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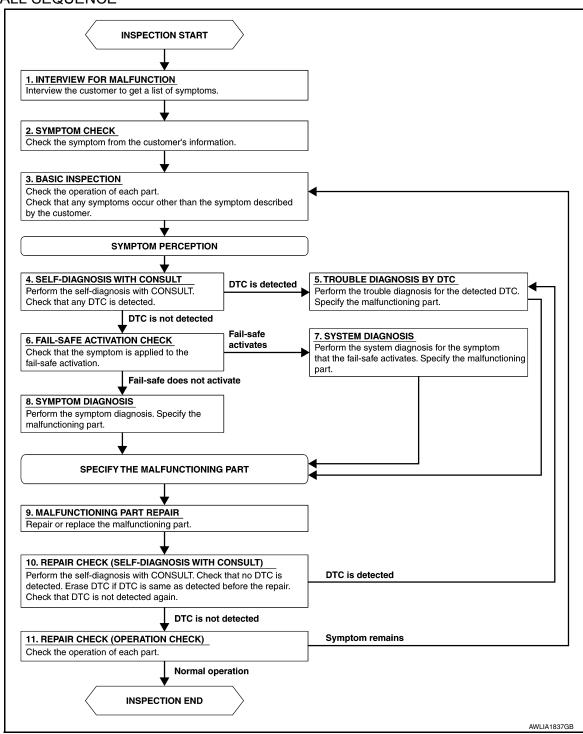
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# **BASIC INSPECTION**

# DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

#### **OVERALL SEQUENCE**



## **DETAILED FLOW**

# ${f 1}$ . INTERVIEW FOR MALFUNCTION

Find out what the customer's concerns are.

# **DIAGNOSIS AND REPAIR WORKFLOW**

DIAGNOSIS AND REPAIR WORKFLOW
< BASIC INSPECTION > [XENON TYPE]
>> GO TO 2.
2.SYMPTOM CHECK
Verify the symptom from the customer's information.
N 00 T0 2
>> GO TO 3.
3.BASIC INSPECTION
Check the operation of each part. Check if any concerns occur other than those mentioned in the customer interview.
THE VIEW.
>> GO TO 4.
4.self-diagnosis with consult
Perform the self diagnosis with CONSULT. Check if any DTC is detected.
Is any DTC detected?
YES >> GO TO 5.
NO >> GO TO 6.  5.TROUBLE DIAGNOSIS BY DTC
Perform the trouble diagnosis for the detected DTC. Specify the malfunctioning part.
>> GO TO 9.
6. FAIL-SAFE ACTIVATION CHECK
Determine if the customer's concern is related to fail-safe activation.
Does the fail-safe activate?
YES >> GO TO 7.
NO >> GO TO 8.  7. SYSTEM DIAGNOSIS
Perform the system diagnosis for the system in which the fail-safe activates. Specify the malfunctioning part.
>> GO TO 9.
8.SYMPTOM DIAGNOSIS
Perform the symptom diagnosis. Specify the malfunctioning part.
>> GO TO 9.
9.MALFUNCTION PART REPAIR
Repair or replace the malfunctioning part.
>> GO TO 10.
10. REPAIR CHECK (SELF-DIAGNOSIS WITH CONSULT)
Perform the self diagnosis with CONSULT. Verify that no DTCs are detected. Erase all DTCs which were
detected prior to the repair. Perform the self diagnosis with CONSULT again. Verify that DTC is not detected again.
Is any DTC detected?
YES >> GO TO 5. NO >> GO TO 11.
11. REPAIR CHECK (OPERATION CHECK)
Check the operation of each part.

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## **DIAGNOSIS AND REPAIR WORKFLOW**

[XENON TYPE] < BASIC INSPECTION >

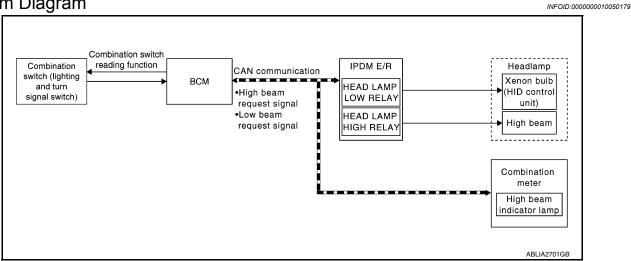
Does it operate normally?

YES >> Inspection End. NO >> GO TO 3.

# SYSTEM DESCRIPTION

## **HEADLAMP**

System Diagram



# System Description

Control of the headlamp system is dependent upon the position of the combination switch (lighting and turn signal switch). When the lighting switch is placed in the 2nd position, the BCM (body control module) receives input requesting the headlamps and park lamps to illuminate. This input is communicated to the IPDM E/R (intelligent power distribution module engine room) across the CAN communication lines. The CPU (central processing unit) of the IPDM E/R controls the headlamp high and headlamp low relay coils. When energized, these relays direct power to the respective headlamps, which then illuminate.

# **Component Parts Location**

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- 1. IPDM E/R E17, E18, E200
- combination meter removed)
- BCM M16, M17, M18, M19 (view with 3. Combination Switch (lighting and turn signal switch) M28
- Combination Meter M24

# Component Description

INFOID:0000000010050182

#### XENON HEADLAMP

A Xenon type headlamp is adapted to the low beam headlamps. Xenon bulbs do not use a filament. Instead, they produce light when a high voltage current is passed between two tungsten electrodes through a mixture of Xenon (an inert gas) and certain other metal halides. In addition to added lighting power, electronic control of the power supply gives the headlamps stable quality and tone color.

Following are some of the many advantages of the Xenon-type headlamp.

- The light produced by the headlamps is a white color comparable to sunlight that is easy on the eyes.
- Light output is nearly double that of halogen headlamps, affording increased area of illumination.
- The light features a high relative spectral distribution at wavelengths to which the human eye is most sensitive. This means that even in the rain, more light is reflected back from the road surface toward the vehicle for added visibility.
- Power consumption is approximately 25 percent less than halogen headlamps, reducing battery load.

#### HIGH BEAM OPERATION/FLASH-TO-PASS OPERATION

With the lighting switch in the 2ND position and placed in HIGH position, the BCM receives input requesting the headlamp high beams to illuminate. The flash-to-pass feature can be used any time and also sends a signal to the BCM. This input is communicated to the IPDM E/R across the CAN communication lines. The CPU of the combination meter controls the ON/OFF status of the HIGH BEAM indicator. The CPU of the IPDM E/R controls the headlamp high relay coil which directs power to the high beam headlamps.

#### EXTERIOR LAMP BATTERY SAVER CONTROL

With the combination switch (lighting and turn signal switch) in the 2nd position and the ignition switch is turned from ON or ACC to OFF, the battery saver feature is activated.

Under this condition, the headlamps remain illuminated for 5 minutes unless the lighting switch position is changed. If the lighting switch position is changed, then the headlamps are turned off.

This setting can be changed by CONSULT. Refer to EXL-28, "BATTERY SAVER: CONSULT Function (BCM -BATTERY SAVER)".

# DAYTIME RUNNING LIGHT SYSTEM

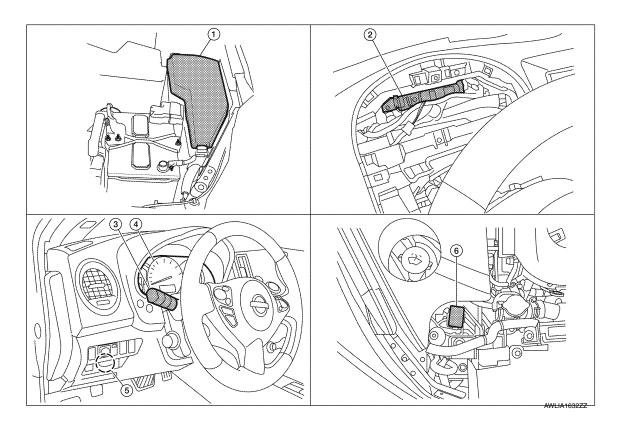
System Diagram

INFOID:0000000010050183 Combination switch Combination reading function Headlamp high switch (lighting CAN communication line IPDM E/R LH and turn Daytime light request signal signal switch) Headlamp high RH Daytime CAN communication line **ECM** light всм Engine status signal relav Parking brake switch Combination Parking brake switch signal

# System Description

The headlamp system for Canada vehicles is equipped with a daytime light relay that activates the high beam headlamps at approximately half illumination whenever the engine is running. If the parking brake is depressed before the engine is started, the daytime lights will not be illuminated. The daytime lights will illuminate once the parking brake is released. Thereafter, the daytime lights will continue to operate when the parking brake is depressed.

# **Component Parts Location**



- 1. IPDM E/R E17, E18, E200, E201
- Combination meter M24
- 2. BCM M16,M17, M18, M19 (view with combination meter removed)
- 5. Parking brake switch E35
- . Combination switch (lighting and turn signal switch) M28
- 6. Daytime light relay E228

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Revision: August 2013 EXL-11 2014 Maxima NAM

## DAYTIME RUNNING LIGHT SYSTEM

< SYSTEM DESCRIPTION >

[XENON TYPE]

## Component Description

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After starting the engine with the parking brake released and the lighting switch in the OFF or 1ST position, the headlamp high beam automatically turns on. With the lighting switch in the 2nd position or with autolamps ON, the headlamps function the same as conventional light systems.

#### **OPERATION**

The BCM monitors inputs from the parking brake switch and the combination switch (lighting and turn signal switch) to determine when to activate the daytime light system. The BCM sends a daytime light request to the IPDM E/R via the CAN communication lines. The IPDM E/R grounds the daytime light relay which in turn, provides power to the ground side of the RH high beam lamp. Power flows backward through the RH high beam lamp to the IPDM E/R, through the high beam fuses, through the LH high beam lamp circuit to the LH high beam lamp and on to ground. The high beam lamps are wired in series which causes them to illuminate at a reduced intensity.

Engine			With engine stopped				With engine running												
Lighting switch		OFF			1ST		2ND		OFF		1ST		2ND						
		Hi	Lo	Р	Hi	Lo	Р	Hi	Lo	Р	Hi	Lo	Р	Hi	Lo	Р	Hi	Lo	Р
Headlamp	High beam	_	ı	1	_	_	×	×	ı	×	•*	•*	×	•*	•*	×	×	_	×
	Low beam	_	-	-	-	-	×	×	×	×	-	-	×	-	-	×	×	×	×
Tail lamp		_	-	ı	×	×	×	×	×	×	-	ı	1	×	×	×	×	×	×
License and instrument illumination lamp		_	-	-	×	×	×	×	×	×	_	-	-	×	×	×	×	×	×

- · Hi: "HIGH BEAM" position
- · Lo: "LOW BEAM" position
- · P: "FLASH TO PASS" position
- x: Lamp "ON"
- · -: Lamp "OFF"
- Eamp dims. (Added functions)
- \*: When starting the engine with the parking brake released, the daytime lights will operate.

  When starting the engine with the parking brake depressed, the daytime lights will not operate.

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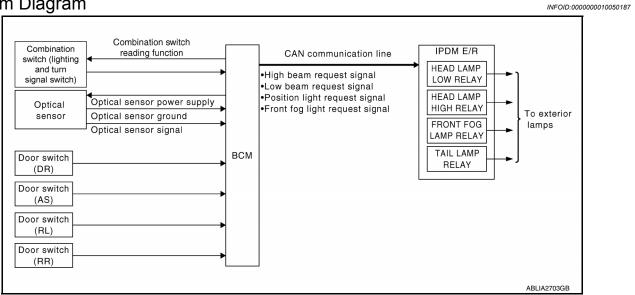
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## **AUTO LIGHT SYSTEM**

System Diagram



# System Description

INFOID:000000010050188

- BCM (Body Control Module) controls auto light operation according to signals from optical sensor, lighting switch and ignition switch.
- IPDM E/R (Intelligent Power Distribution Module Engine Room) operates parking, license plate, tail, front fog lamps and headlamps according to CAN communication signals from BCM.
- Optical sensor detects ambient brightness of 800 to 2,500 lux, converts light (lux) to voltage, and then sends the optical sensor signal to BCM.

#### **OUTLINE**

The auto light control system has an optical sensor that detects outside brightness.

When the lighting switch is in AUTO position, it automatically turns ON/OFF the parking, license plate, tail, front fog lamps and headlamps in accordance with the ambient light. Sensitivity can be adjusted in four steps. For the details of the setting, refer to EXL-26, "HEADLAMP: CONSULT Function (BCM - HEAD LAMP)".

**EXL** 

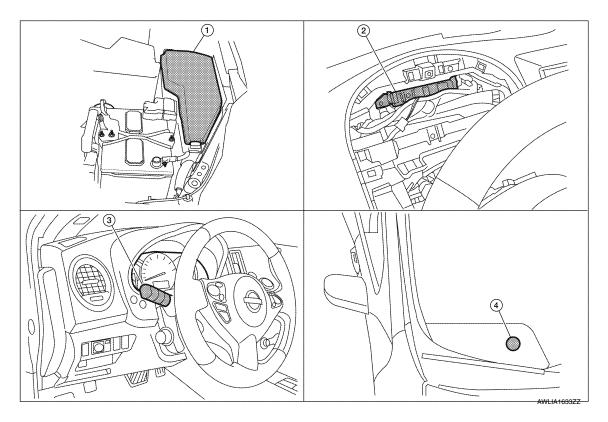
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# **Component Parts Location**

INFOID:0000000010050189



- 1. IPDM E/R E17, E18, E200
- 2. BCM M16, M17, M18, M19, M21 (view 3. with combination meter removed)
  - Combination switch (lighting and turn signal switch) M28

Optical sensor M66

# **Component Description**

INFOID:0000000010050190

#### **AUTO LIGHT OPERATION**

#### Applicable lamps

- Low beam headlamp
- · Parking, license plate and tail lamps
- High beam headlamp (with the lighting switch in HIGH BEAM position)
- Front fog lamp (with the lighting switch in front fog lamp ON position)

When the lighting switch is in AUTO position with the ignition switch in ON position, BCM detects the AUTO LIGHT (ON) by BCM combination switch (lighting and turn signal switch) reading function. BCM automatically turns ON/OFF the applicable lamps according to ambient brightness.

#### NOTE:

Timing for when lamps turn ON/OFF can be changed by the function setting of CONSULT. Refer to <u>EXL-26</u>. "HEADLAMP: CONSULT Function (BCM - HEAD LAMP)".

[XENON TYPE]

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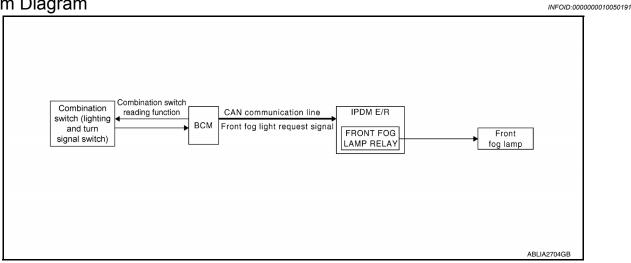
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# FRONT FOG LAMP

System Diagram



# System Description

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INFOID:0000000010050193

- BCM (Body Control Module) controls front fog lamp operation.
- IPDM E/R (Intelligent Power Distribution Module Engine Room) operates front fog lamp according to CAN communication signals from BCM.
- Combination meter operates front fog lamp indicator according to inputs via the CAN communication lines.

# **Component Parts Location**

1. IPDM E/R E17, E18, E200

2. BCM M16, M17, M18, M19 (view with 3. combination meter removed)

Combination switch (lighting and turn signal switch) M28

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Revision: August 2013 EXL-15 2014 Maxima NAM

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## FRONT FOG LAMP

#### < SYSTEM DESCRIPTION >

[XENON TYPE]

## Component Description

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## FRONT FOG LAMP OPERATION

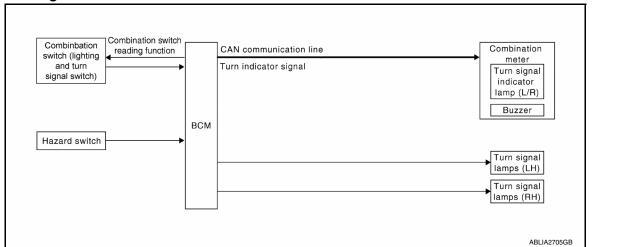
When the lighting switch is in front fog lamp ON position and also in 1ST or 2ND position or AUTO position (headlamp is ON), the BCM detects FR FOG ON and the HEAD LAMP1, 2 ON or the AUTO LIGHT ON. The BCM sends a front fog lamp request ON signal through the CAN communication lines to the IPDM E/R. The IPDM E/R then turns ON the front fog lamp relay sending power to the front fog lamps.

The combination meter also receives a front fog lamp request ON signal through the CAN communication lines at which time it turns the front fog indicator ON.

INFOID:0000000010050195

## TURN SIGNAL AND HAZARD WARNING LAMPS

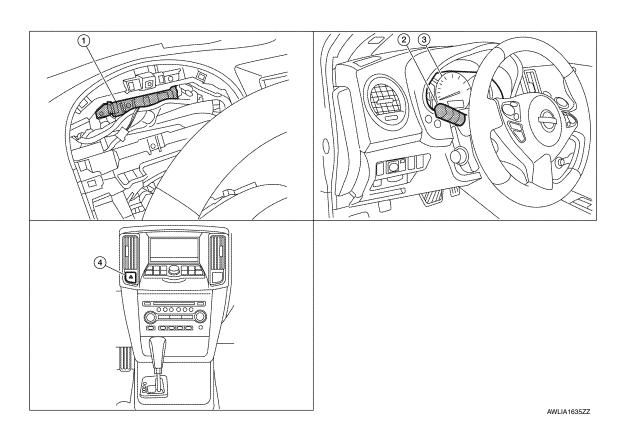
# System Diagram



# System Description

- BCM (Body Control Module) controls turn signal lamp (RH and LH) and hazard warning lamp operation.
- · Combination meter operates turn signal indicator (RH and LH) according to CAN communication signals from BCM.

# **Component Parts Location**



- BCM M16, M17, M18, M19 (view with 2. combination meter removed)
  - signal switch) M28
- Combination switch (lighting and turn 3. Combination meter M24

Hazard switch M54

**EXL-17** Revision: August 2013 2014 Maxima NAM

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## TURN SIGNAL AND HAZARD WARNING LAMPS

< SYSTEM DESCRIPTION >

[XENON TYPE]

## Component Description

INFOID:0000000010050198

#### **TURN SIGNAL OPERATION**

When the turn signal switch is in LH or RH position with the ignition switch in ON position, the BCM detects the TURN RH or TURN LH ON request. The BCM outputs the flasher output signal to the respective turn signal lamp. The BCM sends a turn signal indicator ON request through the CAN communication lines to the combination meter. The combination meter then activates the appropriate turn signal indicator and audible buzzer.

#### HAZARD LAMP OPERATION

When the hazard switch is in ON position, the BCM detects the hazard switch signal ON. The BCM outputs the flasher output signal (right and left). The BCM sends a hazard indicator signal ON request through the CAN communication lines to the combination meter. The combination meter then activates the hazard indicator and audible buzzer.

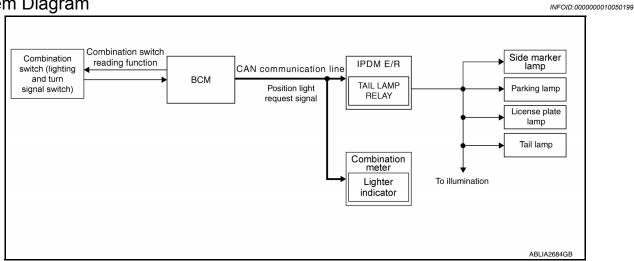
#### REMOTE KEYLESS ENTRY OPERATION

The remote keyless entry receiver transmits Intelligent Key signal to BCM, then BCM controls hazard lamps. Refer to <u>SEC-19</u>, "System Description".

[XENON TYPE]

# PARKING, LICENSE PLATE AND TAIL LAMPS

System Diagram



# System Description

INFOID:0000000010050200

INFOID:0000000010050201

- BCM (Body Control Module) controls parking, license plate and tail lamps operation.
- IPDM E/R (Intelligent Power Distribution Module Engine Room) operates parking, license plate and tail lamps according to CAN communication signals from BCM.

# Component Parts Location

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- IPDM E/R E17, E18, E201
- BCM M16, M17, M18, M19 (view with 3. combination meter removed)
- Combination switch (lighting and turn signal switch) M28

Combination Meter M24

**EXL-19** Revision: August 2013 2014 Maxima NAM

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## PARKING, LICENSE PLATE AND TAIL LAMPS

< SYSTEM DESCRIPTION >

[XENON TYPE]

## Component Description

INFOID:0000000010050202

## PARKING, LICENSE PLATE AND TAIL LAMPS OPERATION

When the lighting switch is in 1ST position, BCM detects the LIGHTING SWITCH 1ST POSITION ON. The BCM sends a parking light ON request through the CAN communication lines to the IPDM E/R. The IPDM E/R then activates the tail lamp relay which sends power to the parking and instrument illumination circuits.

#### EXTERIOR LAMP BATTERY SAVER CONTROL

With the combination switch (lighting and turn signal switch) in the 2nd position and the ignition switch is turned from ON or ACC to OFF, the battery saver feature is activated.

Under this condition, the headlamps remain illuminated for 5 minutes unless the lighting switch position is changed. If the lighting switch position is changed, then the headlamps are turned off.

This setting can be changed by CONSULT. Refer to <u>EXL-28</u>, "<u>BATTERY SAVER</u>: <u>CONSULT Function (BCM-BATTERY SAVER</u>)".

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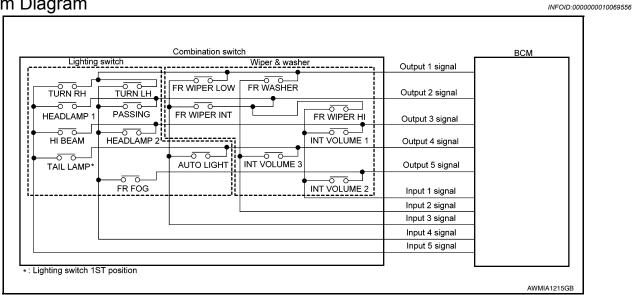
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## COMBINATION SWITCH READING SYSTEM

System Diagram



# System Description

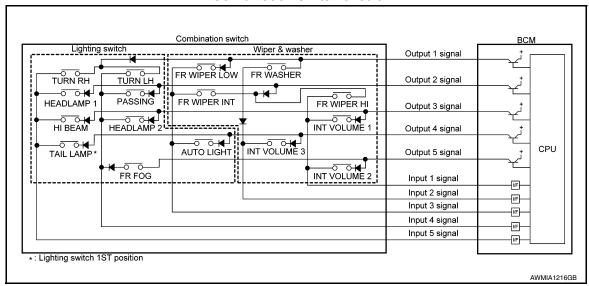
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#### **OUTLINE**

- BCM reads the status of the combination switch (light, turn signal, wiper and washer) and recognizes the status of each switch.
- BCM has a combination of 5 output terminals (OUTPUT 1 5) and 5 input terminals (INPUT 1 5) and reads a maximum of 20 switch states.

#### **COMBINATION SWITCH MATRIX**

#### Combination switch circuit



Combination switch INPUT-OUTPUT system list

System	INPUT 1	INPUT 2	INPUT 3	INPUT 4	INPUT 5
OUTPUT 1	_	FR WASHER	FR WIPER LOW	TURN LH	TURN RH
OUTPUT 2	FR WIPER HI	_	FR WIPER INT	PASSING	HEADLAMP 1
OUTPUT 3	INT VOLUME 1	_	_	HEADLAMP 2	HI BEAM

## **COMBINATION SWITCH READING SYSTEM**

< SYSTEM DESCRIPTION >

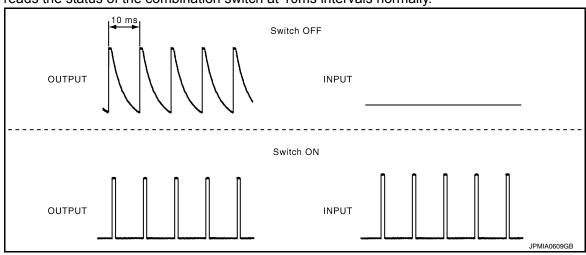
[XENON TYPE]

System	INPUT 1	INPUT 2	INPUT 3	INPUT 4	INPUT 5
OUTPUT 4	_	INT VOLUME 3	AUTO LIGHT	_	TAIL LAMP
OUTPUT 5	INT VOLUME 2	_	_	FR FOG	_

#### COMBINATION SWITCH READING FUNCTION

#### Description

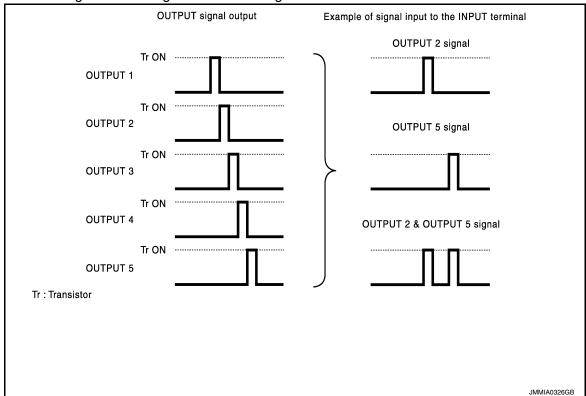
· BCM reads the status of the combination switch at 10ms intervals normally.



#### NOTE:

BCM reads the status of the combination switch at 60ms intervals when BCM is controlled at low power consumption mode.

- BCM operates as follows and judges the status of the combination switch.
- It operates the transistor on OUTPUT side in the following order: OUTPUT 1 → 2 →3 →4 →5 and outputs voltage waveform.
- The voltage waveform of OUTPUT corresponding to the formed circuit is input into the interface on INPUT side if any (1 or more) switches are ON.
- It reads this change of the voltage as the status signal of the combination switch.



## COMBINATION SWITCH READING SYSTEM

## < SYSTEM DESCRIPTION >

Revision: August 2013

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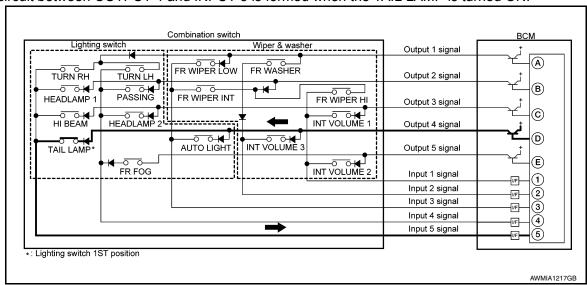
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In the following operation example, the combination of the status signals of the combination switch is replaced as follows: INPUT 1 - 5 to "1 - 5" and OUTPUT 1 - 5 to "A - E".

Example 1: When a switch (TAIL LAMP) is turned ON

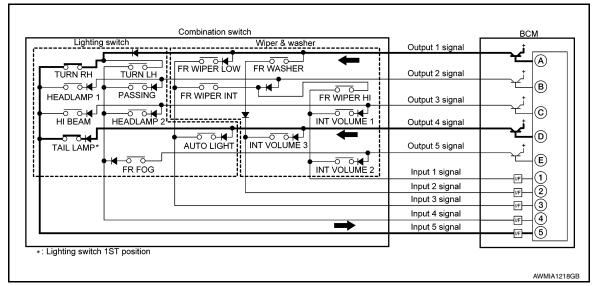
The circuit between OUTPUT 4 and INPUT 5 is formed when the TAIL LAMP is turned ON.



- BCM detects the combination switch status signal "5D" when the signal of OUTPUT 4 is input to INPUT 5.
- BCM judges that the TAIL LAMP switch is ON when the signal "5D" is detected.

Example 2: When some switches (TRUN RH, TAIL LAMP) are turned ON

The circuits between OUTPUT 1 and INPUT 5 and between OUTPUT 4 and INPUT 5 are formed when the TURN RH switch and TAIL LAMP switch are turned ON.



- BCM detects the combination switch status signal "5AD" when the signals of OUTPUT 1 and OUTPUT 4 are input to INPUT 5.
- BCM judges that the TURN RH switch and TAIL LAMP switch are ON when the signal "5AD" is detected.

WIPER INTERMITTENT DIAL POSITION SETTING (FRONT WIPER INTERMITTENT OPERATION) BCM judges the wiper intermittent dial 1 - 7 by the status of INT VOLUME 1, 2, and 3 switches.

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# **COMBINATION SWITCH READING SYSTEM**

## < SYSTEM DESCRIPTION >

[XENON TYPE]

Wiper intermittent dial posi-	Intermittent oper-	INT VOLUME switch ON/OFF status					
tion	ation delay inter- val	INT VOLUME 1 switch  ON  ON  ON  OFF  OFF	INT VOLUME 2 switch	INT VOLUME 3 switch			
1		ON	ON	ON			
2	Short ↑	ON	ON	OFF			
3		ON	OFF	OFF			
4		OFF	OFF	OFF			
5		OFF	OFF	ON			
6	↓ Long	OFF	ON	ON			
7	_==g	OFF	ON	OFF			

< SYSTEM DESCRIPTION >

[XENON TYPE]

# DIAGNOSIS SYSTEM (BCM)

**COMMON ITEM** 

COMMON ITEM: CONSULT Function (BCM - COMMON ITEM)

INFOID:0000000010069548

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## **APPLICATION ITEM**

CONSULT performs the following functions via CAN communication with BCM.

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

## SYSTEM APPLICATION

BCM can perform the following functions.

		Direct Diagnostic Mode							
System	Sub System	Ecu Identification	Self Diagnostic Result	Data Monitor	Active Test	Work support	Configuration	CAN Diag Support Mntr	
Door lock	DOOR LOCK		×	×	×	×			
Rear window defogger	REAR DEFOGGER			×	×				
Warning chime	BUZZER			×	×				
Interior room lamp timer	INT LAMP			×	×	×			
Exterior lamp	HEADLAMP			×	×	×			
Wiper and washer	WIPER			×	×	×			
Turn signal and hazard warning lamps	FLASHER			×	×	×			
Intelligent Key system	INTELLIGENT KEY			×	×	×			
Combination switch	COMB SW			×					
BCM	BCM	×	×			×	×	×	
Immobilizer	IMMU		×	×	×				
Interior room lamp battery saver	BATTERY SAVER			×	×	×			
Trunk open	TRUNK			×	×				
Vehicle security system	THEFT ALM			×	×	×			
RAP system	RETAINED PWR			×					
Signal buffer system	SIGNAL BUFFER			×	×				
TPMS	AIR PRESSURE MONITOR		×	×	×	×			

**HEADLAMP** 

< SYSTEM DESCRIPTION >

[XENON TYPE]

# HEADLAMP : CONSULT Function (BCM - HEAD LAMP)

INFOID:0000000010069549

## **DATA MONITOR**

Monitor Item [Unit]	Description		
PUSH SW [On/Off]	Indicates condition of push button ignition switch		
ENGINE STATE [Stop/Stall/Crank/Run]	Indicates engine status received from ECM on CAN communication line		
VEH SPEED 1 [km/h]	Indicates vehicle speed signal received from ABS on CAN communication line		
KEY SW -SLOT [On/Off]	Indicates condition of key slot		
TURN SIGNAL R [On/Off]			
TURN SIGNAL L [On/Off]			
TAIL LAMP SW [On/Off]			
HI BEAM SW [On/Off]			
HEAD LAMP SW 1 [On/Off]	Indicates condition of combination switch		
HEAD LAMP SW 2 [On/Off]			
PASSING SW [On/Off]	1		
AUTO LIGHT SW [On/Off]			
FR FOG SW [On/Off]			
DOOR SW-DR [On/Off]	Indicates condition of front door switch LH		
DOOR SW-AS [On/Off]	Indicates condition of front door switch RH		
DOOR SW-RR [On/Off]	Indicates condition of rear door switch RH		
DOOR SW-RL [On/Off]	Indicates condition of rear door switch LH		
DOOR SW-BK [On/Off]	Indicates condition of trunk switch		
OPTICAL SENSOR [V]	Indicates voltage signal from optical sensor		

## **ACTIVE TEST**

Test Item	Description	
TAIL LAMP	This test is able to check tail lamp operation [On/Off].	
HEAD LAMP	This test is able to check head lamp operation [Hi/Low/Off].	
FR FOG LAMP	This test is able to check front fog lamp operation [On/Off].	
DAYTIME RUNNING LIGHT	This test is able to check daytime running light operation [LH/RH/Off].	
ILL DIM SIGNAL	This test is able to check head lamp illumination dimming operation [On/Off].	

# **WORK SUPPORT**

Support Item	Setting	Description
	MODE 4	Less sensitive setting than normal setting (Turns ON later than normal operation.)
CUSTOM A/LIGHT SETTING	MODE 3	More sensitive setting than MODE 2 (Turns ON earlier than MODE 2.)
	MODE 2	More sensitive setting than normal setting (Turns ON earlier than normal operation.)
	MODE 1*	Normal
BATTERY SAVER SET	On*	Exterior lamp battery saver function ON
BATTERT GAVER GET	Off	Exterior lamp battery saver function OFF

## < SYSTEM DESCRIPTION >

[XENON TYPE]

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Support Item	Se	tting	Description	
ILL DELAY SET	MODE 8	180 sec.		
	MODE 7	150 sec.		
	MODE 6	120 sec.		
	MODE 4	60 sec.	Sets delay timer function operation time	
	MODE 5	90 sec.	(All doors closed)	
	MODE 3	30 sec.		
	MODE 2	OFF		
	MODE 1*	45 sec.		

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

# **FLASHER**

# FLASHER: CONSULT Function (BCM - FLASHER)

INFOID:0000000010069550

## **DATA MONITOR**

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Monitor Item [Unit]	Description	
REQ SW -DR [On/Off]	Indicates condition of door request switch LH	
REQ SW -AS [On/Off]	Indicates condition of door request switch RH	
PUSH SW [On/Off]	Indicates condition of push button ignition switch	
TURN SIGNAL R [On/Off]	Indicates condition of turn signal function of combination switch	
TURN SIGNAL L [On/Off]		
HAZARD SW [On/Off]	Indicates condition of hazard switch	
RKE-LOCK [On/Off]	Indicates condition of lock signal from Intelligent Key	
RKE-UNLOCK [On/Off]	Indicates condition of unock signal from Intelligent Key	
RKE-PANIC [On/Off]	Indicates condition of panic alarm signal from Intelligent Key	

## **ACTIVE TEST**

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Test Item	Description
FLASHER	This test is able to check turn signal lamp operation [Off/LH/RH].

## **WORK SUPPORT**

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Support Item	Setting	Description
HAZARD ANSWER BACK	Lock/Unlock*	Hazard warning lamp activation when doors are locked or unlocked with the Intelligent Key.
	Unlock Only	Hazard warning lamp activation when doors are unlocked with the Intelligent Key.
	Lock Only	Hazard warning lamp activation when doors are locked with the Intelligent Key.
	Off	No hazard warning lamp activation when doors are locked or unlocked with the Intelligent Key.

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

**COMB SW** 

COMB SW: CONSULT Function (BCM-COMB SW)

INFOID:0000000010069551

## DATA MONITOR

Monitor Item [Unit]	Description		
FR WIPER HI [On/Off]			
FR WIPER LOW [On/Off]	Indicates condition of winer eneration of combination switch		
FR WASHER SW [On/Off]	Indicates condition of wiper operation of combination switch		
FR WIPER INT [On/Off]			
FR WIPER STOP [On/Off]	Indicates front wiper auto stop signal received from IPDM E/R on CAN communication line		
INT VOLUME [1 - 7]	Indicates condition of intermittent wiper operation of combination switch		
TURN SIGNAL R [On/Off]	Indicates condition of right turn signal operation of combination switch		
TURN SIGNAL L [On/Off]	Indicates condition of left turn signal operation of combination switch		
TAIL LAMP SW [On/Off]	Indicates condition of tail lamp switch operation of combination switch		
HI BEAM SW [On/Off]	Indicates condition of Hi beam switch operation of combination switch		
HEAD LAMP SW 1 [On/Off]	Indicates condition of head lamp switch 1 operation of combination switch		
HEAD LAMP SW 2 [On/Off]	Indicates condition of head lamp switch 2 operation of combination switch		
PASSING SW [On/Off]	Indicates condition of passing switch operation of combination switch		
AUTO LIGHT SW [On/Off]	Indicates condition of auto light switch operation of combination switch		
FR FOG SW [On/Off]	Indicates condition of front fog lamp switch operation of combination switch		

# **BATTERY SAVER**

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

INFOID:0000000010069552

## **DATA MONITOR**

Monitor Item [Unit]	Description
REQ SW -DR [On/Off]	Indicates condition of door request switch LH
REQ SW -AS [On/Off]	Indicates condition of door request switch RH
PUSH SW [On/Off]	Indicates condition push button ignition switch
ACC RLY -F/B [On/Off]	Indicates condition of accessory relay
UNLK SEN -DR [On/Off]	Indicates condition of door unlock sensor
KEY SW -SLOT [On/Off]	Indicates condition of key slot
DOOR SW-DR [On/Off]	Indicates condition of front door switch LH
DOOR SW-AS [On/Off]	Indicates condition of front door switch RH
DOOR SW-RR [On/Off]	Indicates condition of rear door switch RH
DOOR SW-RL [On/Off]	Indicates condition of rear door switch LH
DOOR SW-BK [On/Off]	Indicates condition of trunk switch
CDL LOCK SW [On/Off]	Indicates condition of lock signal from door lock and unlock switch
CDL UNLOCK SW [On/Off]	Indicates condition of unlock signal from door lock and unlock switch
KEY CYL LK-SW [On/Off]	Indicates condition of lock signal from door key cylinder switch
KEY CYL UN-SW [On/Off]	Indicates condition of unlock signal from door key cylinder switch
TRNK/HAT MNTR [On/Off]	Indicates condition of trunk room lamp switch
RKE-LOCK [On/Off]	Indicates condition of lock signal from Intelligent Key
RKE-UNLOCK [On/Off]	Indicates condition of unlock signal from Intelligent Key

# **ACTIVE TEST**

Test item	Description
BATTERY SAVER	This test is able to check battery saver operation [On/Off].

## **WORK SUPPORT**

## < SYSTEM DESCRIPTION >

[XENON TYPE]

Support Item	Sett	ting	Description
ROOM LAMP BAT SAV SET	ON*		Interior room lamp battery saver function ON
ROOM LAWF DAT SAV SET	OFF		Interior room lamp battery saver function OFF
ROOM LAMP TIMER SET	MODE 3*	10 min.	Sets interior room lamp battery saver timer operating time
	MODE 2	60 min.	
	MODE 1	15 min.	
BATTERY SAVER SET	ON*	1	Exterior lamp battery saver function ON
DALIERT SAVER SET	OFF		Exterior lamp battery saver function OFF

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

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

< SYSTEM DESCRIPTION >

[XENON TYPE]

# DIAGNOSIS SYSTEM (IPDM E/R)

# **Diagnosis Description**

INFOID:0000000010069553

#### **AUTO ACTIVE TEST**

#### Description

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

- Oil pressure warning lamp
- Front wiper (LO, HI)
- Parking lamps
- Side marker lamps
- License plate lamps
- Tail lamps
- Front fog lamps (if equipped)
- Headlamps (LO, HI)
- A/C compressor (magnet clutch)
- · Cooling fans

#### Operation Procedure

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

#### NOTE:

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

- 2. Turn ignition switch OFF.
- Turn the ignition switch ON, and within 20 seconds, press the front door switch LH 10 times. Then turn the ignition switch OFF.

#### **CAUTION:**

#### Close front door RH.

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

## NOTE:

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

#### **CAUTION:**

- If auto active test mode cannot be actuated, check door switch system. Refer to <u>DLK-67</u>, "Component Function Check".
- Do not start the engine.

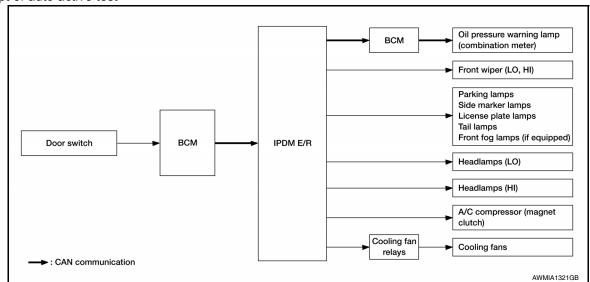
Inspection in Auto Active Test Mode

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

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

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

Concept of auto active test



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

Diagnosis chart in auto active test mode

Symptom	Inspection contents		Possible cause
Any of the fellowing commence do not expect		YES	BCM signal input circuit
Any of the following components do not operate Parking lamps Side marker lamps License plate lamps Tail lamps Front fog lamps (if equipped) Headlamp (HI, LO) Front wiper	Perform auto active test. Does the applicable system operate?	NO	Lamp or motor Lamp or motor ground circuit Harness or connector between IPDM E/R and applicable system IPDM E/R
A/C compressor does not operate	Perform auto active test. Does the magnet clutch operate?	YES	Combination meter signal input circuit     CAN communication signal between combination meter 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

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

## < SYSTEM DESCRIPTION >

[XENON TYPE]

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

# CONSULT Function (IPDM E/R)

INFOID:0000000010069554

## APPLICATION ITEM

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

Direct Diagnostic Mode	Description	
ECU Identification	The IPDM E/R part number is displayed.	
Self Diagnostic Result	The IPDM E/R self diagnostic results are displayed.	
Data Monitor	The IPDM E/R input/output data is displayed in real time.	
Active Test	The IPDM E/R activates outputs to test components.	
CAN Diag Support Mntr	The result of transmit/receive diagnosis of CAN communication is diplayed.	

## **ECU IDENTIFICATION**

The IPDM E/R part number is displayed.

## SELF DIAGNOSTIC RESULT

Refer to PCS-27, "DTC Index".

## **DATA MONITOR**

Monitor Item [Unit]	Main Signals	Description
MOTOR FAN REQ [1/2/3/4]	×	Indicates cooling fan speed signal received from ECM on CAN communication line
AC COMP REQ [On/Off]	×	Indicates A/C compressor request signal received from ECM on CAN communication line
TAIL&CLR REQ [On/Off]	×	Indicates position light request signal received from BCM on CAN communication line
HL LO REQ [On/Off]	×	Indicates low beam request signal received from BCM on CAN communication line

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

## < SYSTEM DESCRIPTION >

[XENON TYPE]

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Monitor Item [Unit]	Main Signals	Description	
HL HI REQ [On/Off]	×	Indicates high beam request signal received from BCM on CAN communication line	
FR FOG REQ [On/Off]	×	Indicates front fog light request signal received from BCM on CAN communication line	
FR WIP REQ [Stop/1LOW/Low/Hi]	×	Indicates front wiper request signal received from BCM on CAN communication line	
WIP AUTO STOP [STOP P/ACT P]	×	Indicates condition of front wiper auto stop signal	
WIP PROT [Off/BLOCK]	×	Indicates condition of front wiper fail-safe operation	
IGN RLY1 -REQ [On/Off]		Indicates ignition switch ON signal received from BCM on CAN communication line	
IGN RLY [On/Off]	×	Indicates condition of ignition relay-1	
PUSH SW [On/Off]		Indicates condition of push-button ignition switch	
INTER/NP SW [On/Off]		Indicates condition of CVT shift position	
ST RLY CONT [On/Off]		Indicates starter relay status signal received from BCM on CAN communication line	
IHBT RLY -REQ [On/Off]		Indicates starter control relay signal received from BCM on CAN communication line	
ST/INHI RLY [Off/ ST /INHI]		Indicates condition of starter relay and starter control relay	
DETENT SW [On/Off]		Indicates condition of CVT shift selector (park position switch)	
DTRL REQ [Off]		Indicates daytime light request signal received from BCM on CAN communication line	
OIL P SW [Open/Close]		Indicates condition of oil pressure switch	
THFT HRN REQ [On/Off]		Indicates theft warning horn request signal received from BCM on CAN communication line	
HORN CHIRP [On/Off]		Indicates horn reminder signal received from BCM on CAN communication line	

# **ACTIVE TEST**

Test item	Description		
HORN	This test is able to check horn operation [On].		
FRONT WIPER	This test is able to check wiper motor operation [Hi/Lo/Off].		
MOTOR FAN	This test is able to check cooling fan operation [4/3/2/1].		
EXTERNAL LAMPS	This test is able to check external lamp operation [Fog/Hi/Lo/Tail/Off].		

# CAN DIAG SUPPORT MNTR

Refer to LAN-12, "CAN Diagnostic Support Monitor".

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[XENON TYPE]

# DTC/CIRCUIT DIAGNOSIS

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

BCM (BODY CONTROL MODULE): Diagnosis Procedure

INFOID:0000000010070067

Regarding Wiring Diagram information, refer to BCS-67, "Wiring Diagram".

# 1. CHECK FUSE AND FUSIBLE LINK

Check if the following BCM fuses or fusible link are blown.

Terminal No.	Signal name	Fuse and fusible link No.
1		Н
11	Battery power supply	10
24		7

#### Is the fuse or fusible link blown?

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

NO >> GO TO 2

# 2. CHECK POWER SUPPLY CIRCUIT

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

Terminals			
(	+)	(-)	Voltage (Approx.)
всм			(Approx.)
Connector	Terminal		
M16	1	Ground	
M17	11		Battery voltage
M18	24		

#### Is the measurement normal?

YES >> GO TO 3

NO >> Repair or replace harness.

# 3. CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

В	CM		Continuity
Connector	Connector Terminal		Continuity
M17	13		Yes

#### Does continuity exist?

YES >> Inspection End.

NO >> Repair or replace harness.

# BCM (BODY CONTROL MODULE): Special Repair Requirement

1. REQUIRED WORK WHEN REPLACING BCM

INFOID:0000000010070068

## POWER SUPPLY AND GROUND CIRCUIT

## < DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

Initialize control unit. Refer to BCS-5, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM): Work Procedure".

>> Work End.

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM): Diagnosis Procedure INFOID:0000000010070069

Regarding Wiring Diagram information, refer to PCS-28, "Wiring Diagram".

# 1. CHECK FUSES AND FUSIBLE LINK

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

Terminal No.	Signal name	Fuses and fusible link No.
1		В
2	Battery power supply	A, D
36		A, E, L

#### Is the fuse blown?

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

NO >> GO TO 2

# 2. CHECK POWER SUPPLY CIRCUIT

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

Terminals				
(	+)	(-)	Voltage (V)	
IPDI	Л E/R	(-)	(Approx.)	
Connector	Terminal			
E16	1	Ground	Ground	
E10	2		Battery voltage	
E18	36			

#### Is the measurement value normal?

YES >> GO TO 3

NO >> Repair harness or connector.

## $oldsymbol{3}$ . CHECK GROUND CIRCUIT

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

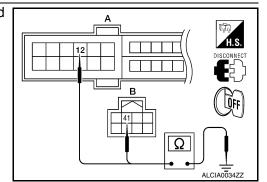
IPDM I	IPDM E/R		Continuity
Connector	Terminal	Ground	Continuity
A: E18	12	Giouria	Yes
B: E17	41		165

#### Does continuity exist?

Revision: August 2013

YES >> Inspection End.

NO >> Repair harness or connector.



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**EXL-35** 2014 Maxima NAM

[XENON TYPE]

# HEADLAMP (HI) CIRCUIT

Description INFOID:000000010050215

The IPDM E/R (intelligent power distribution module engine room) controls the headlamp high relay based on inputs from the BCM over the CAN communication lines. When the headlamp high relay is energized, power flows through fuses 48 and 49, located in the IPDM E/R. Power then flows to the front combination lamps to the headlamp high beam.

# Component Function Check

INFOID:0000000010050216

# 1. CHECK HEADLAMP (HI) OPERATION

#### **NWITHOUT CONSULT**

- 1. Start IPDM E/R auto active test. Refer to PCS-11, "Diagnosis Description".
- 2. Check that the headlamp switches to the high beam.

#### NOTE:

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

#### CONSULT

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

HI: Headlamp switches to the high beam.

OFF : Headlamp OFF

#### Does the headlamp switch to the high beam?

YES >> Headlamp (HI) circuit is normal.

NO >> Refer to EXL-36, "Diagnosis Procedure".

# Diagnosis Procedure

INFOID:0000000010050217

Regarding Wiring Diagram information, refer to <u>EXL-93</u>, "Wiring <u>Diagram"</u> (Without DTRL), <u>EXL-99</u>, "Wiring <u>Diagram"</u> (With DTRL).

# 1. CHECK HEADLAMP (HI) FUSES

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

Unit	Location	Fuse No.	Capacity
Headlamp HI (LH)	IPDM E/R	48	10A
Headlamp HI (RH)	IPDM E/R	49	10A

#### Is the fuse open?

YES >> Repair the harness and replace the fuse.

NO >> GO TO 2.

# 2.CHECK HEADLAMP (HI) OUTPUT VOLTAGE

#### **©CONSULT ACTIVE TEST**

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

### < DTC/CIRCUIT DIAGNOSIS >

With EXTERNAL LAMP ON, check the voltage between the combination lamp connector and ground.

(+)			(-)	Voltage
Connector		Terminal	(-)	voltage
RH	E222 (without DTRL)			
КΠ	E233 (with DTRL)	3	Ground	Battery voltage
LH	E213			

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[XENON TYPE]

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### Is battery voltage present?

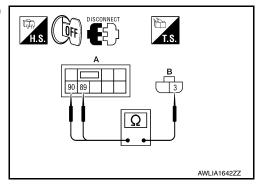
YES >> GO TO 4.

NO >> GO TO 3.

# 3.CHECK HEADLAMP (HI) CIRCUIT FOR OPEN

- Turn the ignition switch OFF.
- Disconnect IPDM E/R connector E200.
- Check continuity between the IPDM E/R harness connector (A) and the front combination lamp harness connector (B).

A		В	Continuity		
Conn	ector	Terminal	Connector Terminal		Continuity
RH		89	E222 (without DTRL)		
КП	E200	09	E233 (with DTRL)	3	Yes
LH		90	E213		



### Does continuity exist?

>> Replace IPDM E/R. Refer to PCS-35, "Removal and YES Installation".

NO >> Repair the harnesses or connectors.

# 4. CHECK FRONT COMBINATION LAMP (HI) GROUND CIRCUIT

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

Connector		Terminal	_	Continuity
RH	E222 (without DTRL)			
	E233 (with DTRL)	4	Ground	Yes
LH	E213			

# T.S. DISCONNECT OFF Ω AWLIA1643ZZ

### Does continuity exist?

>> Inspect the headlamp bulb.

NO (Except RH with DTRL)>>Repair the harness.

NO (RH with DTRL)>>GO TO 5.

# $5.\mathtt{check}$ continuity between front combination Lamp RH (HI) and daytime light relay

Disconnect daytime light relay connector.

Check continuity between front combination lamp RH harness connector and daytime light relay harness connector.

Front combination lamp RH		Daytime light relay		Continuity
Connector Terminal		Connector	Terminal	Continuity
E233	4	E228	3	Yes

### Does continuity exist?

YES >> GO TO 6.

Revision: August 2013

NO >> Repair the harness or connector.

> **EXL-37** 2014 Maxima NAM

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### **HEADLAMP (HI) CIRCUIT**

### < DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

### 6. CHECK DAYTIME LIGHT RELAY GROUND CIRCUIT

Check continuity between daytime light relay harness connector and ground.

Daytime	light relay		Continuity	
Connector Terminal		Ground	Continuity	
E228	4		Yes	

### Does continuity exist?

YES >> GO TO 7.

NO >> Repair the harness or connector.

# 7.CHECK DAYTIME LIGHT RELAY FUSE

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

Unit	Location	Fuse No.	Capacity
Daytime light relay	IPDM E/R	54	10A

### Is the fuse open?

YES >> Replace the fuse after repairing the affected circuit.

NO >> GO TO 8.

# 8.CHECK DAYTIME LIGHT RELAY CIRCUIT FOR OPEN

- 1. Disconnect IPDM E/R connector E18 and E201.
- Check continuity between the IPDM E/R harness connector and the daytime light relay harness connector.

IPDM E/R		Daytime light relay		Continuity
Connector	Terminal	Connector	Terminal	Continuity
E18	6		1	
EIO	6	E228	5	Yes
E201	105		2	

### Does continuity exist?

YES >> GO TO 9

NO >> Repair the harnesses or connectors.

### 9. CHECK DAYTIME LIGHT RELAY

Check daytime light relay. Refer to EXL-38, "Component Inspection".

### Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-35, "Removal and Installation".

NO >> Replace daytime light relay.

## Component Inspection

INFOID:0000000010050218

# 1. CHECK DAYTIME LIGHT RELAY

- 1. Turn ignition switch OFF.
- Remove daytime light relay.
- 3. Check the continuity between daytime light relay terminals under the following conditions.

Terminals	Condition	Continuity
3 and 5	12V direct current supply between terminals 1 and 2	Yes
	No current supply	No

# **HEADLAMP (HI) CIRCUIT**

### < DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

Terminals	Condition	Continuity
3 and 4	12V direct current supply between terminals 1 and 2	No
3 and 4	No current supply	Yes

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace daytime light relay

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[XENON TYPE]

# HEADLAMP (LO) CIRCUIT

Description INFOID:000000010050219

The IPDM E/R (intelligent power distribution module engine room) controls the headlamp low relay based on inputs from the BCM over the CAN communication lines. When the headlamp low relay is energized, power flows through fuses 51 and 52, located in the IPDM E/R. Power then flows to the front combination lamps to the headlamp low beam.

### Component Function Check

INFOID:0000000010050220

# 1. CHECK HEADLAMP (LO) OPERATION

### **NWITHOUT CONSULT**

- Start IPDM E/R auto active test. Refer to <u>PCS-11, "Diagnosis Description"</u>.
- Check that the headlamp is turned ON.

### NOTE:

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

### (P)CONSULT

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

LO : Headlamp ON OFF : Headlamp OFF

### Is the headlamp turned ON?

YES >> Headlamp (LO) is normal.

NO >> Refer to <u>EXL-40</u>, "<u>Diagnosis Procedure</u>".

### Diagnosis Procedure

INFOID:0000000010050221

Regarding Wiring Diagram information, refer to EXL-93, "Wiring Diagram".

# 1. CHECK HEADLAMP (LO) FUSES

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

Unit	Location	Fuse No.	Capacity
Headlamp LO (LH)	IPDM E/R	51	15A
Headlamp LO (RH)	IPDM E/R	52	15A

### Is the fuse open?

YES >> Repair the harness and replace the fuse.

NO >> GO TO 2.

# 2.CHECK HEADLAMP (LO) OUTPUT VOLTAGE

### (P)CONSULT

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

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

### < DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

With EXTERNAL LAMPS ON, check the voltage between the combination lamp connector and ground.

(+)			(-)	Voltage	
Connector		Terminal	- (-)	voltage	
RH E232		1	Ground	Pottory voltage	
LH	E231	1	Ground	Battery voltage	

# DISCONNECT IN THE STATE OF THE

### Is battery voltage present?

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

# $3. {\sf CHECK}$ HEADLAMP (LO) CIRCUIT FOR OPEN

- Turn the ignition switch OFF.
- Disconnect IPDM E/R connector E200.
- 3. Check continuity between the IPDM E/R harness connector (A) and the front combination lamp harness connector (B).

Α		В		Continuity	
Conr	nector	Terminal	Connector	Terminal	Continuity
RH	E200	83	E232	1	Yes
LH	L200	84	E231	1	100

### Does continuity exist?

YES >> Replace the IPDM E/R. Refer to PCS-35, "Removal and Installation".

NO >> Repair the harnesses or connectors.

# 4. CHECK FRONT COMBINATION LAMP (LO) GROUND CIRCUIT

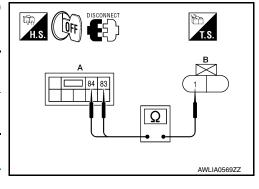
Check continuity between the front combination lamp harness connector terminal and ground.

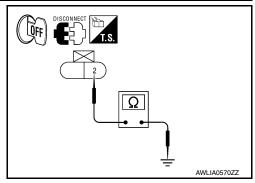
Connector		Terminal	_	Continuity
RH	E232	2	Ground	Yes
LH	E231	2	Ground	163

### Does continuity exist?

YES >> Perform xenon headlamp diagnosis. Refer to <u>EXL-42</u>, "<u>Description</u>".

NO >> Repair the harness.





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### **XENON HEADLAMP**

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

### XENON HEADLAMP

Description INFOID:000000010050222

### **OPERATION**

Refer to EXL-10, "Component Description".

### PRECAUTIONS FOR TROUBLE DIAGNOSIS

- Installation or removal of the connector must be done with the lighting switch OFF.
- When the lamp is illuminated (when the lighting switch is ON), do not touch the harness, HID control unit, inside of the lamp, or the lamp metal parts.
- To check illumination, temporarily install lamp in the vehicle. Be sure to connect power at the vehicle-side connector.
- If the malfunction can be traced directly to the electrical system, first check for items such as blown fuses
  and fusible links, broken wires or loose connectors, pulled-out terminals, and improper connections.
- · Do not work with wet hands.
- Using a tester for HID control unit circuit trouble diagnosis is prohibited.
- Disassembling the HID control unit or harnesses (bulb socket harness, ballast harness) is prohibited.
- Immediately after illumination, the light intensity and color will fluctuate, this is normal.
- When the bulb has reached the end of its lifetime, the brightness may drop significantly, it may flash repeatedly, or the light may turn a reddish color.

## Diagnosis Procedure

INFOID:0000000010050223

### 1. CHECK XENON BULB

Install a known good bulb to the applicable headlamp. Check that the headlamp operates.

### Is the inspection result normal?

YES >> Replace the xenon bulb.

NO >> GO TO 2.

# 2. CHECK HID CONTROL UNIT

Install a known good HID control unit to the applicable headlamp. Check that the headlamp operates.

### Is the inspection result normal?

YES >> Replace HID control unit.

NO >> Inspection End.

### FRONT FOG LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

INFOID:0000000010050225

INFOID:0000000010050226

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### FRONT FOG LAMP CIRCUIT

Description INFOID:0000000010050224

The IPDM E/R (intelligent power distribution module engine room) controls the front fog lamp relay based on inputs from the BCM over the CAN communication lines. When the front fog lamp relay is energized, power flows from the front fog lamp relay in the IPDM E/R to the front fog lamps.

### Component Function Check

# ${f 1}$ .CHECK FRONT FOG LAMP OPERATION

# ®WITHOUT CONSULT

- Activate IPDM E/R auto active test. Refer to PCS-11, "Diagnosis Description".
- Check that the front fog lamp is turned ON.

### (P)CONSULT

- Select "EXTERNAL LAMPS" of IPDM E/R active test item.
- 2. While operating the test item, 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-43, "Diagnosis Procedure".

### Diagnosis Procedure

Regarding Wiring Diagram information, refer to <a>EXL-112</a>, "Wiring Diagram"</a>.

# 1. CHECK FRONT FOG LAMP FUSE

Turn the ignition switch OFF.

Check that the following fuse is not open.

Unit	Location	Fuse No.	Capacity
Front fog lamp	IPDM E/R	53	15A

### Is the fuse open?

>> Repair the harness and replace the fuse.

NO >> GO TO 2.

### 2.CHECK FRONT FOG LAMP OUTPUT VOLTAGE

### 

Turn the ignition switch OFF.

Disconnect the front fog lamp connector.

Turn the ignition switch ON.

Select "EXTERNAL LAMPS" of IPDM E/R active test item.

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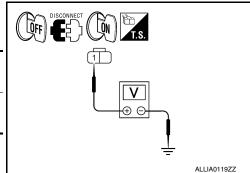
### FRONT FOG LAMP CIRCUIT

### < DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

With EXTERNAL LAMPS ON, check the voltage between the fog lamp connector and ground.

	(+)		(-)	Voltage	
Connector		Terminal	- (-)	voltage	
LH	E214	1	Ground	Pattony voltage	
RH	E227	1	Giodila	Battery voltage	



### Is battery voltage present?

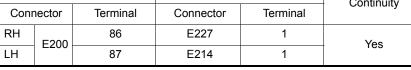
YES >> GO TO 4.

NO >> GO TO 3.

# ${f 3}.$ CHECK FRONT FOG LAMP OPEN CIRCUIT

- Turn the ignition switch OFF.
- Disconnect IPDM E/R connector E200. 2.
- Check continuity between the IPDM E/R harness connector (A) and the front fog lamp harness connector (B).

A		В		Continuity	
Con	nector	Terminal	Connector Terminal		Continuity
RH	E200	86	E227	1	Yes
LH	E200	87	E214	1	165



### Does continuity exist?

YES >> Replace the IPDM E/R. Refer to PCS-35, "Removal and Installation".

NO >> Repair the harnesses or connectors.

# 4. CHECK FRONT FOG LAMP GROUND CIRCUIT

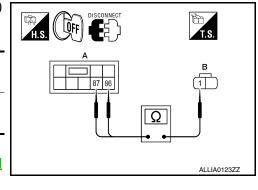
Check continuity between the front fog lamp harness connector terminal and ground.

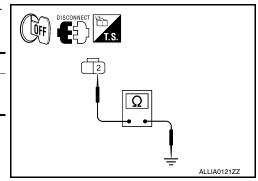
Со	nnector	Terminal	_	Continuity
RH	E227	2	Ground	Yes
LH	E214	2	Ground	163

# Does continuity exist?

YES >> Inspect the fog lamp bulb.

NO >> Repair the harness.





### **PARKING LAMP CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

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### PARKING LAMP CIRCUIT

Description INFOID:0000000010050227

The IPDM E/R (intelligent power distribution module engine room) controls the tail lamp relay based on inputs from the BCM over the CAN communication lines. When the tail lamp relay is energized, power flows through fuses 46 and 47, located in the IPDM E/R. Power then flows to the front and rear combination lamps, license plate lamps.

### Component Function Check

INFOID:0000000010050228

### 1. CHECK PARKING LAMP OPERATION

### **MWITHOUT CONSULT**

- 1. Activate IPDM E/R auto active test. Refer to PCS-11, "Diagnosis Description".
- Check that the parking lamp is turned ON.

### (P)CONSULT

- 1. Select "EXTERNAL LAMPS" of IPDM E/R active test item.
- While operating the test item, 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.

>> Refer to EXL-45, "Diagnosis Procedure". NO

### Diagnosis Procedure

INFOID:0000000010050229

Regarding Wiring Diagram information, refer to EXL-124, "Wiring Diagram".

# 1. CHECK PARKING LAMP FUSES

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

Unit	Location	Fuse No.	Capacity
Parking lamps (front)	IPDM E/R	46	10A
Parking lamps (rear)	IPDM E/R	47	10A

### Is the fuse open?

YES >> Repair the harness and replace the fuse.

NO >> GO TO 2.

# 2.CHECK TAIL LAMP RELAY OUTPUT (VOLTAGE)

### CONSULT

- Turn the ignition switch OFF.
- Disconnect the front and rear combination lamp connectors.
- Turn the ignition switch ON.
- Select "EXTERNAL LAMPS" of IPDM E/R active test item.

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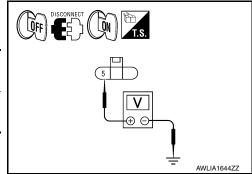
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### < DTC/CIRCUIT DIAGNOSIS >

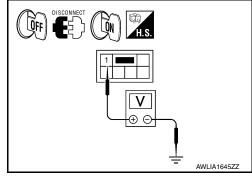
5. With EXTERNAL LAMPS ON, check the voltage between the front combination lamp connector and ground.

(+)			(-)	Voltage	
Connector Termin		Terminal	(-)	voltage	
LH	E217	5	Ground	Battery voltage	
RH	E224	7	Gloulia	Battery voltage	



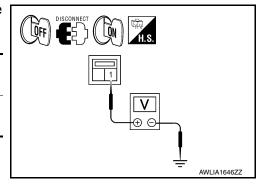
6. With EXTERNAL LAMPS ON, check the voltage between the rear combination lamp connector and ground.

(+)			(-)	Voltage	
Connector T		Terminal	(-)	voitage	
LH	B30	1	Ground	Battery voltage	
RH	B45	•	Ground	battery voltage	



7. With EXTERNAL LAMPS ON, check the voltage between the license plate lamp connector and ground.

(+)		(-)	Voltage		
Con	Connector Terminal		(-)	voitage	
LH	T6	1	Ground	Battery voltage	
RH	T8	I	Ground	Dattery voltage	



### Is battery voltage present?

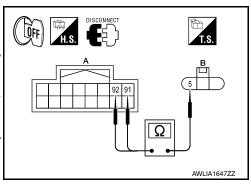
YES >> GO TO 4.

NO >> GO TO 3.

# 3. CHECK PARKING LAMP CIRCUIT (OPEN)

- 1. Turn the ignition switch OFF.
- 2. Disconnect IPDM E/R connector E201.
- 3. Check continuity between the IPDM E/R harness connector (A) and the front combination lamp harness connector (B).

А		В		Continuity	
Cor	nector	Terminal	Connector	Terminal	Continuity
LH	E201	92	E217	5	Vos
RH	E201	91	E224		- 5 Yes



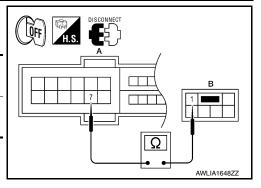
### **PARKING LAMP CIRCUIT**

### < DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

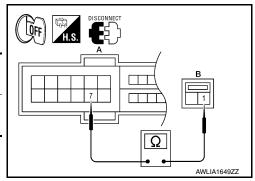
4. Check continuity between the IPDM E/R harness connector (A) and the rear combination lamp harness connector (B).

А		В		Continuity	
Con	nector	Terminal	Connector	Terminal	Continuity
LH	E18	7	B30	1	Yes
RH	□10	,	B45	ı	res



5. Check continuity between the IPDM E/R harness connector (A) and the license plate lamp harness connector (B).

A		В		Continuity	
Cor	nnector	or Terminal Con		Terminal	Continuity
LH	E10	7	T6	1	Yes
RH	- E18	1	Т8	I	ies



Does continuity exist?

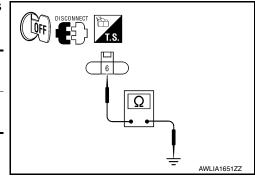
YES >> Replace the IPDM E/R. Refer to PCS-35, "Removal and Installation".

NO >> Repair the harnesses or connectors.

### 4. CHECK PARKING LAMP GROUND CIRCUIT

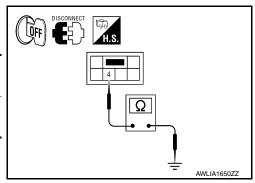
 Check continuity between the front combination lamp harness connector terminal and ground.

(+)			(-)	Continuity
Con	Connector Terminal		(-)	Continuity
LH	E217	6	Ground	Yes
RH	E224	0	Ground	165



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

(+)			(-)	Continuity
Connector Terminal		( )	Continuity	
LH	B30	4 Ground	Yes	
RH	B45	4	Giouna	165



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### **PARKING LAMP CIRCUIT**

### < DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

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

(+)			(-)	Continuity
Con	Connector Terminal		( )	Continuity
LH	T6	2	Ground	Yes
RH	T8	2	Giodila	165

# DISCONNECT H.S.

### Does continuity exist?

YES >> Inspect the parking lamp bulb.

NO >> Repair the harness.

### TURN SIGNAL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

INFOID:0000000010050231

INFOID:0000000010050232

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### TURN SIGNAL LAMP CIRCUIT

Description

The BCM monitors inputs from the combination switch to determine when to activate the turn signals. The BCM outputs voltage direction to the left and right turn signals during turn signal operation or both during hazard warning operation. The BCM sends a turn signal indicator request to the combination meter via the CAN communication lines.

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

### NOTE:

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

### Component Function Check

# 1.CHECK TURN SIGNAL LAMP

### (P)CONSULT

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

LH: Turn signal lamp LH blinkingRH: Turn signal lamp RH blinkingOFF: The turn signal lamp OFF

### Does the turn signal lamp blink?

YES >> Turn signal lamp circuit is normal.

NO >> Refer to EXL-49, "Diagnosis Procedure".

### Diagnosis Procedure

Regarding Wiring Diagram information, refer to <a>EXL-116</a>, "Wiring Diagram".

# 1. CHECK TURN SIGNAL LAMP BULB

Check the applicable lamp bulb to be sure the proper bulb standard is in use and the bulb is not open.

### Is the bulb OK?

YES >> GO TO 2.

NO >> Replace the bulb.

# 2.CHECK TURN SIGNAL LAMP OUTPUT VOLTAGE

- Turn the ignition switch OFF.
- Disconnect front combination lamp connector, door mirror connector (if equipped with turn signal in mirror) and rear combination lamp connector.
- Turn the ignition switch ON.
- With turn signal switch operating, check the voltage between the front combination lamp harness connector and ground.

(+)		(-)	Voltage
Connector	Terminal	(-)	Voltage

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### < DTC/CIRCUIT DIAGNOSIS >

E217	LH			
E224	RH	7	Ground	(V) 15 10 5 0

5. With turn signal switch operating, check the voltage between the rear combination lamp harness connector and ground.

(+)		(-)	Voltage	
Connector		Terminal	(-)	vollage
B30	LH			
B45	RH	6	Ground	(V) 15 10 5 0 1 s

6. With turn signal switch operating, check the voltage between the door mirror (if equipped with turn signals in the mirrors) harness connector and ground.

	(+)			Voltage
Connector Terminal		(-)	Vollage	
D4	LH			
D107	RH	8	Ground	(V) 15 10 5 0 1 s PKID0926E

### Is the measurement value normal?

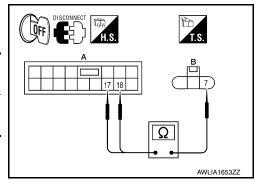
YES >> GO TO 5.

NO >> GO TO 3.

# 3.check turn signal lamp circuit for open

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM connector M17.
- 3. Check continuity between the BCM harness connector (A) and the front combination lamp connector (B).

А			Е	Continuity	
Cor	nector	Terminal	Connector	Terminal	Continuity
LH	M17	18	E217	7	Yes
RH	IVI I 7	17	E224	,	163



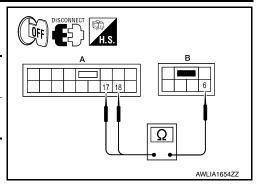
### **TURN SIGNAL LAMP CIRCUIT**

### < DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

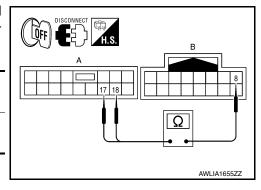
4. Check continuity between the BCM harness connector (A) and the rear combination lamp harness connector (B).

А			Е	Continuity		
Cor	nector	Terminal	Connector Terminal		Continuity	
LH	M17	18	B30	6	Yes	
RH	IVI I /	17	B45	6	ies	



5. Check continuity between the BCM harness connector (A) and the door mirror connector (B) (if equipped with turn signal in mirror).

А			E	Continuity	
Cor	nector	Terminal	Connector	Terminal	Continuity
LH	M17	18	D4	8	Yes
RH	IVI I /	17	D107	0	162



### Does continuity exist?

YES >> GO TO 4.

NO >> Repair the harnesses or connectors.

### 4. CHECK TURN SIGNAL LAMP SHORT CIRCUIT

Check continuity between the BCM harness connector and ground.

Conr	nector	Terminal	_	Continuity
LH	N/17	18	Ground	No
RH	M17	17	Ground	140

### Does continuity exist?

YES >> Repair the harnesses or connectors.

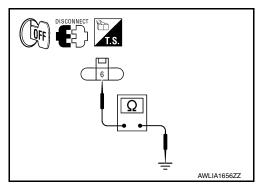
NO >> Replace BCM. Refer to <u>PCS-35. "Removal and Installation".</u>

# DISCONNECT H.S. ALLIA0129ZZ

# 5. CHECK TURN SIGNAL LAMP GROUND CIRCUIT

- Turn ignition switch OFF.
- 2. Check continuity between the front combination lamp and ground.

Со	nnector	Terminal	_	Continuity
LH	E217	6	Ground	Yes
RH	E224	б	Ground	163



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Revision: August 2013 EXL-51 2014 Maxima NAM

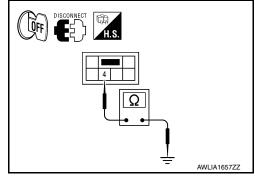
### **TURN SIGNAL LAMP CIRCUIT**

### < DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

3. Check continuity between the rear combination lamp and ground.

Со	nnector	Terminal	_	Continuity
LH	B30	4	Ground	Yes
RH	B45	7	Ground	103



4. Check continuity between the door mirror and ground (if equipped with turn signal in mirror).

С	onnector	Terminal	_	Continuity
LH	D4	7	Ground	Yes
RH	D107	,	Ground	163

### Does continuity exist?

YES >> Replace the front combination lamp. Refer to <u>EXL-154</u>, "Removal and Installation", the rear combination lamp. Refer to <u>EXL-162</u>, "Removal and Installation" or door mirror (if equipped with turn signal in mirror). Refer to <u>EXL-159</u>, "Removal and Installation".

NO >> Repair the harnesses or connectors.

### [XENON TYPE]

INFOID:0000000010050234

### **OPTICAL SENSOR**

Description INFOID:0000000010050233

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

## Component Function Check

# ${f 1}$ .CHECK OPTICAL SENSOR SIGNAL BY CONSULT

### (P)CONSULT

- Turn the ignition switch ON.
- Select "OPTICAL SENSOR" of BCM (HEAD LAMP) DATA MONITOR item.
- Turn the lighting switch to AUTO.
- While the auto light system is operating, check the monitor status.

Monitor item	Condition	Voltage
OPTICAL SENSOR	When illuminating	3.1V or more *
OPTICAL SENSOR	When shutting off light	0.6V or less

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

### Is the item status normal?

YES >> Optical sensor is normal.

NO >> Refer to EXL-53, "Diagnosis Procedure".

### Diagnosis Procedure

Regarding Wiring Diagram information, refer to EXL-106, "Wiring Diagram".

# 1. CHECK OPTICAL SENSOR POWER SUPPLY INPUT

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

(	+)	(-)	Voltage	
Connector	Terminal		voltage	
M66	1	Ground	5V	

### Is the voltage reading as specified?

YES >> GO TO 2.

NO >> GO TO 4.

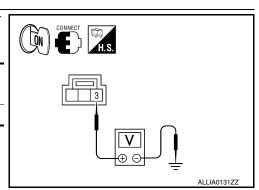
# 2.CHECK OPTICAL SENSOR GROUND INPUT

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

(	+)	(-)	Voltage
Connector	Terminal		
M66	3	Ground	Less than 0.2V

### Is the voltage reading as specified?

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



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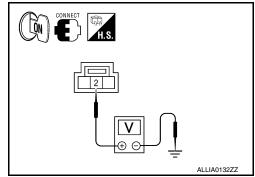
ALLIA0130ZZ

# $\overline{3}$ .check optical sensor signal output

With the auto light system operating, check voltage between the optical sensor harness connector and ground.

(+)		(-)	Condition	Voltage
Connector	Terminal	(-)	Condition	voilage
M66	2	Ground	When illuminating	3.1V or more *
IVIOO	2	Giodila	When shutting off light	0.6V or less

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



### Is the voltage reading as specified?

YES >> GO TO 7.

NO >> Replace the optical sensor. Refer to EXL-158, "Removal and Installation".

### 4. CHECK OPTICAL SENSOR POWER SUPPLY FOR OPEN CIRCUIT

- Turn the ignition switch OFF.
- Disconnect the optical sensor connector and BCM connector M18.
- Check continuity between the optical sensor harness connector (A) and the BCM harness connector (B).

	A		В	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M66	1	M18	46	Yes

### Does continuity exist?

YES >> GO TO 5.

NO >> Repair the harnesses or connectors.

# ALLIA0133ZZ

# ${f 5}$ .CHECK OPTICAL SENSOR POWER SUPPLY FOR SHORT CIRCUIT

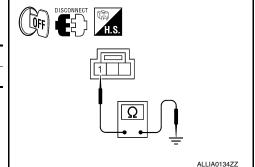
Check the continuity between the optical sensor harness connector and the ground.

Connector	Terminal	_	Continuity
M66	1	Ground	No

### Does continuity exist?

YES >> Repair the harnesses or connectors.

>> Replace BCM. Refer to BCS-79, "Removal and Installa-NO



# 6. CHECK OPTICAL SENSOR GROUND FOR OPEN CIRCUIT

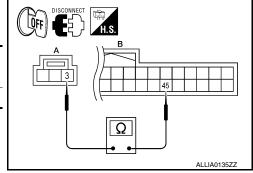
- Turn the ignition switch OFF.
- Disconnect the optical sensor connector and BCM connector M18.
- Check continuity between the optical sensor harness connector (A) and the BCM harness connector (B).

А		В		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M66	3	M18	45	Yes

### Does continuity exist?

YES >> Replace BCM. Refer to BCS-79, "Removal and Installation".

NO >> Repair the harnesses or connectors.



### [XENON TYPE]

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# 7. CHECK OPTICAL SENSOR SIGNAL FOR OPEN CIRCUIT

- 1. Turn the ignition switch OFF.
- 2. Disconnect the optical sensor connector and BCM connector M18.
- 3. Check continuity between the optical sensor harness connector (A) and the BCM harness connector (B).

	A		В	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M66	2	M18	21	Yes

# 

### Does continuity exist?

YES >> GO TO 8.

NO >> Repair the harnesses or connectors.

# 8. CHECK OPTICAL SENSOR SIGNAL FOR SHORT CIRCUIT

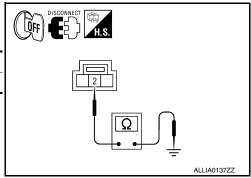
Check the continuity between the optical sensor harness connector and ground.

Connector	Terminal	_	Continuity
M66	2	Ground	No

### Does continuity exist?

YES >> Repair the harnesses or connectors.

NO >> Replace BCM. Refer to <u>BCS-79</u>, "Removal and Installation".



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### HAZARD SWITCH

# **Component Function Check**

INFOID:0000000010050236

# 1. CHECK HAZARD SWITCH SIGNAL BY CONSULT

### **©CONSULT DATA MONITOR**

- 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
HAZAND SW	Tiazaiu Switch	OFF	Off

### Is the measurement normal?

YES >> Hazard switch circuit is normal.

NO >> Refer to EXL-56, "Diagnosis Procedure".

### Diagnosis Procedure

INFOID:0000000010050237

Regarding Wiring Diagram information, refer to EXL-116, "Wiring Diagram".

# 1. CHECK HAZARD SWITCH SIGNAL INPUT

- 1. Turn ignition switch OFF.
- Disconnect hazard switch connector.
- 3. Turn ignition switch ON.
- 4. Check voltage between hazard switch harness connector and ground.

(+) Hazard switch		(-)	Voltage (Approx.)		
Connector	Terminal		( , , , , , , , , , , , , , , , , , , ,		
M54	2	Ground	(V) 15 10 5 0 JPMIA0012GB		

### Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 2.

# 2.CHECK HAZARD SWITCH SIGNAL OPEN CIRCUIT

- 1. Turn ignition switch OFF.
- Disconnect BCM connector M19.
- 3. Check continuity between hazard harness connector and BCM harness connector.

Hazaro	d switch	В	Continuity		
Connector	Terminal	Connector Terminal		Continuity	
M54	2	M19	98	Yes	

### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

### **HAZARD SWITCH**

### < DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

# 3. CHECK HAZARD SWITCH SIGNAL SHORT CIRCUIT

Check continuity between hazard switch harness connector and ground.

Hazard	d switch		Continuity
Connector	Terminal	Ground	Continuity
M54	2		No

### Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-79, "Removal and Installation".

NO >> Repair or replace harness.

# 4. CHECK HAZARD SWITCH GROUND OPEN CIRCUIT

Check continuity between hazard switch harness connector and ground.

Hazaro	d switch		Continuity
Connector	Terminal	Ground	Continuity
M54	M54 1		Yes

### Is the inspection result normal?

YES >> Replace hazard switch. Refer to EXL-161, "Removal and Installation".

NO >> Repair or replace harness.

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# **ECU DIAGNOSIS INFORMATION**

# BCM (BODY CONTROL MODULE)

Reference Value

### NOTE:

The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.

- · Activate and display TPMS transmitter IDs
- Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs
- Check Intelligent Key relative signal strength
- · Confirm vehicle Intelligent Key antenna signal strength

### VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
ED WIDED III	Other than front wiper switch HI	OFF
FR WIPER HI	Front wiper switch HI	ON
ED WIDED LOW	Other than front wiper switch LO	OFF
FR WIPER LOW	Front wiper switch LO	ON
FR WASHER SW	Front washer switch OFF	OFF
	Front washer switch ON	ON
ED WIDED INT	Other than front wiper switch INT	OFF
FR WIPER INT	Front wiper switch INT	ON
ED WIDED STOD	Front wiper is not in STOP position	OFF
FR WIPER STOP	Front wiper is in STOP position	ON
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	Wiper intermittent dial position
TUDNI CIONAL D	Other than turn signal switch RH	OFF
TURN SIGNAL R	Turn signal switch RH	ON
TUDNI CIONAL I	Other than turn signal switch LH	OFF
TURN SIGNAL L	Turn signal switch LH	ON
TAIL LAMP CVV	Other than lighting switch 1ST and 2ND	OFF
TAIL LAMP SW	Lighting switch 1ST or 2ND	ON
HI BEAM SW	Other than lighting switch HI	OFF
HI BEAIN SW	Lighting switch HI	ON
HEAD LAMD SW 4	Other than lighting switch 2ND	OFF
HEAD LAMP SW 1	Lighting switch 2ND	ON
HEAD LAMP SW 2	Other than lighting switch 2ND	OFF
HEAD LAWP SW 2	Lighting switch 2ND	ON
DACCING CW	Other than lighting switch PASS	OFF
PASSING SW	Lighting switch PASS	ON
ALITO LICUIT CW	Other than lighting switch AUTO	OFF
AUTO LIGHT SW	Lighting switch AUTO	ON
ED EOC SW	Front fog lamp switch OFF	OFF
FR FOG SW	Front fog lamp switch ON	ON
DOOD SW DD	Driver door closed	OFF
DOOR SW-DR	Driver door opened	ON

# < ECU DIAGNOSIS INFORMATION >

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Monitor Item	Condition	Value/Status
DOOR SW-AS	Passenger door closed	OFF
DOOR SW-AS	Passenger door opened	ON
DOOR SW-RR	Rear door RH closed	OFF
DOOR SW-RR	Rear door RH opened	ON
DOOR SW-RL	Rear door LH closed	OFF
DOOR SW-RL	Rear door LH opened	ON
DOOR SW-BK	Trunk door closed	OFF
JOOK SW-BK	Trunk door opened	ON
CDL LOCK SW	Other than power door lock switch LOCK	OFF
DDL LOCK SW	Power door lock switch LOCK	ON
CDL UNLOCK SW	Other than power door lock switch UNLOCK	OFF
CDL UNLOCK 3W	Power door lock switch UNLOCK	ON
(EY CYL LK-SW	Other than driver door key cylinder LOCK position	OFF
CLI OIL LN-3W	Driver door key cylinder LOCK position	ON
(EY CYL UN-SW	Other than driver door key cylinder UNLOCK position	OFF
VET OTE OIN-OVV	Driver door key cylinder UNLOCK position	ON
HAZARD SW	When hazard switch is not pressed	OFF
IAZAND SW	When hazard switch is pressed	ON
REAR DEF SW	When rear window defogger switch is pressed	ON
D CANCEL SW	Trunk lid opener cancel switch OFF	OFF
TR CANCEL SW	Trunk lid opener cancel switch ON	ON
TR/BD OPEN SW	Trunk lid opener switch OFF	OFF
	While the trunk lid opener switch is turned ON	ON
RNK/HAT MNTR	Trunk lid closed	OFF
IKIN/HAI WINTK	Trunk lid opened	ON
DKE I OCK	When LOCK button of Intelligent Key is not pressed	OFF
RKE-LOCK	When LOCK button of Intelligent Key is pressed	ON
DKE TIMI OCK	When UNLOCK button of Intelligent Key is not pressed	OFF
RKE-UNLOCK	When UNLOCK button of Intelligent Key is pressed	ON
DKE TD/DD	When TRUNK OPEN button of Intelligent Key is not pressed	OFF
RKE-TR/BD	When TRUNK OPEN button of Intelligent Key is pressed	ON
RKE-PANIC	When PANIC button of Intelligent Key is not pressed	OFF
ANE-FAINIU	When PANIC button of Intelligent Key is pressed	ON
RKE-P/W OPEN	When UNLOCK button of Intelligent Key is not pressed and held	OFF
ML-F/W OPEN	When UNLOCK button of Intelligent Key is pressed and held	ON
RKE-MODE CHG	When LOCK/UNLOCK button of Intelligent Key is not pressed and held simultaneously	OFF
VVE-MODE CUR	When LOCK/UNLOCK button of Intelligent Key is pressed and held simultaneously	ON
OPTICAL SENSOR	When outside of the vehicle is bright	Close to 5 V
OF HUAL SENSUK	When outside of the vehicle is dark	Close to 0 V
DEO SW. DD	When front door request switch is not pressed (driver side)	OFF
REQ SW -DR	When front door request switch is pressed (driver side)	ON
250 CM AC	When front door request switch is not pressed (passenger side)	OFF
REQ SW -AS	When front door request switch is pressed (passenger side)	ON

# < ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status
REQ SW -RL	When rear door request switch is not pressed (driver side)	OFF
REQ 3W -RL	When rear door request switch is pressed (driver side)	ON
REQ SW -RR	When rear door request switch is not pressed (passenger side)	OFF
NEQ 3W -NN	When rear door request switch is pressed (passenger side)	ON
REQ SW -BD/TR	When trunk opener request switch is not pressed	OFF
REQ 3W -DD/TR	When trunk opener request switch is pressed	ON
PUSH SW	When engine switch (push switch) is not pressed	OFF
FUSH SW	When engine switch (push switch) is pressed	ON
IGN RLY2 -F/B	Ignition switch OFF or ACC	OFF
IGN INLIZ -17B	Ignition switch ON	ON
ACC RLY -F/B	Ignition switch OFF	OFF
ACC RLT -F/D	Ignition switch ACC or ON	ON
BRAKE SW 1	When the brake pedal is not depressed	ON
DRANE SW I	When the brake pedal is depressed	OFF
DETE/CANCL CW	When selector lever is in P position	OFF
DETE/CANCL SW	When selector lever is in any position other than P	ON
CET DAVALOVA	When selector lever is in any position other than P or N	OFF
SFT PN/N SW	When selector lever is in P or N position	ON
LINIUK OENI, DD	Driver door UNLOCK status	OFF
UNLK SEN -DR	Driver door LOCK status	ON
DUOU OW IDDM	When engine switch (push switch) is not pressed	OFF
PUSH SW -IPDM	When engine switch (push switch) is pressed	ON
ION DIVA E/D	Ignition switch OFF or ACC	OFF
IGN RLY1 -F/B	Ignition switch ON	ON
DETE OW IDDM	When selector lever is in P position	OFF
DETE SW -IPDM	When selector lever is in any position other than P	ON
CET DN IDDM	When selector lever is in any position other than P or N	OFF
SFT PN -IPDM	When selector lever is in P or N position	ON
OFT D. MET	When selector lever is in any position other than P	OFF
SFT P -MET	When selector lever is in P position	ON
OFT N. MET	When selector lever is in any position other than N	OFF
SFT N -MET	When selector lever is in N position	ON
	Engine stopped	STOP
ENIONE OTATE	While the engine stalls	STALL
ENGINE STATE	At engine cranking	CRANK
	Engine running	RUN
VEH SPEED 1	While driving	Equivalent to speedometer reading
VEH SPEED 2	While driving	Equivalent to speedometer reading
	Driver door LOCK status	LOCK
DOOR STAT-DR	Wait with selective UNLOCK operation (5 seconds)	READY
	Driver door UNLOCK status	UNLK
	Passenger door LOCK status	LOCK
DOOR STAT-AS	Wait with selective UNLOCK operation (5 seconds)	READY
	Passenger door UNLOCK status	UNLK

# < ECU DIAGNOSIS INFORMATION >

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Monitor Item	Condition	Value/Status
ID OK FLAG	Ignition switch ACC or ON	RESET
ID OK FLAG	Ignition switch OFF	SET
PRMT ENG STRT	When the engine start is prohibited	RESET
PRIVIT ENG STRT	When the engine start is permitted	SET
KEY SW -SLOT	When Intelligent Key is not inserted into key slot	OFF
KET SW -SLUT	When Intelligent Key is inserted into key slot	ON
RKE OPE COUN1	During the operation of Intelligent Key	Operation frequency of Intelligent Key
CONFRM ID ALL	The key ID that the key slot receives does not accord with any key ID registered to BCM.	YET
CONFRIN ID ALL	The key ID that the key slot receives accords with any key ID registered to BCM.	DONE
CONFIRM ID4	The key ID that the key slot receives does not accord with the fourth key ID registered to BCM.	YET
CONFIRM ID4	The key ID that the key slot receives accords with the fourth key ID registered to BCM.	DONE
CONFIRM ID3	The key ID that the key slot receives does not accord with the third key ID registered to BCM.	YET
CONFIRM ID3	The key ID that the key slot receives accords with the third key ID registered to BCM.	DONE
CONFIRM ID2	The key ID that the key slot receives does not accord with the second key ID registered to BCM.	YET
CONFIRM ID2	The key ID that the key slot receives accords with the second key ID registered to BCM.	DONE
CONFIRM ID1	The key ID that the key slot receives does not accord with the first key ID registered to BCM.	YET
	The key ID that the key slot receives accords with the first key ID registered to BCM.	DONE
TD 4	The ID of fourth key is not registered to BCM	YET
ΓP 4	The ID of fourth key is registered to BCM	DONE
FD 0	The ID of third key is not registered to BCM	YET
TP 3	The ID of third key is registered to BCM	DONE
	The ID of second key is not registered to BCM	YET
TP 2	The ID of second key is registered to BCM	DONE
	The ID of first key is not registered to BCM	YET
ΓP 1	The ID of first key is registered to BCM	DONE
AIR PRESS FL	Ignition switch ON (only when the signal from the transmitter is received)	Air pressure of front LH tire
AIR PRESS FR	Ignition switch ON (only when the signal from the transmitter is received)	Air pressure of front RH tire
AIR PRESS RR	Ignition switch ON (only when the signal from the transmitter is received)	Air pressure of rear RH tire
AIR PRESS RL	Ignition switch ON (only when the signal from the transmitter is received)	Air pressure of rear LH tire
D REGST FL1	When ID of front LH tire transmitter is registered	DONE
	When ID of front LH tire transmitter is not registered	YET
D REGST FR1	When ID of front RH tire transmitter is registered	DONE
D NEGOTINI	When ID of front RH tire transmitter is not registered	YET
ID REGST RR1	When ID of rear RH tire transmitter is registered	DONE
ויסיו ועוען	When ID of rear RH tire transmitter is not registered	YET

# < ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status
ID REGST RL1	When ID of rear LH tire transmitter is registered	DONE
ID NEGGT NET	When ID of rear LH tire transmitter is not registered	YET
WARNING LAMP	Tire pressure indicator OFF	OFF
WARRING LAWI	Tire pressure indicator ON	ON
BU77FR	Tire pressure warning alarm is not sounding	OFF
DOZZEN	Tire pressure warning alarm is sounding	ON

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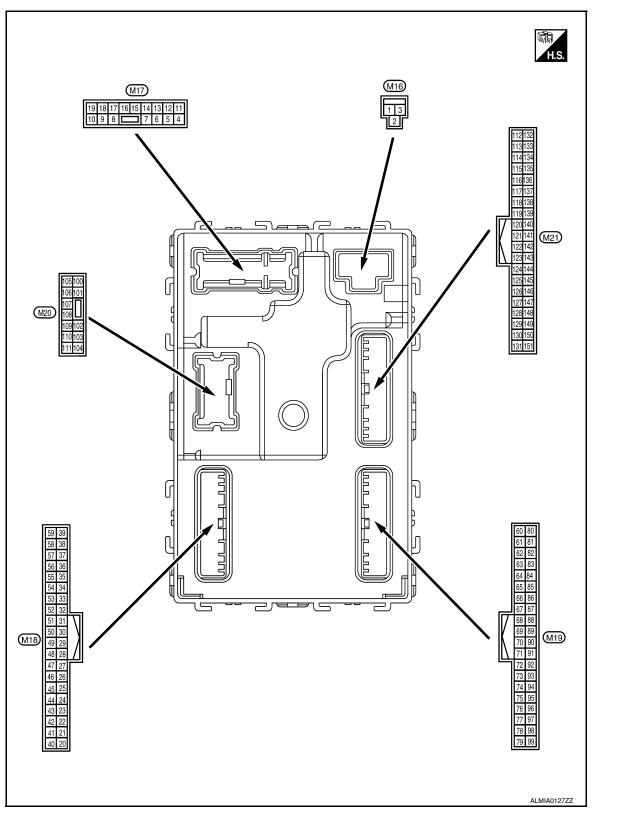
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Terminal Layout



Physical Values

Torm	inal No.	Description				
	e color)	Input/			Condition	Value
(+)	(-)	Signal name	Output			(Approx.)
1 (W/B)	Ground	Battery power supply	Input	Ignition switch OF	F	Battery voltage
2 (R/Y)	Ground	Battery power supply output	Output	Ignition switch OF	F	Battery voltage
3 (L/W)	Ground	Ignition power supply output	Output	Ignition switch ON		Battery voltage
4	Ground	Interior room lamp	Output	After passing the ir er operation time	nterior room lamp battery sav-	0V
(P/W)	Ground	power supply	Output	Any other time after lamp battery saver	er passing the interior room roperation time	Battery voltage
5	Ground	Front door RH UN-	Output	Front door RH	UNLOCK (actuator is activated)	Battery voltage
(G)	Ground	LOCK	Output	TION GOOF KIT	Other than UNLOCK (actuator is not activated)	0V
7	Ground	Step lamp	Output	Step lamp	ON	0V
(R/W)	Giodila	Step lamp	Output	Step lamp	OFF	Battery voltage
8	Ground	All doors LOCK	Output	All doors	LOCK (actuator is activated)	Battery voltage
(V)	Giodila	All doors LOCK	Output	All doors	Other than LOCK (actuator is not activated)	0V
9	Ground	Front door LH UN-	Output	tput Front door LH	UNLOCK (actuator is activated)	Battery voltage
(L)	Ground	LOCK	Output		Other than UNLOCK (actuator is not activated)	0V
10	Ground	Rear door RH and rear door LH UN-	Output	Rear door RH	UNLOCK (actuator is activated)	Battery voltage
(G)	Oround	LOCK	Output	and rear door LH	Other than UNLOCK (actuator is not activated)	0V
11 (Y/R)	Ground	Battery power supply	Input	Ignition switch OF	F	Battery voltage
13 (B)	Ground	Ground	_	Ignition switch ON		0V
					OFF	0V
14 (GR/ W)	Ground	Engine switch (push switch) illumination ground	Input	Tail lamp	ON	NOTE: When the illumination brightening/dimming level is in the neutral position  (V)  10  0  JSNIA0010GB
15	Ground	ACC indicator lamp	Output	Ignition switch	OFF	Battery voltage
(Y/L)		F	4	<b>)</b>	ACC or ON	0V

# < ECU DIAGNOSIS INFORMATION >

	inal No.	Description	•			Value	
(Wire	e color) (-)	Signal name	Input/ Output		Condition	(Approx.)	
17 (G/B)	Ground	Turn signal (RH)	Output	Ignition switch ON	Turn signal switch OFF  Turn signal switch RH	0V  (V) 15 10 1   1   1   1   1   1   1   1   1   1	
					Turn signal switch OFF	0V	
18 (G/Y)	Ground	Turn signal (LH)	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0 1 s PKID0926E 6.5 V	
19 (Y)	Ground	Room lamp timer control	Output	Interior room lamp	OFF	Battery voltage	
21 (P/B)	Ground	Optical sensor signal	Input	Ignition switch	ON  When outside of the vehicle is bright  When outside of the vehicle is dark	OV Close to 5V Close to 0V	
24 (R/W)	Ground	Stop lamp switch 1	Input		_	Battery voltage	
26 (O/L)	Ground	Stop lamp switch 2	Input	Stop lamp switch	OFF (brake pedal is re- leased) ON (brake pedal is de- pressed)	0V  Battery voltage	
27 (O)	Ground	Front door lock as- sembly LH (unlock sensor)	Input	Front door LH	LOCK status	(V) 15 10 10 ms JPMIA0011GB 11.8V	E
-				When Intelligent V	UNLOCK status	0V Ratteny voltage	
29 (Y)	Ground	Key slot switch	Input		ey is inserted into key slot ey is not inserted into key slot	Battery voltage  0V	
31 (G)	Ground	Rear window defog- ger feedback signal	Input	Rear window de- fogger switch	OFF ON	0V Battery voltage	

# < ECU DIAGNOSIS INFORMATION >

	inal No.	Description				Mal .	
	e color)	Signal name	Input/		Condition	Value (Approx.)	
(+)	(-)	Olginal Hallie	Output		I		
32 (R/B)	Ground	Front door RH switch	Input	Front door RH switch	OFF (when front door RH closes)	(V) 15 10 10 10 ms  JPMIA0011GB 11.8 V	
					ON (when front door RH opens)	0V	
37 (O)	Ground	Trunk lid opener can- cel switch	Input	Trunk lid opener cancel switch	CANCEL	(V) 15 10 5 0 10 ms JPMIA0012GB	
					ON	0V	
38 (GR/	Ground	Rear window defog-	Input	Rear window de-	OFF	5V	
W)	Giodila	ger ON signal	iliput	fogger switch	ON	0V	
40 (Y/G)	Ground	Power window serial link	Input/ Output	Ignition switch ON		(V) 15 10 5 0 10 ms JPMIA0013GB	
				Ignition switch OF	F or ACC	OV	
41		Engine switch (push		Engine switch	ON	5.5V	
(W)	Ground	switch) illumination	Output	(push switch) illu- mination	OFF	OV	
42	Ground	LOCK indicator lamp	Output	LOCK indicator	ON	0V	
(R)	2.34.14		Carpat	lamp	OFF	Battery voltage	
45 (P)	Ground	Receiver & sensor ground	Input	Ignition switch ON		ov	
46	Ground	Receiver & sensor	Output	Ignition switch	OFF	0V	
(V/W)		power supply output	·		ACC or ON	5.0V	

# < ECU DIAGNOSIS INFORMATION >

Terminal No.		Description				Value	
(Wire (+)	e color) (-)	Signal name		Condition	(Approx.)	Α	
47		Tire pressure receiv-	Input/	Ignition switch	Standby state	(V) 6 4 2 0 + 0.2s	В
(G/O)	Ground	er signal	Output	ŎN	When receiving the signal from the transmitter	(V) 6 4 2 0 ••• 0.2s OCC3880D	E
48		Selector lever trans-			P or N position	12.0V	G
(R/G)	Ground	mission range switch signal	Input	Selector lever	Except P and N positions	0V	
-					ON	OV	Н
49 (L/O)	Ground	Security indicator signal	Output	Security indicator	Blinking	(V) 15 10 5 0 JPMIA0014GB	J
					OFF	11.3V  Battery voltage	K
					All switch OFF	0V	
					Lighting switch 1ST		
			Combination Switch Combination Lighting sw	Lighting switch high-beam	(V) 15	EX	
50		Combination switch			Lighting switch 2ND	15	
(LG/ B)	Ground	OUTPUT 5	Input	(Wiper intermit- tent dial 4)	Turn signal switch RH	2 ms JPMIA0031GB	M
					All switch OFF		
					(Wiper intermittent dial 4)	0V	0
					Front wiper switch HI (Wiper intermittent dial 4)	(V)	
51 (L/W)	Ground	Combination switch OUTPUT 1	Input	Combination switch	Any of the conditions below with all switch OFF  • Wiper intermittent dial 1  • Wiper intermittent dial 2  • Wiper intermittent dial 3  • Wiper intermittent dial 6  • Wiper intermittent dial 7	(V) 15 10 5 0 2 ms JPMIA0032GB	Ρ

# < ECU DIAGNOSIS INFORMATION >

Terminal No.		Description				Val.	
	e color)	Signal name	Input/	Condition		Value (Approx.)	
(+)	(-)		Output		All switch OFF (Wiper intermittent dial 4)	OV	
	Ground	Combination switch OUTPUT 2	Input	Combination switch	Front washer switch ON (Wiper intermittent dial 4)	(V)	
52 (G/B)					Any of the conditions below with all switch OFF  • Wiper intermittent dial 1  • Wiper intermittent dial 5  • Wiper intermittent dial 6	10 5 0 2 ms JPMIA0033GB 10.7V	
					All switch OFF	0V	
					Front wiper switch INT		
50				Combination	Front wiper switch LO	(V) 15	
53 (LG/ R)	Ground	Combination switch OUTPUT 3	Input	switch (Wiper intermit- tent dial 4)	Lighting switch AUTO	10 5 0 2 ms JPMIA0034GB 10.7V	
					All switch OFF	0V	
	Ground	Combination switch OUTPUT 4	Input	Combination switch (Wiper intermittent dial 4)	Front fog lamp switch ON		
					Lighting switch 2ND	(V)	
54 (G/Y)					Lighting switch flash-to- pass	10 5 0	
					Turn signal switch LH	2 ms JPMIA0035GB	
57 (W)	Ground	Tire pressure warn- ing check switch	Input		_	5V	
58 (SB)	Ground	Front door LH switch	Input	Front door LH switch	OFF (front door LH CLOSE)	(V) 15 10 5 0 10 ms 10 ms 11.8V	
					ON (front door LH OPEN)	0V	
59	Ground	ound Rear window defog- ger relay	Output	Rear window de- fogger	Active	Battery voltage	
(G/R)	2.54.14				Not activated	0V	

# < ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description				Value	
(+) (-)		Signal name	Input/ Output		Condition	(Approx.)	
60 (B/R)	Ground	Front console antenna 2 (-)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0062GB	
					When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0  JMKIA0063GB	
61 (W/R)	Ground	Center console antenna 2 (+)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1 s  JMKIA0062GB	
					When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 JMKIA0063GB	
62	Ground	Front outside handle	Output	When the front door RH request	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA0062GB	
(V)		RH antenna (-)	Output	switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB	

	ninal No. e color)	Description Input/		Condition		Value	
(+)	(-)	Signal name	Output			(Approx.)	
63	Ground	Front outside handle RH antenna (+)	Output	When the front door RH request switch is operat- ed with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB	
(P)					When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB	
64	Ground	Front outside handle LH antenna (-)	Output	When the front door LH request switch is operat- ed with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 11 1 s  JMKIA0062GB	
(V)					When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB	
65	Ground	When Intelligent Key is in the antenna detection area  When the front door I H request	(V) 15 10 5 0 1 s JMKIA0062GB				
(P)	Giodila	LH antenna (+)	Output	switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	15	

### < ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description		Condition		Value	
(+)	(-)	Signal name	Input/ Output	Condition		(Approx.)	
68 (G/O)	Ground	NATS antenna amp (built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelligent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.	
69 (O)	Ground	NATS antenna amp (built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelligent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.	
70 (R/B)	Ground	Ignition relay-2 con- trol	Output	Ignition switch	OFF or ACC	0V Battery voltage	
71		Remote keyless entry receiver signal	Input/ Output	During waiting		(V) 15 10 5 1 ms JMKIA0064GB	
	Ground			When operating either button on Intelligent Key		(V) 15 10 1 ms  JMKIA0065GB	
75 (R/Y)	Ground	Combination switch INPUT 5	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB	
					Front fog lamp switch ON (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0037GB	
					Any of the conditions below with all switch OFF  • Wiper intermittent dial 1  • Wiper intermittent dial 2  • Wiper intermittent dial 6  • Wiper intermittent dial 7	(V) 15 10 5 0 2 ms JPMIA0040GB	

	Terminal No. Description (Wire color)					Value
(Wire (+)	(-)	Signal name	Input/ Output		Condition	(Approx.)
		Combination switch INPUT 3	Output	Combination switch	All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB
76 (B(C)	Ground				Lighting switch high-beam (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0036GB 1.3V
(R/G)					Lighting switch 2ND (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0037GB 1.3V
					Any of the conditions below with all switch OFF  • Wiper intermittent dial 1  • Wiper intermittent dial 2  • Wiper intermittent dial 3	(V) 15 10 5 0 2 ms JPMIA0040GB 1.3V
78 (P)	Ground	CAN-L	Input/ Output	<u> </u>		_
79 (L)	Ground	CAN-H	Input/ Output	_		_
80 (R/L)	Ground	Key slot illumination	Output	Key slot illumina- tion	OFF	Battery voltage  (V) 15 10 5 0 JPMIA0015GB 6.5V
					ON OFF or ACC	0V 0V
81 (LG)	Ground	ON indicator lamp	Output	Ignition switch	ON	Battery voltage

# < ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

Terminal No. (Wire color)		Description				Value	
(+)	(-)	Signal name	Input/ Output	Condition		(Approx.)	
83	Ground	ACC relay control	Output	Ignition switch	OFF	OV	В
(L)				<b>J</b> 11 2	ACC or ON	Battery voltage	_
84 (Y/R)	Ground	CVT shift selector	Output		_	Battery voltage	С
87	Ground	Selector lever P posi-	Input	Selector lever	P position	0V	
(G/B)	Crodina	tion switch	mpat	20.00.01	Any position other than P	Battery voltage	
					ON (pressed)	0V	D
88 (R)	Ground	nd I Inniit I	Front door RH request switch	OFF (not pressed)	(V) 15 10 5 0 JPMIA0016GB 1.0V	E F	
					ON (pressed)	0V	G
89 (R)	Ground	Front door LH request switch	Input	Front door LH request switch	OFF (not pressed)	(V) 15 10 5 0 JPMIA0016GB 1.0V	H
90	Ground	Blower fan motor re-	Output	Ignition switch	OFF or ACC	0V	J
(Y)	Ground	lay control	Juipui	ignition switch	ON	Battery voltage	
91 (L/R)	Ground	Remote keyless entry receiver power supply	Output	Ignition switch OFF		Battery voltage	K

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# < ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

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

# < ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

	inal No. e color)	Description				Value	А						
(+)	(-)	Signal name	Input/ Output		Condition	(Approx.)							
					All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB	ВС						
					Lighting switch AUTO (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0038GB	E F						
96 (P/B)	Ground	Combination switch INPUT 4 Out	Output	Combination switch	Lighting switch 1ST (Wiper intermittent dial 4)	1.3V  (V) 15 10 2 ms  JPMIA0036GB  1.3V	G H						
													Any of the conditions below with all switch OFF  • Wiper intermittent dial 1  • Wiper intermittent dial 5  • Wiper intermittent dial 6

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[XENON TYPE]

	inal No.	Description				Value	
(+)	e color)	Signal name	Input/ Output	Condition		(Approx.)	
	Ground	Combination switch INPUT 2	Output	Combination switch (Wiper intermittent dial 4)	All switch OFF	(V) 15 10 5 0 2 ms JPMIA0041GB	
					Lighting switch flash-to- pass	(V) 15 10 5 0 2 ms JPMIA0037GB	
97 (R/B)					Lighting switch 2ND	(V) 15 10 5 0 2 ms JPMIA0036GB 1.3V	
					Front wiper switch INT	(V) 15 10 5 0 2 ms JPMIA0038GB 1.3V	
					Front wiper switch HI	(V) 15 10 5 0 2 ms JPMIA0040GB 1.3V	
					Pressed	0 V	
98 (G/O)	Ground	Hazard switch	Input	Hazard switch	Not pressed	(V) 15 10 5 0 10 ms JPMIA0012GB 1.1V	

# < ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

Terminal No. (Wire color)		Description				Value	
(+)	(-)	Signal name	Input/ Output	Condition		(Approx.)	
103	Ground	Trunk lid opening.	Output	Trunk lid	Open (trunk lid opener actuator is activated)	Battery voltage	
(V)	Giodila	Trunk ild Opening.	Output	Trunk iid	Close (trunk lid opener actuator is not activated)	0V	
110 (V/W)	Ground	Trunk room lamp	Output	Trunk room lamp	ON	0V	
(V/VV)		•			OFF	Battery voltage	
114	When Intelligent Key is in the passenger compartment		the passenger compart-	(V) 15 10 5 0 1 s  JMKIA0062GB			
114 (B)	Ground	Trunk room antenna 1 (-)	Output	Ignition switch OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 JMKIA0063GB	
115 (W) Ground	Ground	Fround Trunk room antenna 1 (+)	Output	Ignition switch OFF	When Intelligent Key is in the passenger compart- ment	(V) 15 10 0 1 s JMKIA0062GB	
	Glound				When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 JMKIA0063GB	

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[XENON TYPE]

Term	inal No.	Description					
(Wire	e color)	Signal name	Input/ Output		Condition	Value (Approx.)	
118		Rear bumper anten-		When the trunk	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0  JMKIA0062GB	
(L/O)	Ground	na (-)	Output	is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB	
119 (BR/	Ground	Rear bumper anten-	Output	When the trunk lid request switch	When Intelligent Key is in the antenna detection area	(V) 15 10 5 11 s  JMKIA0062GB	
W)	Glound	na (+)	Output	is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB	
127	Craund	Ignition relay (IPDM	Output	lanition quitab	OFF or ACC	Battery voltage	
(BR/ W)	Ground	E/R) control	Output	Ignition switch	ON	0V	
130 (W)	Ground	Trunk room lamp switch	Input	Trunk room lamp switch	OFF (trunk is closed)	(V) 15 10 5 0 10 ms JPMIA0011GB	
					ON (trunk is open)	0V	
132	Ground	Starter motor relay	Output	Ignition switch	When selector lever is in P or N position and the brake is depressed	Battery voltage	
(R)	Cround	control		ON ON	When selector lever is in P or N position and the brake is not depressed	ov	

#### < ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

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	inal No. e color)	Description		Condition		Value	
(+)	(-)	Signal name	Input/ Output	Condition		(Approx.)	
140	Ground	Engine switch (push	Input	Engine switch	Pressed	0V	
(BR)	Cround	switch)	iiipat	(push switch)	Not pressed	Battery voltage	
141 (BR)	Ground	Trunk opener request switch	Input	Trunk opener request switch	ON (pressed)  OFF (not pressed)	(V) 15 10 10 ms JPMIA0016GB	
144	Ground	Request switch buzz-	Output	Request switch	Sounding	0V	
(GR)	Ground	er	Output	buzzer	Not sounding	Battery voltage	
147	Ground	Trunk lid opener	Input	Trunk lid opener	Pressed	0V	
(L/R)	Giodila	switch	iriput	switch	Not pressed	Battery voltage	
148 (R/W)	Ground	Rear door RH switch	Input	Rear door RH switch	OFF (when rear door RH closes)	(V) 15 10 5 0 JPMIA0011GB 11.8V	
					ON (when rear door RH opens)	ov	
149 (R/B)	Ground	Rear door LH switch	Input	Rear door LH switch	OFF (when rear door LH closes)	(V) 15 10 5 0 10 ms JPMIA0011GB	
					ON (when rear door LH opens)	ov	

Fail Safe

Display contents of CONSULT	Fail-safe	Cancellation	
B2190: NATS ANTENNA AMP	Inhibit engine cranking	Erase DTC	
B2191: DIFFERENCE OF KEY	Inhibit engine cranking	Erase DTC	
B2192: ID DISCORD BCM-ECM	Inhibit engine cranking	Erase DTC	
B2193: CHAIN OF BCM-ECM	Inhibit engine cranking	Erase DTC	
B2195: ANTI-SCANNING	Inhibit engine cranking	Erase DTC	
B2560: STARTER CONT RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status has become consistent  • Starter control relay signal  • Starter relay status signal	

# < ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

Display contents of CONSULT	Fail-safe	Cancellation
B2562: LO VOLTAGE	Inhibit engine cranking	100 ms after the power supply voltage increases to more than 8.8 V
B2608: STARTER RELAY	Inhibit engine cranking	500 ms after the following signal communication status becomes consistent  • Starter motor relay control signal  • Starter relay status signal (CAN)
B260A: IGNITION RELAY	Inhibit engine cranking	<ul> <li>500 ms after the following conditions are fulfilled</li> <li>IGN relay (IPDM E/R) control signal: OFF (Battery voltage)</li> <li>Ignition ON signal (CAN to IPDM E/R): OFF (Request signal)</li> <li>Ignition ON signal (CAN from IPDM E/R): OFF (Condition signal)</li> </ul>
B260F: ENG STATE SIG LOST	Maintains the power supply position attained at the time of DTC detection	When any of the following conditions is fulfilled  • Power position changes to ACC  • Receives engine status signal (CAN)
B2617: STARTER RELAY CIRC	Inhibit engine cranking	1 second after the starter motor relay control inside BCM becomes normal
B2618: BCM	Inhibit engine cranking	1 second after the ignition relay (IPDM E/R) control inside BCM becomes normal
B26E1: ENG STATE NO RECIV	Inhibit engine cranking	When any of the following conditions are fulfilled Power position changes to ACC Receives engine status signal (CAN)

# DTC Inspection Priority Chart

INFOID:000000001006990

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

Priority	DTC
1	B2562: LO VOLTAGE
2	U1000: CAN COMM CIRCUIT U1010: CONTROL UNIT (CAN)
3	B2190: NATS ANTENNA AMP B2191: DIFFERENCE OF KEY B2192: ID DISCORD BCM-ECM B2193: CHAIN OF BCM-ECM
4	<ul> <li>B2553: IGNITION RELAY</li> <li>B2555: STOP LAMP</li> <li>B2556: PUSH-BTN IGN SW</li> <li>B2557: VEHICLE SPEED</li> <li>B2560: STARTER CONT RELAY</li> <li>B2601: SHIFT POSITION</li> <li>B2602: SHIFT POSITION</li> <li>B2603: SHIFT POSI STATUS</li> <li>B2604: PNP SWITCH</li> <li>B2605: PNP SWITCH</li> <li>B2608: STARTER RELAY</li> <li>B2608: STARTER RELAY</li> <li>B2607: ENG STATE SIG LOST</li> <li>B2614: ACC RELAY CIRC</li> <li>B2615: BLOWER RELAY CIRC</li> <li>B2615: BLOWER RELAY CIRC</li> <li>B2616: IGN RELAY CIRC</li> <li>B2618: BCM</li> <li>B2618: BCM</li> <li>B2611: ENG STATE NO RECIV</li> <li>C1729: VHCL SPEED SIG ERR</li> <li>U0415: VEHICLE SPEED SIG</li> </ul>

#### < ECU DIAGNOSIS INFORMATION >

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Priority	DTC
5	C1704: LOW PRESSURE FL C1705: LOW PRESSURE FR C1706: LOW PRESSURE RR C1707: LOW PRESSURE RL C1708: [NO DATA] FL C1709: [NO DATA] FR C1710: [NO DATA] FR C1711: [NO DATA] RR C1711: [NO DATA] RR C1711: [CHECKSUM ERR] FL C1712: [CHECKSUM ERR] FR C1713: [CHECKSUM ERR] FR C1714: [CHECKSUM ERR] RR C1715: [CHECKSUM ERR] RR C1716: [PRESSDATA ERR] FL C1717: [PRESSDATA ERR] FR C1718: [PRESSDATA ERR] RR C1718: [PRESSDATA ERR] RR C1719: [PRESSDATA ERR] RR C1719: [CODE ERR] FR C1720: [CODE ERR] FR C1721: [CODE ERR] RR C1722: [CODE ERR] RR C1723: [CODE ERR] RR C1724: [BATT VOLT LOW] FL C1726: [BATT VOLT LOW] FR C1727: [BATT VOLT LOW] RR
6	B2622: INSIDE ANTENNA     B2623: INSIDE ANTENNA

DTC Index

#### NOTE:

Details of time display

- CRNT: Displays when there is a malfunction now or after returning to the normal condition until turning ignition switch OFF → ON again.
- 1 39: Displayed if any previous malfunction is present when current condition is normal. It increases 1 → 2
   → 3...38 → 39 after returning to the normal condition whenever ignition switch OFF → ON. The counter
   remains at 39 even if the number of cycles exceeds it. It is counted from 1 again when turning ignition switch
   OFF → ON after returning to the normal condition if the malfunction is detected again.

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
No DTC is detected. further testing may be required.	_	_	_	_
U1000: CAN COMM CIRCUIT	_	_	_	BCS-32
U1010: CONTROL UNIT (CAN)	_	_	_	BCS-33
U0415: VEHICLE SPEED SIG	_	_	_	BCS-34
B2190: NATS ANTENNA AMP	×	_	_	SEC-37
B2191: DIFFERENCE OF KEY	×	_	_	SEC-40
B2192: ID DISCORD BCM-ECM	×	_	_	SEC-41
B2193: CHAIN OF BCM-ECM	×	_	_	SEC-42
B2553: IGNITION RELAY	_	_	_	PCS-46
B2555: STOP LAMP	_	_	_	SEC-43
B2556: PUSH-BTN IGN SW	_	×	_	SEC-46
B2557: VEHICLE SPEED	×	×	_	SEC-48
B2560: STARTER CONT RELAY	×	×	_	SEC-49

Revision: August 2013 EXL-81 2014 Maxima NAM

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#### < ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
B2562: LOW VOLTAGE	_	_	_	BCS-35
B2601: SHIFT POSITION	×	×	_	<u>SEC-50</u>
B2602: SHIFT POSITION	×	×	_	<u>SEC-53</u>
B2603: SHIFT POSI STATUS	×	×	_	<u>SEC-56</u>
B2604: PNP SWITCH	×	×	_	<u>SEC-59</u>
B2605: PNP SWITCH	×	×	_	<u>SEC-61</u>
B2608: STARTER RELAY	×	×	_	<u>SEC-63</u>
B260A: IGNITION RELAY	×	×	_	PCS-48
B260F: ENG STATE SIG LOST	×	×	_	<u>SEC-65</u>
B2614: ACC RELAY CIRC	_	×	_	PCS-50
B2615: BLOWER RELAY CIRC	_	×	_	PCS-53
B2616: IGN RELAY CIRC	_	×	_	PCS-56
B2617: STARTER RELAY CIRC	×	×	_	<u>SEC-67</u>
B2618: BCM	×	×	_	PCS-59
B261A: PUSH-BTN IGN SW	_	×	_	PCS-60
B2622: INSIDE ANTENNA	_	_	_	DLK-60
B2623: INSIDE ANTENNA	_	_	_	<u>DLK-63</u>
B26E1: ENG STATE NO RES	×	×	_	SEC-66
C1704: LOW PRESSURE FL	_	_	×	<u>WT-43</u>
C1705: LOW PRESSURE FR	_	_	×	<u>WT-43</u>
C1706: LOW PRESSURE RR	_	_	×	<u>WT-43</u>
C1707: LOW PRESSURE RL	_	_	×	<u>WT-43</u>
C1708: [NO DATA] FL	_	_	×	<u>WT-13</u>
C1709: [NO DATA] FR	_	_	×	<u>WT-13</u>
C1710: [NO DATA] RR	_	_	×	<u>WT-13</u>
C1711: [NO DATA] RL	_	_	×	<u>WT-13</u>
C1712: [CHECKSUM ERR] FL	_	_	×	<u>WT-15</u>
C1713: [CHECKSUM ERR] FR	_	_	×	<u>WT-15</u>
C1714: [CHECKSUM ERR] RR	_	_	×	<u>WT-15</u>
C1715: [CHECKSUM ERR] RL	_	_	×	<u>WT-15</u>
C1716: [PRESSDATA ERR] FL	_	_	×	<u>WT-17</u>
C1717: [PRESSDATA ERR] FR	_	_	×	<u>WT-17</u>
C1718: [PRESSDATA ERR] RR	_	_	×	<u>WT-17</u>
C1719: [PRESSDATA ERR] RL	_	_	×	<u>WT-17</u>
C1720: [CODE ERR] FL	_	_	×	<u>WT-15</u>
C1721: [CODE ERR] FR	_	_	×	<u>WT-15</u>
C1722: [CODE ERR] RR	_	_	×	<u>WT-15</u>
C1723: [CODE ERR] RL	_	_	×	<u>WT-15</u>
C1724: [BATT VOLT LOW] FL	_	_	×	<u>WT-15</u>
C1725: [BATT VOLT LOW] FR	_	_	×	<u>WT-15</u>
C1726: [BATT VOLT LOW] RR	_	_	×	<u>WT-15</u>
C1727: [BATT VOLT LOW] RL	_	_	×	<u>WT-15</u>

# < ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
C1729: VHCL SPEED SIG ERR	_	_	×	<u>WT-19</u>
C1734: CONTROL UNIT	_	_	×	<u>WT-20</u>

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< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

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

Reference Value

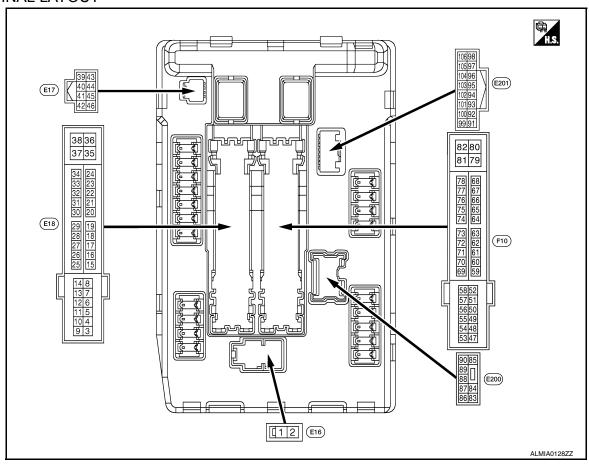
#### VALUES ON THE DIAGNOSIS TOOL

Monitor Item	(	Value/Status	
MOTOR FAN REQ	Engine idle speed	Changes depending on engine coolant temperature, air conditioner operation status, vehicle speed, etc.	1,2,3,4
		A/C switch OFF	Off
AC COMP REQ	Engine running	A/C switch ON (Compressor is operating)	On
TAIL&CLR REQ	Lighting switch OFF		Off
IAIL&ULK KEQ	Lighting switch 1ST, 2ND, HI or	AUTO (Light is illuminated)	On
III I O DEO	Lighting switch OFF		Off
HL LO REQ	Lighting switch 2ND HI or AUTO	(Light is illuminated)	On
III III DEO	Lighting switch OFF		Off
HL HI REQ	Lighting switch HI		On
		Front fog lamp switch OFF	Off
FR FOG REQ	Lighting switch 2ND or AUTO (Light is illuminated)	<ul> <li>Front fog lamp switch ON</li> <li>Daytime running light activated (Only for Canada models)</li> </ul>	On
	Ignition switch ON	Front wiper switch OFF	STOP
ED WID DEO		Front wiper switch INT	1LOW
FR WIP REQ		Front wiper switch LO	Low
		Front wiper switch HI	
		Front wiper stop position	STOP P
WIP AUTO STOP	Ignition switch ON	Any position other than front wiper stop position	ACT P
		Front wiper operates normally	Off
WIP PROT	Ignition switch ON	Front wiper stops at fail-safe operation	BLOCK
ION DIVI DEO	Ignition switch OFF or ACC		Off
IGN RLY1 -REQ	Ignition switch ON	On	
ION DLV	Ignition switch OFF or ACC	Off	
IGN RLY	Ignition switch ON	On	
DUCH CW	Release the push-button ignition	switch	Off
PUSH SW	Press the push-button ignition sy	On	
INITED/ND SVA	Ignition switch ON	CVT selector lever in any position other than P or N	Off
INTER/NP SW	Ignition switch ON CVT selector lever in P or N position		On
CT DLV CONT	Ignition switch ON		Off
ST RLY CONT	At engine cranking		On
IUDI DIV DEO	Ignition switch ON		Off
IHBT RLY -REQ	At engine cranking	On	

< ECU DIAGNOSIS INFORMATION >

Monitor Item	Con	ndition	Value/Status
	Ignition switch ON	Off	
	At engine cranking		ST →INHI
ST/INHI RLY	The status of starter relay or starter the battery voltage malfunction, etc. starter control relay is OFF	UNKWN	
DETENT SW	Ignition switch ON	Press the selector button with CVT selector lever in P position     CVT selector lever in any position other than P	Off
	Release the CVT selector button wi	On	
DTRL -REQ	DTRL ON	On	
DIRL-REQ	DTRL OFF	Off	
OIL P SW	Ignition switch OFF, ACC or engine	Open	
OIL P SW	Ignition switch ON	Close	
	Not operated	Off	
THFT HRN REQ	Panic alarm is activated     Horn is activated with VEHICLE S TEM	On	
HORN CHIRP	Not operated	Off	
HUKN UTIKP	Door locking with Intelligent Key (ho	orn chirp mode)	On

#### TERMINAL LAYOUT



PHYSICAL VALUES

**EXL-85** Revision: August 2013 2014 Maxima NAM Α

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< ECU DIAGNOSIS INFORMATION >

	inal No.	Description				Value
+ (Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)
1 (R)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
2 (L)	Ground	Battery power supply	Input	Ignition sw	itch OFF	Battery voltage
4 (LG)	Ground	Front wiper LO	Output	Ignition switch ON	Front wiper switch OFF Front wiper switch LO	0 V Battery voltage
5 (Y)	Ground	Front wiper HI	Output	Ignition switch ON	Front wiper switch OFF	0 V
6	Ground	Daytime light relay power supply (Canada models	Output	Ignition sw	Front wiper switch HI	Battery voltage  Battery voltage
(L) 7	Ground	only) Tail, license plate lamps &	Output	Ignition	Lighting switch OFF	0 V
(GR)		interior lamps		switch ON	Lighting switch 1ST	Battery voltage
10				Ignition swi (For a few s switch OFF	seconds after turning ignition	0 V
(BR)	Ground	ECM relay power supply	Output	Ignition s     (More the	switch ON switch OFF an a few seconds after turn- on switch OFF)	Battery voltage
12 (B)	Ground	Ground	_	Ignition sw	itch ON	0 V
13				Approximately 1 second or more after turning the ignition switch ON		0 V
(SB)	Ground	Fuel pump power supply	Output		nately 1 second after turning on switch ON unning	Battery voltage
15	Ground	Ignition relay-1 power sup-	Output	Ignition sw	itch OFF	0 V
(W)	Ground	ply	Output	Ignition sw	itch ON	Battery voltage
16				Ignition	Front wiper stop position	0 V
(R)	Ground	Front wiper auto stop	Input	switch ON	Any position other than front wiper stop position	Battery voltage
19	Ground	Ignition relay-1 power sup-	Output	Ignition sw		0 V
(Y)		ply		Ignition sw	itch ON	Battery voltage
20 (L)	Ground	Ambient sensor ground	_	Ignition sw	itch ON	ov
21 (LG)	Ground	Ambient sensor	_	Ignition switch ON		5V
22 (SB)	Ground	Refrigerant pressure sensor ground	_	Ignition switch ON		ov
23 (GR)	Ground	Refrigerant pressure sensor	_	Ignition switch ON (READY)     Both A/C switch and blower motor switch ON (electric compressor operates)		1.0 - 4.0V
24 (G)	Ground	Refrigerant pressure sensor power supply	_	Ignition sw	itch ON	5V
25 (GR)	Ground	Ignition relay-1 power sup- ply	Output	Ignition sw		0 V Battery voltage
				3		, - 3 -

< ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)					Value	
(Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)
27 (W)	Ground	Ignition relay monitor	Input	Ignition swi	itch OFF or ACC	Battery voltage 0 V
28 (SB)	Ground	Push-button ignition switch	Input	Press the p	oush-button ignition switch	0 V
30				CVT select	e push-button ignition switch or lever in any position other I (ignition switch ON)	Battery voltage  0 V
(BR)	Ground	Starter relay control	Input	CVT select switch ON)	or lever P or N (ignition	Battery voltage
34 (O)	Ground	Cooling fan relay-3 control	Input	Ignition swi	itch OFF or ACC	0 V 0.7 V
35 (P)	Ground	Cooling fan motor control	Output	Ignition swi	itch OFF or ACC	0 V 0.7 V
36 (G)	Ground	Battery power supply	Input	Ignition swi	itch OFF	Battery voltage
38 (GR)	Ground	Cooling fan motor control	Output	Ignition swi	itch OFF or ACC	0 V 0.7 V
39 (P)	_	CAN - L	Input/ Output	_		_
40 (L)	_	CAN - H	Input/ Output	_		
41 (B)	Ground	Ground	_	Ignition swi	itch ON	0 V
42 (SB)	Ground	Cooling fan relay-2 control	Input	Ignition swi	itch OFF or ACC	0 V 0.7 V
					Press the CVT selector button (CVT selector lever P)	Battery voltage
43 (Y)	Ground	CVT shift selector (Detention switch)	Input	Ignition switch ON	CVT selector lever in any position other than P     Release the CVT selector button (CVT selector lever P)	0 V
44 (W)	Ground	Horn relay control	Input	The horn is	deactivated sactivated	Battery voltage 0 V
45 (GR)	Ground	Anti theft horn relay control	Input		deactivated	Battery voltage 0 V
46 (BR)	Ground	Starter relay control	Input	CVT selector lever in any position other than P or N (ignition switch ON)		0 V
(511)				switch ON)		Battery voltage
48 (W)	Ground	A/C relay power supply	Output	Engine running	A/C switch OFF  A/C switch ON (A/C compressor is operating)	0 V  Battery voltage

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< ECU DIAGNOSIS INFORMATION >

	inal No.	Description				Value
+ (vvire	e color)	Signal name	Input/ Output		Condition	(Approx.)
49				Ignition swi (For a few s switch OFF	seconds after turning ignition	0 V
(R/B)	Ground	ECM relay power supply	Output	Ignition s     (More that	switch ON switch OFF an a few seconds after turn- on switch OFF)	Battery voltage
51	Ground	Ignition relay power supply	Output	Ignition swi	itch OFF	0 V
(LG)	Cround	igiliaan ralay pawar aappiy	Catpat	Ignition swi	itch ON	Battery voltage
52	Ground	Ignition relay power supply	Output	Ignition swi	itch OFF	0 V
(Y/G)	0.00	ig.iii.oii. roidy porroi ouppi,		Ignition swi	itch ON	Battery voltage
<b>E</b> 2				Ignition swi (For a few s switch OFF	seconds after turning ignition	0 V
53 (R/W)	Ground	ECM relay power supply	Output			Battery voltage
ΕΛ			Ignition switch OFF  (For a few seconds after turning ignition switch OFF)	seconds after turning ignition	0 V	
54 (G/W)		Output	Ignition s     (More that	switch ON switch OFF an a few seconds after turn- on switch OFF)	Battery voltage	
55 (W/L)	Ground	ECM power supply	Output	Ignition switch OFF		Battery voltage
56	Cround	lanition roley newer cumply	Output	Ignition switch OFF		0 V
(R/Y)	Ground	Ignition relay power supply	Output	Ignition swi	itch ON	Battery voltage
57	Ground	Ignition relay power supply	Output	Ignition swi	itch OFF	0 V
(O)	Cround	ignition roley power supply	Output	Ignition swi	itch ON	Battery voltage
58	Ground	Ignition relay power supply	Output	Ignition swi		0 V
(Y)		3	- 15 414	Ignition swi		Battery voltage
69				Ignition swi (For a few s switch OFF	seconds after turning ignition	Battery voltage
69 (W/B)	Ground	ECM relay control	Output	Ignition s     (More that	switch ON switch OFF an a few seconds after turn- on switch OFF)	0 - 1.5 V
						0 -1.0 V
70 (O)	Ground	Throttle control motor re- lay control	Output	Ignition switch ON → OFF		↓ Battery voltage ↓ 0 V
				Ignition swi	itch ON	0 - 1.0 V
72		Transmission range switch		Ignition	CVT selector lever in P or N position	Battery voltage
(R/B)	Ground	Transmission range switch signal	Input	switch ON	CVT selector lever in any position other than P or N position	0 V

< ECU DIAGNOSIS INFORMATION >

Terminal No. Description					Value						
(Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)					
75	Ground	Oil pressure switch	Input	Ignition	Engine stopped	0 V					
(LG)	Oround	On pressure switch	IIIput	switch ON	Engine running	Battery voltage					
				Ignition switch ON		(V) 6 4 2 0 2 2ms JPMIA0001GB 6.3 V					
76 (SB)	Ground	Power generation command signal	Output	Output	Output	Output	Output	Output		on "Active test", "ALTERNA- " of "ENGINE"	(V) 6 4 2 0 2 2 2 2 3.8 V
					on "Active test", "ALTERNA- " of "ENGINE"	(V) 6 4 2 0 ■ 2ms JPMIA0003GB 1.4 V					
77 (GR)	Ground	Fuel pump relay control	Output		nately 1 second after turning on switch ON unning	0 - 1.0 V					
(OII)					tely 1 second or more after ignition switch ON	Battery voltage					
80 (B)	Ground	Starter motor	Output	At engine of	cranking	Battery voltage					
83	0	Headless I O (DII)	0	Ignition	Lighting switch OFF	0 V					
(R/Y)	Ground	Headlamp LO (RH)	Output	switch ON	Lighting switch 2ND	Battery voltage					
84	Ground	Headlamp LO (LH)	Output	Ignition	Lighting switch OFF	0 V					
(L)	Ground	Headiallip LO (LFI)	Output	switch ON	Lighting switch 2ND	Battery voltage					
86 (W/R)	Ground	Front fog lamp (RH)	Output	Lighting switch 2ND	Front fog lamp switch     ON     Daytime running light     activated (Only for Canada models)	Battery voltage					
					Front fog lamp switch OFF	0 V					
		Front fog lamp (LH)	Output	Lighting switch	Front fog lamp switch     ON     Daytime running light	Battery voltage					
87 (L/Y)	Ground	Tront log lamp (EIT)	Output	2ND	activated (Only for Canada models)						

< ECU DIAGNOSIS INFORMATION >

	inal No.	Description				Value	
+ (Wire	e color)	Signal name	Input/ Output	Condition		(Approx.)	
88 (R/W)	Ground	Washer pump power supply	Output	Ignition swi	itch ON	Battery voltage	
89 (L/W)	Ground	Headlamp HI (RH)	Output	Ignition switch ON	Lighting switch HI     Lighting switch PASS	Battery voltage	
(L/VV)				SWILCH ON	Lighting switch OFF	0 V	
90 (G)	Ground	Headlamp HI (LH)	Output	Ignition switch ON	Lighting switch HI     Lighting switch PASS	Battery voltage	
(G)				SWILCH ON	Lighting switch OFF	0 V	
91		Parking lamp (RH)		Ignition	Lighting switch 1ST	Battery voltage	
(LG/ R)	Ground	Side marker lamp (RH)	Output	switch ON	Lighting switch OFF	0 V	
92		Parking lamp (LH)		Ignition	Lighting switch 1ST	Battery voltage	
(LG/ B)	Ground	Side marker lamp (LH)	Output	switch ON	Lighting switch OFF	0 V	
99 (BR/ W)	Ground	Ambient sensor ground	_	Ignition switch ON		0V	
100 (SB)	Ground	Ambient sensor	_	Ignition swi	itch ON	5V	
101 (W)	Ground	Refrigerant pressure sensor ground	_	Ignition swi	itch ON	0V	
102 (R)	Ground	Refrigerant pressure sensor	_	Ignition switch ON (READY)     Both A/C switch and blower motor switch ON (electric compressor operates)		1.0 - 4.0V	
103 (P)	Ground	Refrigerant pressure sensor power supply	_	Ignition switch ON		5V	
105	Ground	Daytime light relay control	Outro 1	Ignition switch ON	Daytime light system active	Battery voltage	
(V)	Giodila	(Only for Canada models)	Output	Ignition switch ON	Daytime light system inactive	0 V	

Fail Safe INFOID:0000000010069907

#### CAN COMMUNICATION CONTROL

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

If No CAN Communication Is Available With ECM

Control part	Fail-safe in operation
Cooling fan	<ul> <li>Signals cooling fans ON when the ignition switch is turned ON</li> <li>Signals cooling fans OFF when the ignition switch is turned OFF</li> </ul>
A/C compressor	A/C relay OFF
Generator	Outputs the power generation command signal (PWM signal) 0%

If No CAN Communication Is Available With BCM

< ECU DIAGNOSIS INFORMATION >

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

#### IGNITION RELAY MALFUNCTION DETECTION FUNCTION

- IPDM E/R monitors the voltage at the contact circuit and excitation coil circuit of the ignition relay-1 inside it.
- IPDM E/R judges the ignition relay-1 error if the voltage differs between the contact circuit and the excitation coil circuit.
- If the ignition relay-1 cannot turn OFF due to contact seizure, it activates the tail lamp relay for 10 minutes to alert the user to the ignition relay-1 malfunction when the ignition switch is turned OFF.

DTC	Ignition switch	Ignition relay-1	Tail lamp relay
_	ON	ON	_
_	OFF	OFF	_
B2098: IGN RELAY ON	OFF	ON	ON (10 minutes)
B2099: IGN RELAY OFF	ON	OFF	_

#### NOTE:

The tail lamp turns OFF when the ignition switch is turned ON.

#### FRONT WIPER CONTROL

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

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

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

#### NOTE:

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

#### STARTER MOTOR PROTECTION FUNCTION

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

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< ECU DIAGNOSIS INFORMATION >

DTC Index INFOID:0000000010069908

CONSULT display	Fail-safe	TIME	NOTE	Refer to
No DTC is detected. further testing may be required.	_	_	_	_
U1000: CAN COMM CIRCUIT	×	CRNT	1 – 39	PCS-15
B2098: IGN RELAY ON	×	CRNT	1 – 39	PCS-16
B2099: IGN RELAY OFF	_	CRNT	1 – 39	PCS-17
B210B: START CONT RLY ON	_	CRNT	1 – 39	<u>SEC-69</u>
B210C: START CONT RLY OFF	_	CRNT	1 – 39	<u>SEC-72</u>
B210D: STARTER RELAY ON	_	CRNT	1 – 39	<u>SEC-72</u>
B210E: STARTER RELAY OFF	_	CRNT	1 – 39	<u>SEC-74</u>
B210F: INTRLCK/PNP SW ON	_	CRNT	1 – 39	<u>SEC-76</u>
B2110: INTRLCK/PNP SW OFF	_	CRNT	1 – 39	SEC-78

#### NOTE:

The details of TIME display are as follows.

- CRNT: The malfunctions that are detected now
- 1 39: The number is indicated when it is normal at present and a malfunction was detected in the past. It increases like  $0 \rightarrow 1 \rightarrow 2 \cdots 38 \rightarrow 39$  after returning to the normal condition whenever IGN OFF  $\rightarrow$  ON. It is fixed to 39 until the self-diagnosis results are erased if it is over 39. It returns to 0 when a malfunction is detected again in the process.

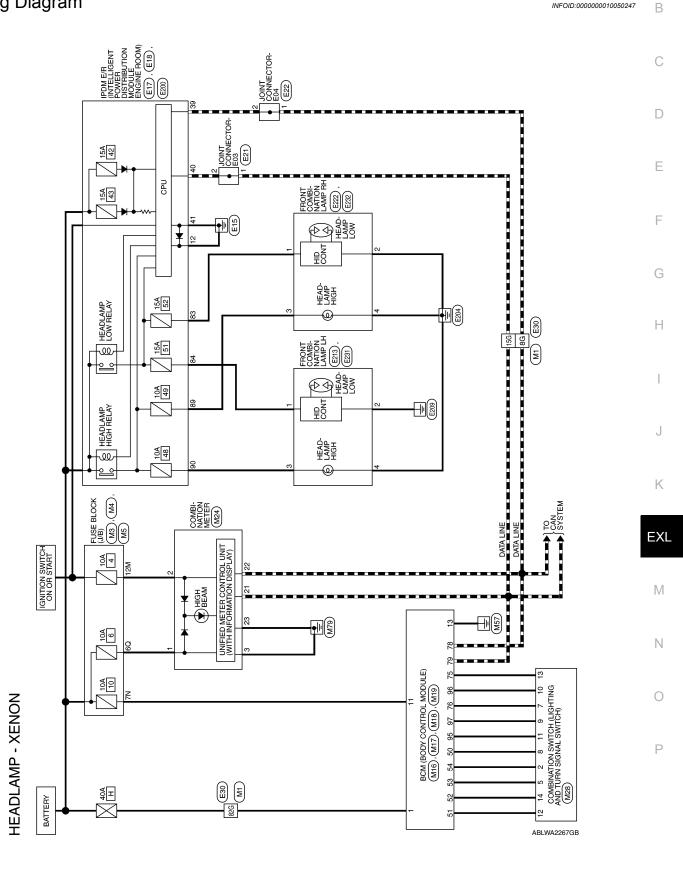
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INFOID:0000000010050247

# WIRING DIAGRAM

**HEADLAMP** 

Wiring Diagram



Connector Name | BCM (BODY CONTROL MODULE)

Connector Name FUSE BLOCK (J/B)
Connector Color WHITE

Connector Name FUSE BLOCK (J/B)
Connector Color WHITE

BLACK

Connector Color

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E

Signal Name BATT (F/L)

Color of Wire

Terminal No.

Signal Name

Color of Wire

Terminal No.

Signal Name

Color of Wire

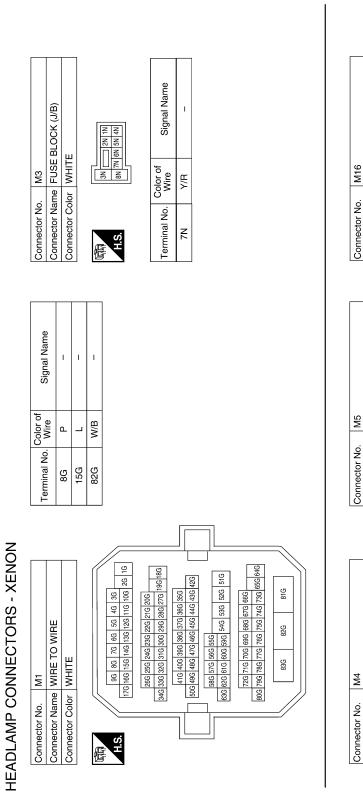
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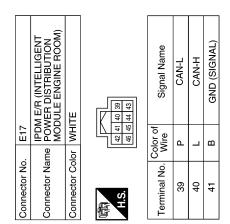
Connector No.	o. M17		Connector No.	Jo. M18	8	ပိ	Connector No.	M19	
nector Na	ame BCM (BOD)	Connector Name BCM (BODY CONTROL MODULE)	Connector N	Jame BC (B(	Connector Name BCM (BODY CONTROL MODULE)	ပိ	nnector Nar	ne BCM (BOD)	Connector Name BCM (BODY CONTROL MODULE)
Connector Color	olor WHITE	Ш	Connector Color GREEN	color GF	EEN	႘ိ	Connector Color	or BLACK	×
	4 5 6 7	8 9 10							
H.S.	11 12 13 14 15	2 16 17 18 19	H.S.				H.S.		
			39 38 37 36 38 59 58 57 56 58	35 34 33 32 55 54 53 52	31 30 29 28 27 26 25 24 23 22 22 25 35 36 36 36 36 36 36 36 36 36 36 36 36 36		78 77 87 98 97	76 76 74 73 72 71 96 96 95 94 93 92 91 9	70 69 68 67 66 65 64 63 62 61 89 99 99 99 89 87 86 85 84 83 82 81
Terminal No.	Color of Wire	Signal Name	Terminal No.	Color of Wire	of Signal Name	Te	erminal No.	Color of Wire	Signal Name
=	Y/R	BAT BCM FUSE	20	LG/B	INPUT 5		75	Ρ/Υ	OUTPUT 5
13	В	GND1	51	3	INPUT 1		92	R/G	OUTPUT 3
			52	G/B	INPUT 2		78	۵	CAN-L
			53	LG/R	INPUT 3		79	_	CAN-H
			54	کر اک	INPUT 4		95	B/W	OUTPUT 1
							96	P/B	OUTPUT 4
							26	B/B	OITPITS

Signal Name	BAT	NSI	GND (POWER)	CAN-H	CAN-L	GND (CIRCUIT)
Color of Wire	Y/R	0	В	٦	Ь	В
Terminal No.	-	2	3	21	22	23

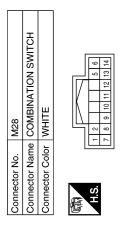
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				17	37
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Connector No.	Connector Name COMBINATION METER	Connector Color WHITE	停工	-	2
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	13 14	8	ıl
	5	ಜ	ıl
- 117	12	32	ıl
IV.	Ε	8	ıl
- 11	우	30	ıl
	6	83	ıl
	80	88	ıl
	7	27	ıl
	9	28	ıl
	2	25	ıl
	4	24	ıl
	က	23	ıl
H.S.	2	22	ıl
4	-	21	

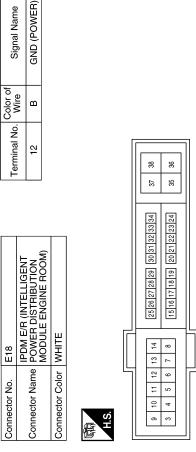
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Signal Name	1	I	_	ı	-	_	_	1	-	_
Color of Wire	G/Y	LG/R	R/G	LG/B	R/B	P/B	R/W	L/W	R/Υ	G/B
Terminal No.	2	5	7	8	6	10	11	12	13	14



Connector No.	). E21	
Connector Na	Ime JOIN	Connector Name JOINT CONNECTOR-E03
Connector Color WHITE	olor WHIT	Е
原列 H.S.	4 3 2	2 1 0
Terminal No.	Color of Wire	Signal Name
1	٦	ı
2	٦	ı



**HEADLAMP** 

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Signal Name	ı	1	1											
Color of Wire	۵		P											
Terminal No.	8G	15G	82G											
Connector No. E30	Connector Color WHITE			H.S. 10 26 100 110 120 130 140 150 150 160 170 160 170 170 170 170 170 170 170 170 170 17	206 216 226 230 246 256 286	18 <sup>cd</sup> 18 <sup>cd</sup> 27 <sup>c</sup> 28 <sup>cd</sup> 29 <sup>cd</sup> 30 <sup>c</sup> 31 <sup>c</sup> 32 <sup>c</sup> 33 <sup>c</sup> 34 <sup>c</sup>	35G 36G 37G 38G 39G 40G 41G	42G   43G   44G   45G   46G   48G   49G   50G	55G 50G 57G 58G	200	66G 67G 68G 69G 70G 71G 72G	64G 65G 73G 74G 75G 77G 77G 78G 79G 80G	81G 82G 83G	
Connector No. E22 Connector Name JOINT CONNECTOR-F04		1			Signal Name	I	I							
). E22	lor WHIT		4		Color of Wire	۵	Д							
Connector No.	Connector Color WHITE		<b>E</b>	H.S.	Terminal No.	-	2							

Connector No.	E200		Connector No.	). E213		Connector No.	. E222	
tor Nam	ne POW	Connector Name POWER DISTRIBUTION MODULI FINGINE BOOM	Connector Na	ame FRONT CC LAMP LH	Connector Name FRONT COMBINATION LAMP LH	Connector Na	FRONT	Connector Name LAMP RH (WITHOUT
tor Colc	Connector Color WHITE	TE	Connector Color   BLACK	olor BLACK		Connector Color BLACK	lor BLACK	מר בומון כוס בואו
	90 89 8	88 67 88 89 70 88	H.S.	<u> </u>		高 H.S.		
Terminal No. Wire	Solor of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name	Terminal No. Wire	Color of Wire	Signal Name
83	Ργ	HEADLAMP LO RH	က	g	ı	က	M	ı
84	_	HEADLAMP LO LH	4	В	1	4	ш	ı
89	<b>M</b>	HEADLAMP HI RH						
06	5	HEADLAMP HI LH						

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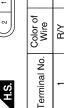
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E232	FRONT COMBINATION LAMP RH (WITH XENON HEADLAMP SYSTEM)	GRAY
Connector No.	Connector Name	Connector Color GRAY





Signal Name

Color of Wire	R/Υ	В	
Terminal No.	-	2	

Connector No. E231	Connector Name LAMP LH (WITH XENON HEADLAMP SYSEM)	Connector Color GRAY
Conne	Conne	Conne







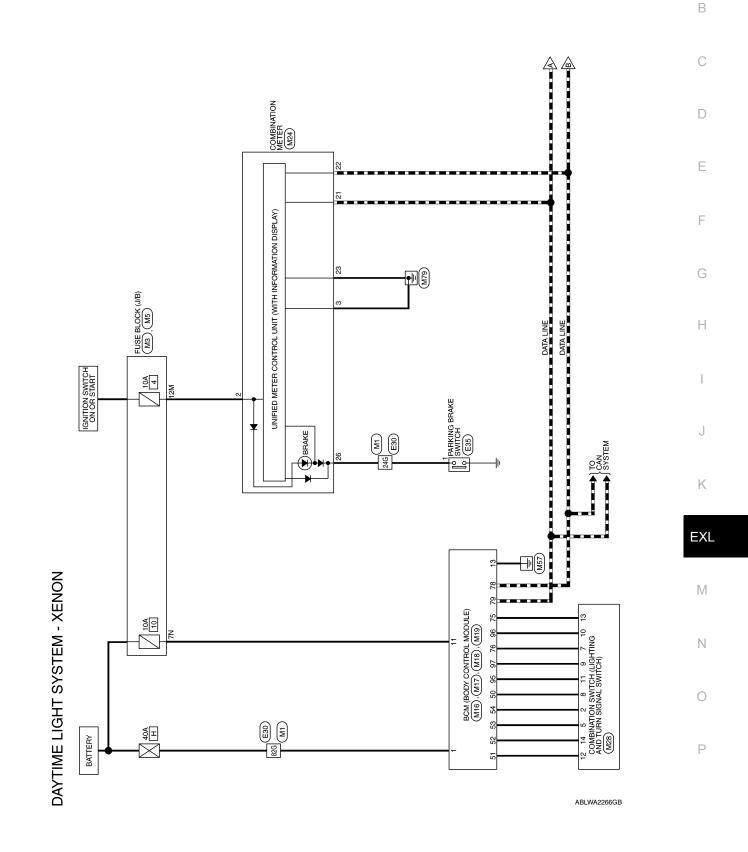
Signal	I	_
Color of Wire	٦	В
Terminal No.	1	2

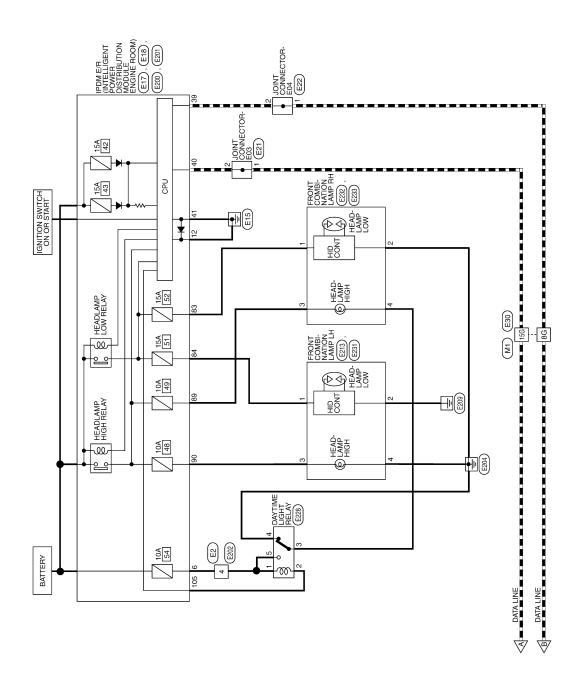
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# DAYTIME RUNNING LIGHT SYSTEM

Wiring Diagram





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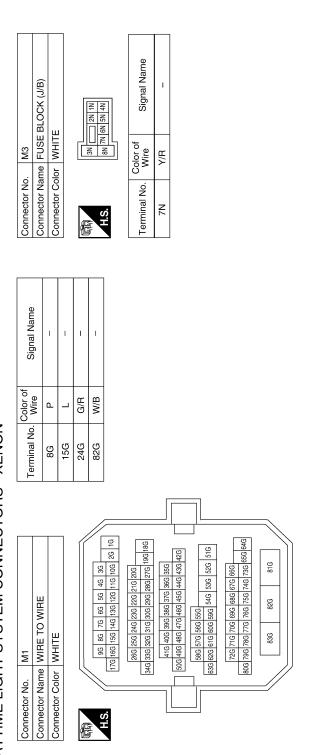
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# DAYTIME LIGHT SYSTEM CONNECTORS - XENON



Connector Color WHITE  SM 4M	Connector No. M16 Connector Name BCM (BODY Connector Color BLACK	ime BCM (BODY)	M16 BCM (BODY CONTROL MODULE) BLACK	Connector Name BCM (BODY Connector Color WHITE	. M17 me BCM (BOD) lor WHITE	M17 BCM (BODY CONTROL MODULE) WHITE
<b>-</b> 7	H.S.			uj	1 12 13 14 15	11 12 13 14 15 16 17 18 19
Signal Name	Terminal No. Wire	Color of Wire	Signal Name	Terminal No. Wire	Color of Wire	Signal Name
1	-	M/B	BATT (F/L)	<del>-</del>	Y/R	BAT BCM FUSE
				13	В	GND1

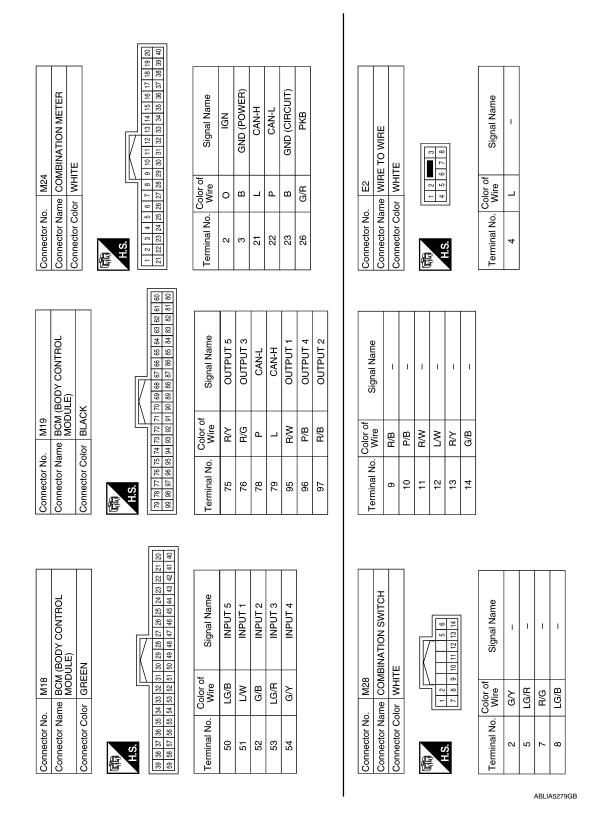
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	Connector No.	E18	Teriminal No	Color of	Signal Namo
Connector Name POWER DISTRIBUTION	Connector Name	Connector Name POWER DISTRIBUTION	9	Wire	DTRL/DEICER
MODULE ENGINE HOOM) Connector Color WHITE	Connector Color	MODULE ENGINE ROOM) WHITE	12	В	GND (POWER)
42 41 40 38 46 45 44 43	所 H.S.				
Terminal No. Wire Signal Name	9 10 11 12	13 14 25 26 27 28 29  30 31 32 33 34  7 8			
39 P CAN-L		-	35 36		
40 L CAN-H				_	
41 B GND (SIGNAL)					

	Connector Name JOINT CONNECTOR-E04	ш	2 1 0	Signal Name	-	_
E22	ne JOINT	or WHITE	[] 4 3 2	Color of Wire	Д	Ь
Connector No.	Connector Nar	Connector Color WHITE	呵呵 H.S.	Terminal No.	1	2

Connector Name JOINT CONNECTOR-E03	ш		Signal Name	-	-	
TOIN at	v WHIT	0 4 3 2 1	Color of Wire	Т	٦	
Connector Nan	Connector Color WHITE	原 H.S.	Terminal No.	F	2	

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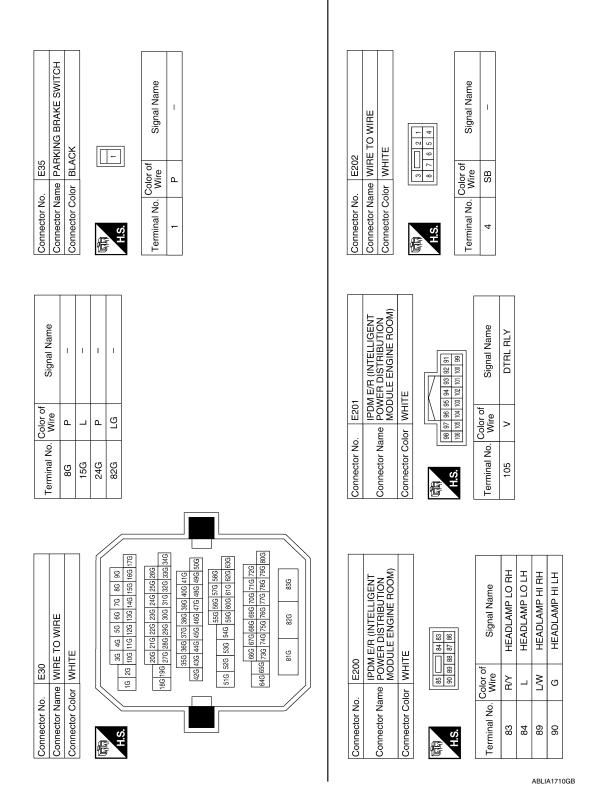
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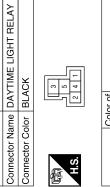
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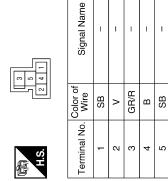
Connector No.	E231
Connector Name	Connector Name LAMP LH (WITH XENON HEADLAMP SYSTEM)
Connector Color GRAY	GRAY

_			
	Signal Name	-	1
	Color of Wire	Г	В
H.S.	Terminal No.	1	2
		1	2 B



E228

Connector No.



Connector No.	. E213	
Connector Na	me FRONT C	Connector Name   FRONT COMBINATION   LAMP LH
Connector Color BLACK	lor BLAC	>
咸功 H.S.		
Terminal No.	Color of Wire	Signal Name
3	9	_
4	В	I

	FRONT COMBINATION LAMP RH (WITH DAYTIME LIGHT SYSTEM)	Y		Signal Name	_	_
E233		BLACK		Color of Wire	Γ/W	GR/R
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	8	7

~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	H.S. Color of Signal Nam	
	Color of Wire	Color of Wire R/Y

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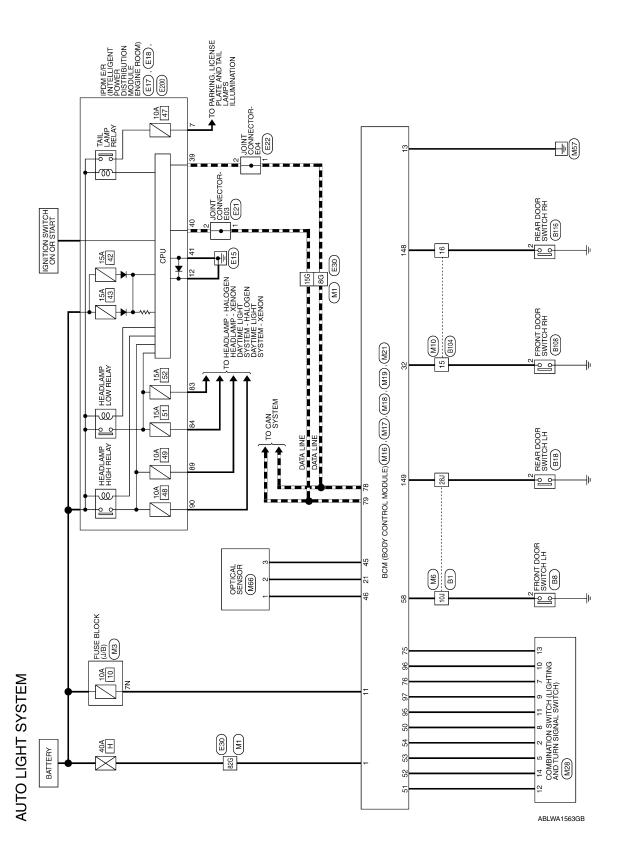
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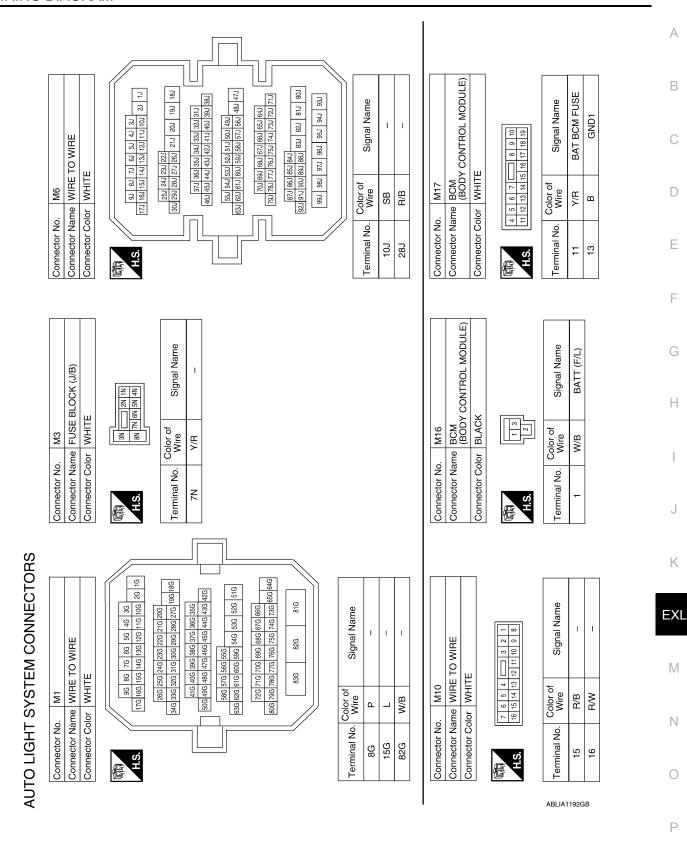
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# **AUTO LIGHT SYSTEM**

Wiring Diagram





					61 60 81 80									
	BCM (BODY CONTROL MODULE)	*			70 69 68 67 66 65 64 63 62 6 90 89 88 87 86 85 84 83 82 8	Signal Name	OUTPUT 5	OUTPUT 3	CAN-L	CAN-H	OUTPUT 1	OUTPUT 4	OUTPUT 2	
M19		or BLACK			74 73 72 71 94 93 92 91	Color of Wire	₽Y	R/G	۵	٦	₩,	P/B	B/B	
Connector No.	Connector Name	Connector Color	唇	H.S.	79 78 77 76 75 79 99 99 99 99	Terminal No.	75	92	78	62	96	96	26	

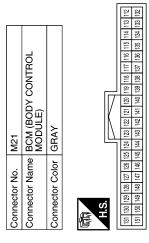
Signal Name	OUTPUT 5	OUTPUT 3	CAN-L	CAN-H	OUTPUT 1	OUTPUT 4	OUTPUT 2	
Color of Wire	R/Y	B/G	۵	٦	W/A	P/B	B/B	
Terminal No.	75	9/	78	62	95	96	26	
								,

Signal Name	1 1	-	I
10 1 1 1 1 1 1 1	W. Y.	R/Υ	G/B
II No.	11 12	13	41

Signal Name	A/L SIGNAL TYPE 1	AS DOOR SW 1	GND RF2 A/L	A/L POWER SUPPLY 5V	S TUPNI	INPUT 1	INPUT 2	$\epsilon$ luani	4 TUPUT	DR DOOR SW
Color of Wire	P/B	R/B	Ь	W/W	LG/B	$\sim$	G/B	LG/R	G/Y	SB
Terminal No.	21	32	45	46	20	51	52	53	54	58

	COMBINATION SWITCH					
	S			9	14	١
	z		닏	2	10 11 12 13 14	
	≌		117		12	
	₹		W		11	
	冒	щ	IN.		10	
8	≥	F	$\Pi$		6	
M28	8	WHITE		2	8	
				-	7	l
r No.	r Name	r Color	•			

Connector No.	M18
Connector Name	Connector Name BCM (BODY CONTROL MODULE)
Connector Color   GREEN	GREEN
管	
HS	
39 38 37 36 35 34 33 32 31 30	3 32 31 30 29 28 27 26 25 24 23 22 21 20
59 58 57 56 55 54 5	56 55 54 53 52 51 50 49 48 47 46 45 44 43 42 41 40



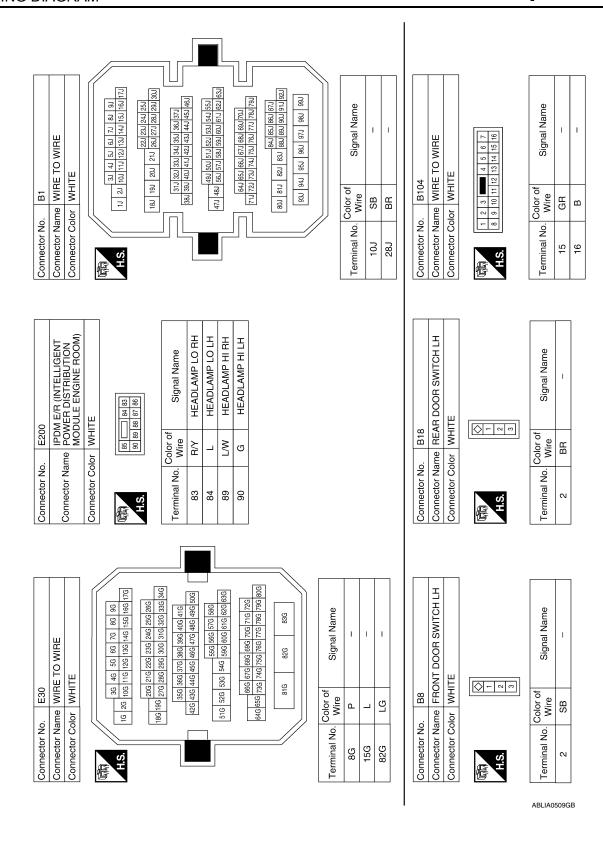
	13 112	133 132				
	114	134				
	115	135				
	116 115	136	Ф	≥	≥	
	117	137	Signal Name	RR DOOR SW	RL DOOR SW	
	118	138	Ž	Ö	9	
긭	119	139	nal	18	8	
-117	120	148 147 146 145 144 143 142 141 140	Sig	<u>~</u>	7	
IV	121	7	",		<u>a</u>	
$\Pi$	123	142				
$\prod$	123	143	4-			
$\Box$	125 124 123	7	Color of Wire	≥	В	
	125	45	응호	₩ W	R/B	
	126	146	0			
	127	147	ું			
	128	₩	=		6	
ιĠ	129	149	<u>.</u> ≝	148	149	
Ξ.S.	130	150	Terminal No.			
	₽	151	_ ≝			

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88 88		А
37		В
SENT (10N (200M) (20) (32) (33) (34) (19) (20) (21) (22) (23) (24)	MI MI EE)	С
POWER DISTRIBUTION MODULE ENGINE ROOM) WHITE    14   14	Signal Name  TAIL/ILLUMI  GND (POWER)	D
	Color of Wire GR GR B	Е
Connector Name Connector Color H.S.  8 10 11 12 8 1 5 6	Terminal No.	F
L NOO	e 6 (-1) e 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	G
PDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) WHITE	or of Signal Name P CAN-L L CAN-H B GND (SIGNAL) WHITE    4   3   2   1	Н
		I
Connector No.  Connector Name Connector Color H.S.	Connector No.   Connector No.   Connector Name   Connector Name   Connector Color   Connector	J K
AL SENSOR	Signal Name	EXL
M66 Ne OPTICA Net I 2 3	§   >   a   a   a   a   a   a   a   a   a	
Connector No. M66 Connector Name OPTICAL SENSOR Connector Color WHITE	Connector No.  Connector Name Connector Color  Connector Color  Connector Color  Connector Color  Terminal No.  Color  Color  Connector Color	N O
<u> </u>	ABLIA5266GB	

**EXL-109** Revision: August 2013 2014 Maxima NAM



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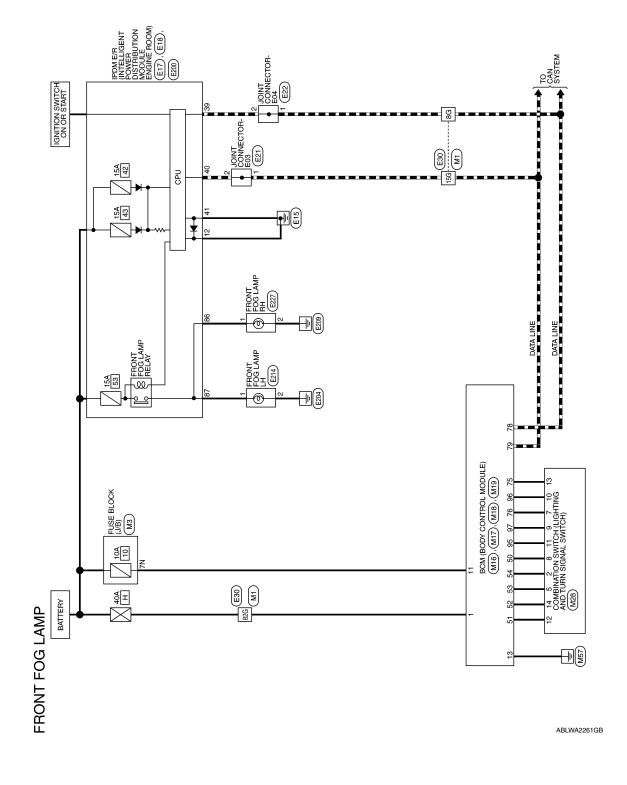
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9	REAR DOOR SWITCH RH	ΠE		Signal Name	I
. B116	me RE,	lor WH		Color of Wire	В
Connector No.	Connector Name	Connector Color WHITE	原 H.S.	Terminal No.	2

Connector Name FRONT DOOR SWITCH RH Connector Color WHITE
Color of Wire
GR.

# FRONT FOG LAMP SYSTEM

Wiring Diagram



Connector No. M3 Connector Name FUSE BLOCK (J/B) Connector Color WHITE  NHITE  NHITE  Signal Name  7N Y/R -	Connector No.   M18   School   M18   Connector Name   BCM   (BODY CONTROL MODULE)   Connector Color   GREEN   School   GREEN   GREE	A B C D
Terminal No.         Color of Wire         Signal Name           8G         P         -           15G         L         -           82G         W/B         -	Connector Name   BCM   RODDY CONTROL MODULE   RODDY CONTROL MODULE   RODDY CONTROL MODULE   RODDY CONNECTOR   RODDY CONTROL MODULE   RODDY CONTROL MODULE   RODDY CONTROL MODULE   RODDY CONTROL MODULE   RODDY CONTROL   RO	F G H
Connector Name   WIRE TO WIRE	Connector No. M16 Connector Name BCM (BODY CONTROL MODULE) Connector Color BLACK  Terminal No. Wire Signal Name  1 W/B BATT (F/L)	K  EXL  M  N

VITCH  Connector Name   IPDM E/R (INTELLIGENT Connector Name   POWER DISTRIBUTION MODULE ENGINE ROOM)  Connector Color   WHITE	SH.	46, 45, 44, 43	ame Color of Signal Name	39 P CAN-L	40 L CAN-H	41 B GND (SIGNAL)								ame Connector No.   E21	MER)  Connector Name JOINT CONNECTOR-E03 Connector Color   WHITE	ą	(原列 H.S.		Terminal No. Wire Signal Name	1	Z
Connector No. M28 Connector Name COMBINATION SWITCH Connector Color WHITE	H.S. 7 8 9 10 11 12 13 14		Terminal No.   Color of   Signal Name	2 G/Y –	5 LG/R –	7 R/G –	8 LG/B –	9 R/B –	10 P/B –	11 R/W –	12 L/W -	13 R/Y –	14 G/B –	Color of Col	B 8					37 38	35 36
M19 BCM (BODY CONTROL MODULE) BLACK		22 51 70 69 68 67 86 65 64 83 82 61 60 22 91 90 89 88 87 86 85 64 83 82 81 80	r of Signal Name	7 OUTPUT 5	a OUTPUT 3	CAN-L	CAN-H	V OUTPUT 1	3 OUTPUT 4	3 OUTPUT 2				E18	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)	WHITE				14 25[26[27]28[29] 30[31]32[33[34]	8 15 16 17 18 19 20 21 22 23 24
Connector No.  Connector Name BK  Connector Color BI	咸南 H.S.	79 78 77 76 75 74 73 77 97 99 99 99 99 99	Terminal No. Wire	75 R/Y	76 R/G	78 P	7 6Z	95 R/W	96 P/B	97 R/B				Connector No.	Connector Name PC	Connector Color W		H.S.		9 10 11 12 13	3 4 5 6 7

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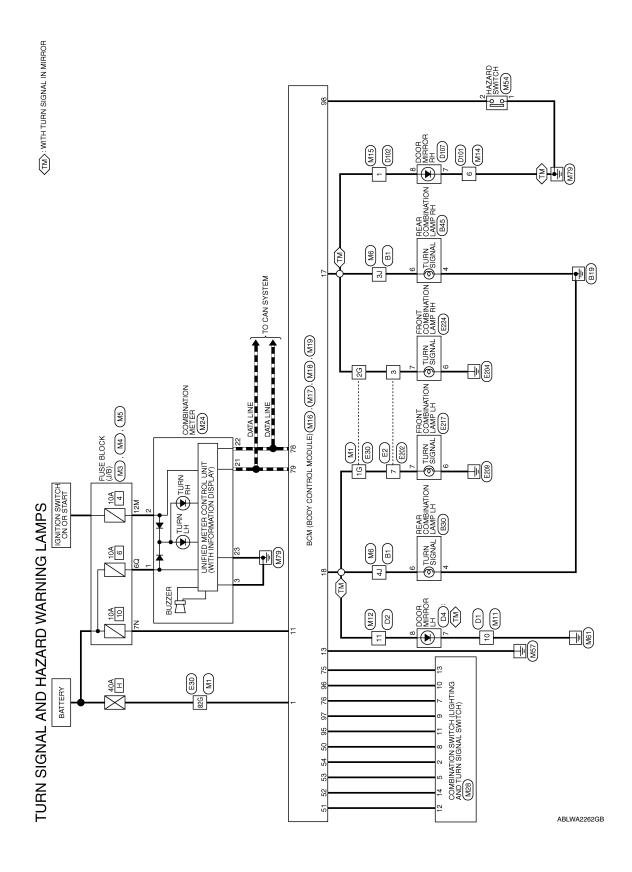
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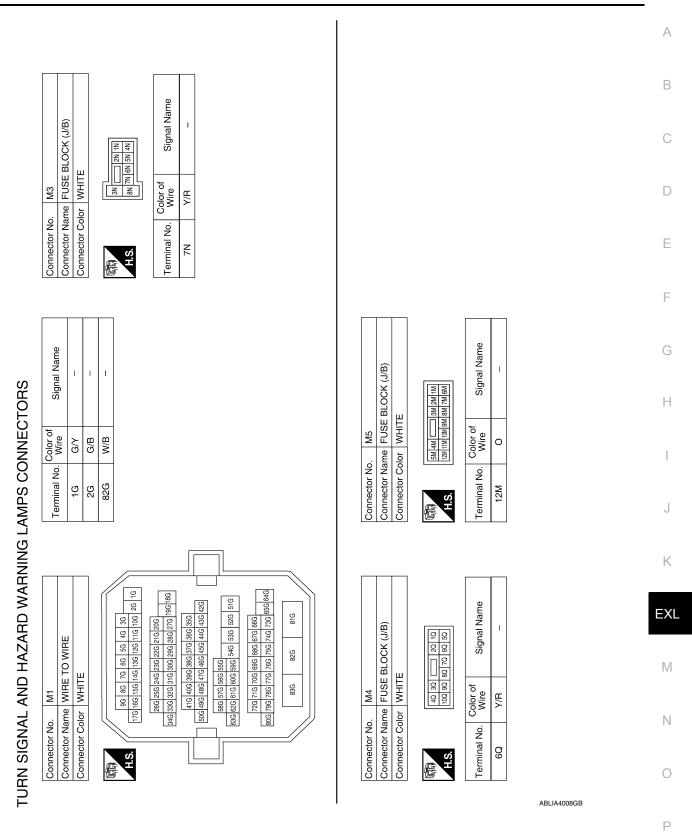
Signal Name	ı	1	1									FRONT FOG LAMP RH BLACK	ť		Signal Name	ı	1
Color of Wire	۵	_	LG								E227	-	Įί	-2	Color of Wire	W/R	В
Terminal No.	8G	15G	82G								Connector No.	Connector Name Connector Color		H.S.	Terminal No.	-	2
Connector No. E30 Connector Name WIRE TO WIRE	Connector Color WHITE	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		H.S. 16 26 100 110 120 130 140 150 160 170 180 170 170 170 170 170 170 170 170 170 17	206 216 226 236 246 256 266 196 196 197 197 197 197 197 197 197 197 197 197	2/9 289 289 304 319 329 339 349	35G 38G 37G 38G 39G 40G 41G 42G 43G 44G 45G 46G 47G 48G 50G	55G 56G 57G 58G 51G 52G 53G 54G 55G 60G 61G 82G 63G	66G 67G 68G 69G 77G 71G 72G 64G 65G 73G 74G 75G 76G 77G 77B 80G 80G	81G 82G 83G	Connector No. E214	Connector Name FRONT FOG LAMP LH Connector Color BLACK		H.S.	Terminal No.   Color of   Signal Name		2 B –
Connector No. E22 Connector Name JOINT CONNECTOR-E04				2 1 0	Signal Name	ı	ı					IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)	Ш	1 84 83 9 87 86	Signal Name	FR FOG LAMP RH	FR FOG LAMP LH
E22	E I	2		4	Color of Wire	Ь	Ь				. E200	me POWE MODU	lor WHITE	88 68 06	Color of Wire	W/R	5
Connector No.	Connoctor Color WHITE		£	H.S.	Terminal No.	1	2				Connector No.	Connector Name	Connector Color	是 H.S.	Terminal No.	98	87

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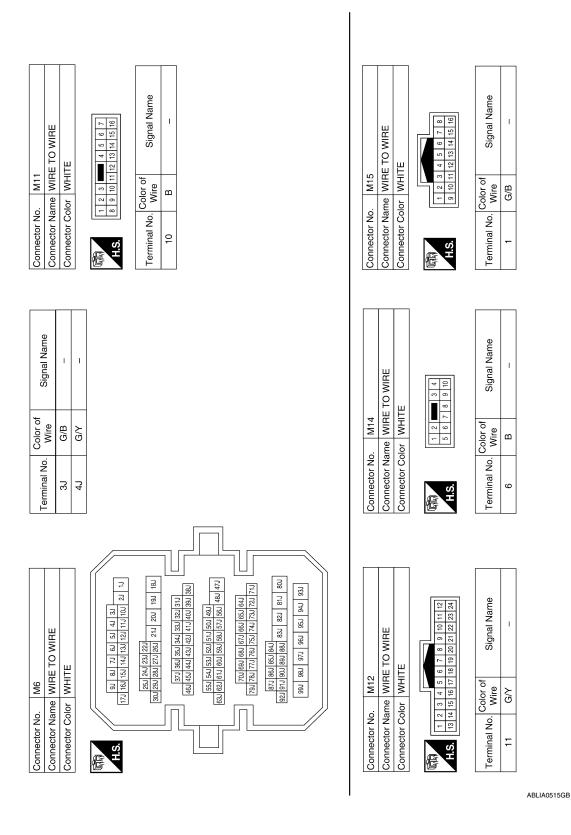
Wiring Diagram



< WIRING DIAGRAM > [XENON TYPE]



Revision: August 2013 EXL-117 2014 Maxima NAM



< WIRING DIAGRAM > [XENON TYPE]

Connector No. M16	Connector No.	M17			Connector No.	M18		
Je.	Connector Na	me BCM (BOD)	Connector Name BCM (BODY CONTROL MODULE)		Connector Name		BCM (BODY CONTROL MODULE)	Ti
Connector Color BLACK	Connector Color	lor WHITE			Connector Color		z	
		5 6 7	4 5 6 7 7 8 8 9 10 10 10 10 10 10 10 10 10 10 10 10 10					
H.S.	H.S.	1	61 81 /1 91		A.S.			
Terminal No. Color of Signal Name	Terminal No.	Color of Wire	Signal Name		39 38 37 36 35 34 59 58 57 56 55 54	1 33 32 31 3	36 55 54 53 52 51 50 29 28 27 26 25 24 23 22 21 20 56 55 54 53 52 51 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	22 21 20 42 41 40
1 W/B BATT (F/L)	1	Y/R	BAT BCM FUSE			30,010		] _
	13	В	GND1		Terminal No.	Color of Wire	Signal Name	
	17	G/B	FR FLASHER		50	LG/B	INPUT 5	<u> </u>
	18	G/Y	FL FLASHER		51	<b>M</b>	INPUT 1	T
					52	G/B	INPUT 2	
					53	LG/R	INPUT 3	
					54	Z/S	INPUT 4	
Connector No. M19	Terminal No.	Color of Wire	Signal Name		Connector No.	M24		
Connector Name BCM (BODY CONTROL MODULE)	75	Ρ/Υ	OUTPUT 5		Connector Name	o COMBIL	COMBINATION METER	
Connector Color BLACK	92	R/G	OUTPUT 3					7
	78	۵	CAN-L					
管	62	_	CAN-H	T				
H.S.	95	M/A	OUTPUT 1		0.0			
76 75 74 73 72	96	P/B	OUTPUT 4		2 3 4	7 8 9	11 12 13 14 15 16 17	18 19 20
99 98 97 96 85 84 83 82 91 90 89 88 87 86 85 84 83 82 81 80	97	R/B	OUTPUT 2		21 22 23 24 25 26	25 26 27 28 29 30	31 32 33 34 35 36 37	38 39 40
	86	G/O	HAZARD SW		_	Color of	O Constitution	
					l erminai No.	Wire	Signal Name	
					-	Y/R	BAT	
					2	0	IGN	
					ဇ	В	GND (POWER)	
					21	_	CAN-H	
					22	۵	CAN-L	
					23	В	GND (CIRCUIT)	
K EXI	J	I	G	F	Е	D	С	A B

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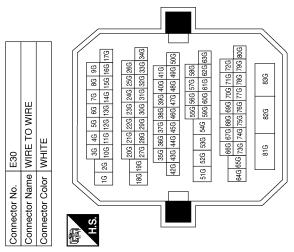
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Connector No.	. M54	
Connector Na	me HAZ	Connector Name   HAZARD SWITCH
Connector Color WHITE	lor WHI	12
H.S.		2   1   4
Terminal No.	Color of Wire	Signal Name
-	В	ı
2	9/0	ı

Name										
Signal Name	ı	I	I	I	_	_	I	I	_	_
Color of Wire	G/Y	LG/R	R/G	LG/B	B/B	B/B	B/W	N/¬	R/Y	G/B
Terminal No. Wire	2	5	7	8	6	10	1	12	13	14

-		Ľ	5	0				
Confrector No.		_	MZ	α				
Connector Name COMBINATION SWITCH	πe	$\sim$	읹	₹	Ħ	ֻ	∣≓	ON SWITCH
Connector Color WHITE	ō	_	l≠		ш			
E C		ш	$   \rangle$	IN.	IV.	117	$\overline{}$	
	-	-					5	9
į.	7	_	6	10	8 9 10 11 12 13 14	12	13	14



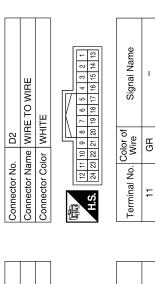
Connector No. E2  Connector Name WIRE TO WIRE  Connector Color WHITE	me WIR	E TO WIRE
刷 H.S.	2 2 2	8 7 8
Terminal No.	Color of Wire	Signal Name
က	SB	I
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< WIRING DIAGRAM > [XENON TYPE]

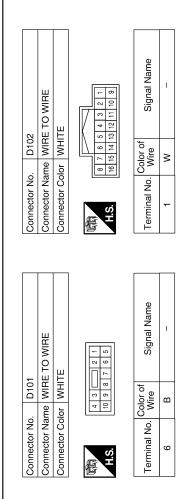
Connector No. E224  Connector Name FRONT COMBINATION  LAMP RH  Connector Color GRAY  LS.  Color of Signal Name  6 B -  7 G/B -	Connector No. B30 Connector Name REAR COMBINATION LAMP LH Connector Color WHITE  Terminal No. Wire Signal Name  4 B - 6 LG -	A B C D
Con Con Terr		F
Name Pation	Name (Name (	G
FRONT COMBINATION LAMP LH GRAY  or of Signal Name  s	Signal Name	Н
	Vo. Color of LG BR BR LG LG	I
Connector No. Connector Name Connector Color H.S.  6 E 6 E	Terminal No.	J
		K
WIRE  Signal Name  -	B1   WHRE TO WIRE   WHITE   WHITE 	EXI
2. E202  Signature MIRE TO  Signature Mire  G/B  G/B	WHRE TO   WHITE   WH	M
nector No nector No nector No nector No nector Co no ninal No.	nector No.	N
Con Con Ter	S S S S	0
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	E TO WIRE	<u> </u>	7 6 5 4 3 2 1 16 15 14 13 12 11 10 9 8	Signal Name	ı
2	me WIR	lor WHI	7 6 5 1	Color of Wire	В
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	H.S.	Terminal No.	10

Connector No.	). B45	
Connector Na	ame REAF	Connector Name REAR COMBINATION LAMP RH
Connector Color WHITE	olor WHIT	Е
	-	CX
H.S.	3 4	2 8
Terminal No.	Color of Wire	Signal Name
4	В	ı
9	BB	ı



	DOOR MIRROR LH	<u> </u>	2 3 4 5 6 7 8 10 11 12 13 14 15 16	Signal Name	-	_
. D4		lor WHI	9 10 11 :	Color of Wire	В	GR
Connector No.	Connector Name	Connector Color WHITE	H.S.	Terminal No.	7	8

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< WIRING DIAGRAM > [XENON TYPE]

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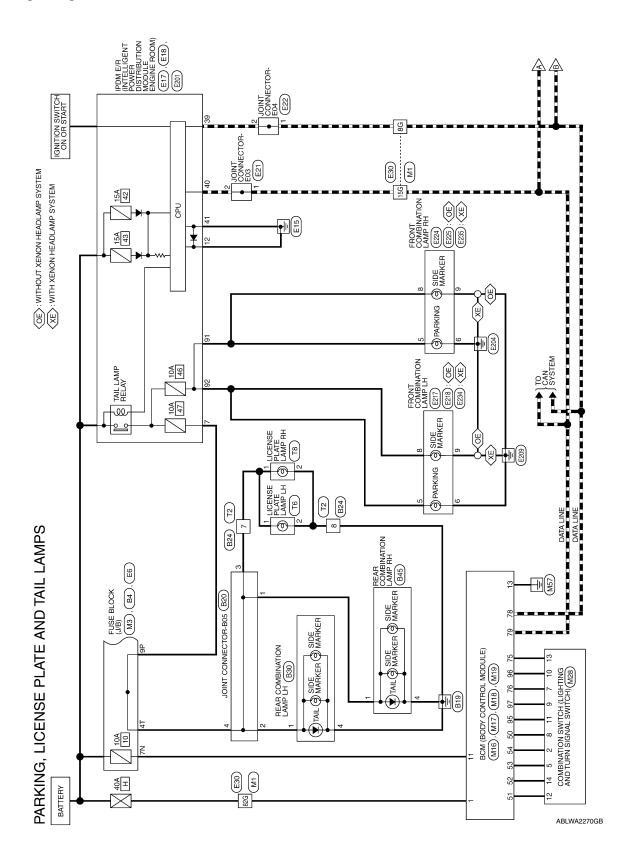
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ector No. D107	Connector Name   DOOR MIRROR RH	Connector Color WHITE	9 10 11 12 13 14 15 16	inal No. Wire Signal Name	7 B –
Connector No.	Connector	Connector	南 H.S.	Terminal No.	7

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Wiring Diagram



COMBINATION METER (M24) UNIFIED METER CONTROL UNIT (WITH INFORMATION DISPLAY) IGNITION SWITCH ON OR START **▼** LIGHT BATTERY

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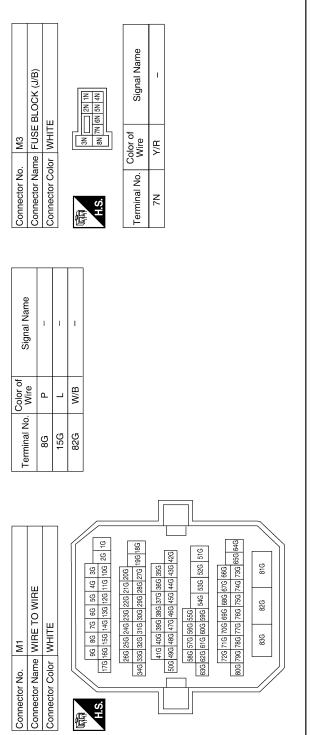
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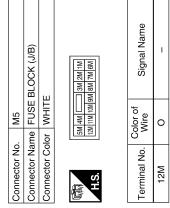
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# PARKING, LICENCE PLATE AND TAIL LAMPS CONNECTORS





Connector No.	. M4		
Connector Na	ıme FUSE	Connector Name   FUSE BLOCK (J/B)	
Connector Color WHITE	lor WHIT	Е	
斯 H.S.	40 30 100 90	100 90 80 70 60 50	
Terminal No.	Color of Wire	Signal Name	
90	Y/R	_	

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< WIRING DIAGRAM > [XENON TYPE]

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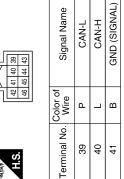
Terminal No. C
GND (POWER)         7         R/G           CAN-H         8         LG/B
CAN-L

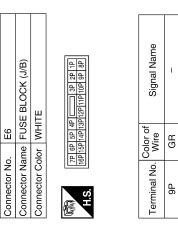
Revision: August 2013 EXL-127 2014 Maxima NAM

Connector No.	. E21	
nnector Na	Ime JOINT	Connector Name JOINT CONNECTOR-E03
nnector Cc	Connector Color WHITE	Ш
H.S.	1 4 3 2 1	
Terminal No.	Color of Wire	Signal Name
1	Т	1
2	7	ı

	E21	JOINT CONNECTO	WHITE
	Connector No.	Connector Name	Connector Color

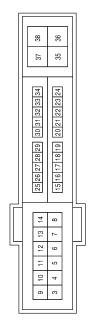
Connector No.	E17
Connector Name	Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color WHITE	WHITE





Signal Name	TAIL/ILLUMI	GND (POWER)
Color of Wire	GR	В
Terminal No.	7	12

Connector No.	E18
Connector Name	Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color WHITE	WHITE



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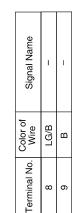
< WIRING DIAGRAM > [XENON TYPE]

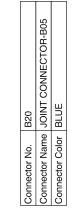
		А
Signal Name	FRONT COMBINATION LAMP LH (WITHOUT XENON HEADLAMP SYSTEM) GRAY  or of Signal Name  ine Signal Name  Signal Name  B	В
Color of Wire LG	I	D
8G 15G 82G	Connector No.  Connector Name Connector Color H.S.  H.S.  9 L 9	Е
		F
E30   WHITE	FRONT COMBINATION LAMP LH GRAY  or of Signal Name  A/B  B	G
E30   NHITE   TO   S26   S		ı
Connector No. E30  Connector Name WIRE TO WIRE  Connector Color WHITE  16 26 46 56 66 116 126 136 14 156 136 14 156 136 15 156 15 156 156 156 156 156 156 156	Connector No. Connector Color H.S.  Terminal No. Co 5 L 6	J
		K
Signal Name	POWER DISTRIBUTION MODULE ENGINE ROOM) WHITE  Stor of Signal Name  Signal Name  Signal CLEARANCE RH  Signal CLEARANCE LH	EX
Connector No. Connector Name Connector Color H.S. Terminal No. Vo. 1	Connector No.  Connector Name Connector Color  Terminal No. Co 92 L	N O
	ABLIA4005GB	D

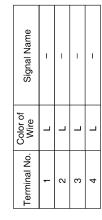
Revision: August 2013 EXL-129 2014 Maxima NAM

[XENON TYPE] < WIRING DIAGRAM >

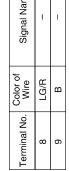
Connector Name LAMP LH (WITH XENON HEADLAMP SYSTEM)	
Connector Color GBAY	BINATION TH XENON SYSTEM)







Connector No.	E225
Connector Name	FRONT COMBINATION LAMP RH (WITHOUT XENON HEADLAMP SYSTEM)
Connector Color GRAY	GRAY



Signal Nam	I	1	
Color of Wire	LG/R	В	
rminal No.	8	6	

B4	Connector Name   FUSE BLOCK (J/B)	BROWN	37 21 17
Connector No.	Connector Name	Connector Color BROWN	

Signal Name	-	
Color of Wire	L	
Terminal No.	4T	

Connector No.	E224
Connector Name	Connector Name   FRONT COMBINATIO
Connector Color GRAY	GRAY



ı	_	
LG/R	В	
5	9	
		LG/R B

Connector No.	E235
Connector Name	Connector Name LAMP RH (WITH XENON HEADLAMP SYSTEM)
Connector Color GRAY	GRAY





Signal Name	ı	ı
Color of Wire	LG/R	В
Terminal No.	8	6

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< WIRING DIAGRAM > [XENON TYPE]

		A
Connector No. B45 Connector Name REAR COMBINATION LAMP RH Connector Color WHITE  Terminal No. Color of Signal Name  Terminal No. Wire Signal Name	Connector No. T8 Connector Name LICENSE PLATE LAMP RH Connector Color BROWN  THS.	Signal Name
B45 LAMP RH WHITE    1	T8 LICENSE PI	C
No. B45 Name REA Color WHIT  Color of the	No. T8 Color BR Color	Color of Mire of O
Connector No. Connector Color H.S. Terminal No. V	Connector No. T8 Connector Name LICENSE Connector Color BROWN H.S.	Terminal No.
		F
Connector No. B30  Connector Name REAR COMBINATION LAMP LH Connector Color WHITE  The state of the signal Name  Terminal No. Wire Signal Name  Terminal No. Wire Signal Name	Connector No. T6 Connector Name LICENSE PLATE LAMP LH Connector Color BROWN	Signal Name
B30  REAR CO LAMP LH  WHITE  3 4 5 6  Color of  Color of	T6 LICENSE BROWN	Mire B H
No. B30 Color WHIT	r Name   Color	
Connector No. Connector Color H.S. Terminal No. Co	Connector No. Connector Color H.S.	Terminal No.
		К
O WIRE	O WIRE	Signal Name
Connector No. B24 Connector Name WIRE TO WIRE Connector Color WHITE  A.S. A.S. B. B. A.S. B. A.S. B.	Connector No. T2 Connector Name WIRE TO WIRE Connector Color WHITE	Wire Wire
Connector No. Connector Name Connector Color H.S. Terminal No.  7	Connector No. T2 Connector Name WIRE T Connector Color WHITE  ALS.	IN IN
Connector No. Connector Cole	Connector No. Connector Nam Connector Colc	Terminal No.

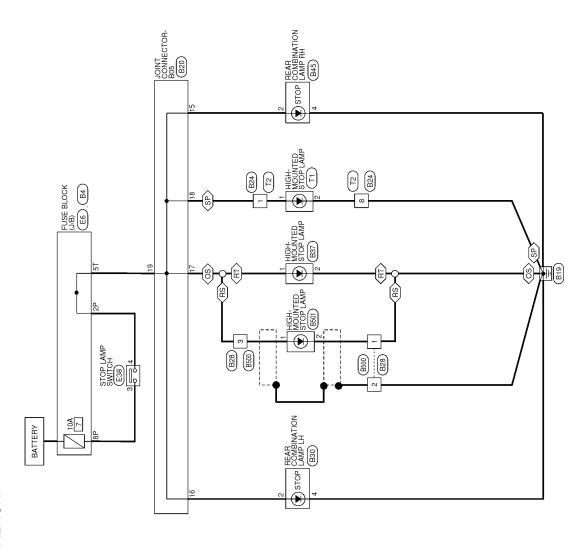
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Revision: August 2013 EXL-131 2014 Maxima NAM

# STOP LAMP

Wiring Diagram

(GS): WITHOUT REAR SPOILER
(RS): WITH REAR SUNSHADE
(RT): WITHOUT REAR SUNSHADE
(SP): WITH REAR SPOILER



STOP LAMP - XENON

ABLWA2260GB

Connector Name FUSE BLOCK (J/B)

B4

Connector No.

Connector Color BROWN

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# STOP LAMP CONNECTORS

	Connector Name STOP LAMP SWITCH	ITE	2 4	Signal Name	1	I
. E38	me STC	lor WH		Color of Wire	В	LG
Connector No.	Connector Na	Connector Color WHITE	明 H.S.	Terminal No. Wire	ε	4
	Connector Name FUSE BLOCK (J/B)	TE	6P   6P   4P	Signal Name	I	ĺ
9E	ne FUS	or WHI	7P 6P 5P 4P 6P 13P 13P	Solor of Wire	ГG	œ
Connector No.	Connector Nar	Connector Color WHITE	H.S.	Terminal No. Wire	2P	8Р

Signal Name

Color of Wire

Terminal No.

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

	Connector No.	o. B24		Connector No.	r No.   B28	
Connector Name   JOINT CONNECTOR-B05	Connector Name WIRE TO WIRE	ame WIRE	E TO WIRE	Connecto	r Name WIF	Connector Name WIRE TO WIRE
	Connector Color WHITE	olor WHIT	巴	Connecto	Connector Color WHITE	ITE
4 3 2 1		1 2	3	é		
14 13 12 11	HS	4 5 6	2 8	(内内) H.S.		3 2 1
Signal Name	Terminal No	Color of Wire	Signal Name	Terminal		f Signal Name
ı	-	0	ı	-	В	ı
1	8	В	_	2	В	ı
ı				3	0	I
ı						
1						
	ignal Nam	ignal Name	1   1   1   1   1   1   1   1   1   1	13   12   11	13   12   11	Terminal No.   Color of   Signal Name   Terminal No.   Wire   Signal Name   Terminal

**EXL-133** Revision: August 2013 2014 Maxima NAM

HIGH-MOUNTED STOP   Connector Name   LAMP (WITHOUT REAR   Connector Color   WHITE	Connector No.   B501	REAR COMBINATION LAMP RH WHITE  1	r of Signal Name	HIGH-MOUNTED STOP LAMP (WITH REAR SPOILER) BROWN	r of Signal Name
	Connector Name Connector Name Connector Name Terminal No. Color Connector Name Connector Name Connector Name Connector Name Connector Color Terminal No. Color	nector Name	Terminal No. Color of Wire 2 0 4 B		Terminal No. Color of Wire 1 O 2 B
	Connector Name Connector Name Connector Color Terminal No. Color Connector Name Connector Name Connector Name Connector Name Connector Name Connector Color Terminal No. M. M.	OUNTED STOP NITHOUT REAR ADE)	Signal Name	OUNTED STOP WITH REAR ADE)	Signal Name

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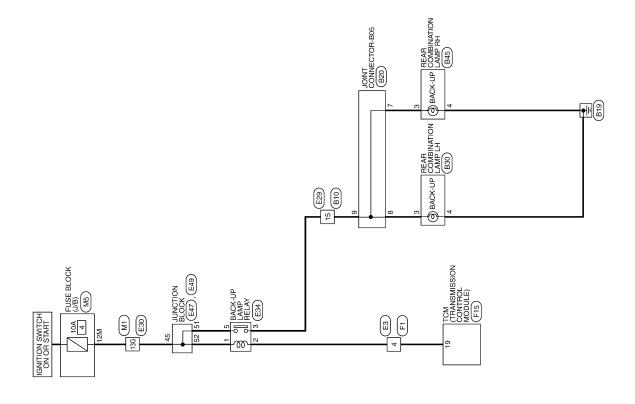
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Connector No.   T2	Connector Name WIRE TO WIRE	Connector Color WHITE	
Connecto	Connecto	Connecto	

2 2 4 1	Signal Name	-	I
8 3 7 6 5	Color of Wire	0	В
H.S.	Terminal No.	1	8

# **BACK-UP LAMP**

Wiring Diagram

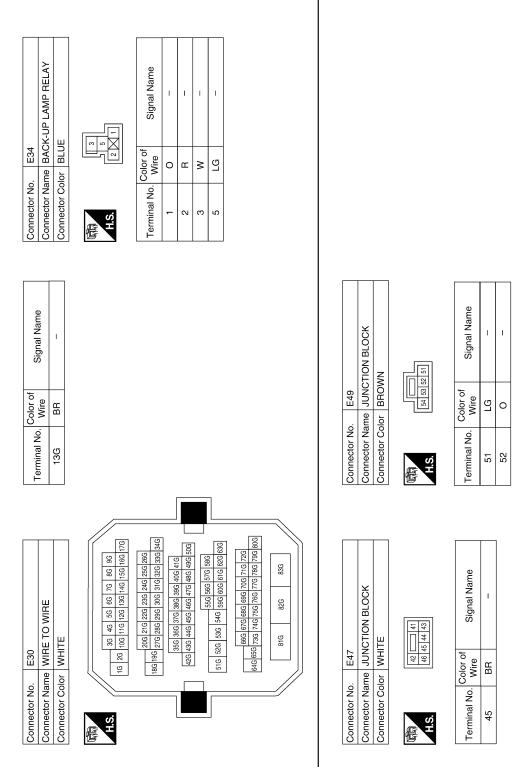


BACK-UP LAMP

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[XENON TYPE]

				А
		Vame		В
	BLOCK (J/B)	Signal Name		С
	Connector No. M5 Connector Name FUSE BLOCK (J/B) Connector Color WHITE	5M   4M   1M   2M   2M   1M   1M   1M   1M   1		D
	Connector No. Connector Nan Connector Colc	H.S. Terminal No.		Е
				F
	Signal Name		/IRE	G
			No. E29 Name WIRE TO WIR Color   WHITE	Н
	Color of Wire O		Connector No.   E29  Connector Name   WIRE TO WIRE  Connector Color   WHITE  To 5 4     19   19   19   19   19   19   19	I
	Terminal No. 13G		Connector No. Connector Cold A.S. Terminal No.	J
		<u>5</u> 84 84 84 84 84 84 84 84 84 84 84 84 84		K
CTORS	끭	176   166   156   46   36   46   36   46   36   46   36   46   36   46   36   46   36   46   36   46   36   46   36   46   36   3	VIRE 15 15 15 15 15 15 15 15 15 15 15 15 15	EXL
CONNE	M1 WIRE TO WIF	176   166   156   176	o. E3 ame WIRE TO WIRE clor WHITE   2   3   1   1   1   1   1   1   1   1   1	M
P LAMP	Connector No. M1 Connector Name WIRE TO WIRE Connector Color WHITE		al No     Stor N   N   N   N   N   N   N   N   N   N	N
BACK-UP LAMP CONNECTORS	Conne	是 E	ABLIA02536BB	0
ш			ABLIAU329GB	D



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RE 15 16 17 1	Signal Name	B45 REAR COMBINATION LAMP RH WHITE  or of Signal Name  V	В
17E TO WI			С
B10   WIRE TO WIRE	Color of Wire V		D
Connector No. B10 Connector Name WIRE TO WIRE Connector Color WHITE      2   3     4   5   6   7       1   2   3       1   15   15   15   15   15	Terminal No.	Connector No. Connector Color Terminal No. 3 4	E
			F
15 CM (TRANSMISSION CONTROL MODULE) 1LACK 12 24 25 26 27 38 39 44 46 13 14 15 16 17 18 19 20 43 44 46 13 14 15 16 17 18 19 20 43 44 46 13 14 15 16 17 18 19 20 43 44 46	Signal Name REV LAMP RLY	Signal Name	G
ELACK  22 23 4 25 56 7 8 9 10 4 12 13 14 15 16 17 18 19 20 4 12 13 14 15 16 17 18 19 20 4 12 13 14 15 16 17 18 19 20 4 14 15 16 17 18 19 20 4 15 18 18 18 18 18 18 18 18 18 18 18 18 18	Sign REV I	H L L L L L L L L L L L L L L L L L L L	Н
0. F15 ame TCM CON Olor BLA( 1 2 2 2 2 2 2 2 2 1 1 1 1 2 1 3 4 1 1 1 2 1 3 4 1 1 1 1 2 1 3 4 1 1 1 2 1 3 4 1 1 1 2 1 3 4 1 1 1 2 1 3 4 1 1 1 2 1 3 4 1 1 1 2 1 3 4 1 1 1 1 2 1 3 4 1 1 1 1 2 1 3 4 1 1 1 1 2 1 3 4 1 1 1 1 1 2 1 3 4 1 1 1 1 1 2 1 3 4 1 1 1 1 1 2 1 3 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Color of Wire G/B		1
Connector No. F15 Connector Name TCM (TCONTR CONTR CON	Terminal No.	Connector No. Connector Name Connector Color Terminal No. W 3 4	J
			K
AB 1 8 1 1 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Signal Name	Signal Name	EXL
3 12 11 10 WII		NNT CONIN NT	M
No. F1  Name WIRE  Color WHIT  7 6 5 4 7 16 15 14 13	Color of Wire G/B	No.   B20	N
Connector No. F1  Connector Name WIRE TO WIRE  Connector Color WHITE  T 6 5 4	Terminal No.	Connector No. B20 Connector Name JOINT CONNECTOR Connector Color BLUE    10   9   7   6   5   4   3   2   1     20   9   17   16   15   14   13   12   11     Terminal No. Wire Signal Name   8   V	
	<u> </u>	ABLIA1723GB	0

Revision: August 2013 EXL-139 2014 Maxima NAM

#### **EXTERIOR LIGHTING SYSTEM SYMPTOMS**

< SYMPTOM DIAGNOSIS >

[XENON TYPE]

# SYMPTOM DIAGNOSIS

# **EXTERIOR LIGHTING SYSTEM SYMPTOMS**

Symptom Table

#### **CAUTION:**

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

Symp	otom	Possible cause	Inspection item
Head lamp does not switch to the high beam.	One side	Fuse     Harness between IPDM E/R and the front combination lamp     Front combination lamp (High beam relay)     IPDM E/R	Head lamp (HI) circuit. Refer to <u>EXL-36</u> .
	Both sides	Symptom diagnosis "BOTH SIDE HEADLAMPS DO N Refer to EXL-143.	OT SWITCH TO HIGH BEAM"
High beam indicator lamp (Head lamp switches to the		Combination meter     BCM	Combination meter.     Data monitor "HI-BEAM IND".     BCM (HEAD LAMP).     Active test "HEADLAMP".
	One side	Front combination lamp (Low beam relay)	_
Headlamp does not switch to the low beam.	Both sides	Combination switch (lighting and turn signal switch)     Harness between the combination switch (lighting and turn signal switch) and BCM     BCM	Combination switch (lighting and turn signal switch). Refer to EXL-21.
		High beam request signal BCM IPDM E/R	IPDM E/R. Data monitor "HL HI REQ".
		IPDM E/R	_
Headlamp does not turn ON.	One side	Fuse Bulb Harness between IPDM E/R and the front combination lamp Front combination lamp IPDM E/R	Headlamp (LO) circuit. Refer to <u>EXL-40</u> .
	Both sides	Symptom diagnosis "BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON" Refer to EXL-144, "Description".	
Headlamp does not turn	When the ignition switch is turned ON	BCM     Combination switch (lighting and turn signal switch)	Combination switch (lighting and turn signal switch). Refer to EXL-21.
OFF.	The ignition switch is turned OFF (After activating the battery saver).	IPDM E/R	_

# **EXTERIOR LIGHTING SYSTEM SYMPTOMS**

< SYMPTOM DIAGNOSIS >

[XENON TYPE]

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Symp	otom	Possible cause	Inspection item
Headlamp is not turned ON switch AUTO.	N/OFF with the lighting	Combination switch (lighting and turn signal switch) Harness between the combination switch (lighting and turn signal switch) and BCM BCM	Combination switch (lighting and turn signal switch). Refer to EXL-21.
		<ul><li> Optical sensor</li><li> Harness between the optical sensor and BCM</li><li> BCM</li></ul>	Optical sensor. Refer to <u>EXL-53</u> .
Daytime light system does not activate.		<ul> <li>Either high beam bulb</li> <li>Parking brake switch</li> <li>Combination switch (lighting and turn signal switch)</li> <li>BCM</li> <li>IPDM E/R</li> <li>Daytime light relay</li> <li>Harness between IPDM E/R and daytime light relay.</li> </ul>	Daytime light system description. Refer to EXL-11, "System Description".
Front fog lamp is not turned ON.	One side	<ul> <li>Front fog lamp bulb</li> <li>Harness between IPDM E/R and the front combination lamp</li> <li>Front combination lamp</li> <li>IPDM E/R</li> </ul>	Front fog lamp circuit. Refer to <u>EXL-43</u> .
	Both side	Symptom diagnosis "BOTH SIDE FRONT FOG LAMPS Refer to EXL-146.	S ARE NOT TURNED ON"
Parking lamp is not turned ON.	One side	<ul> <li>Fuse</li> <li>Parking lamp bulb</li> <li>Harness between IPDM E/R and the front/rear combination lamp</li> <li>Front/rear combination lamp</li> <li>IPDM E/R</li> </ul>	Parking lamp circuit. Refer to <u>EXL-45</u> .
	Both sides	Symptom diagnosis "PARKING, LICENSE PLATE AND ON". Refer to EXL-145.	TAIL LAMPS ARE NOT TURNED
Turn signal lamp does not blink.  Indicator lamp is normal. (The applicable side performs the high flasher activation).		<ul> <li>Harness between BCM and each turn signal lamp</li> <li>Turn signal lamp bulb</li> <li>Door mirror (if equipped with turn signals in the door mirrors)</li> </ul>	Turn signal lamp circuit. Refer to <u>EXL-49</u> .
	One side	Combination meter	_
Turn signal indicator lamp	Both sides (Always)	<ul><li>Turn signal indicator lamp signal</li><li>Combination meter</li><li>BCM</li></ul>	Combination meter.     Data monitor "TURN IND".     BCM (FLASHER).     Active test "FLASHER".
does not blink.	Both sides (Does blink when activating the hazard warning lamp with the ignition switch OFF)	<ul><li>The combination meter power supply and the ground circuit</li><li>Combination meter</li></ul>	Combination meter. Power supply and the ground circuit Refer to MWI-37.
<ul> <li>Hazard warning lamp do</li> <li>Hazard warning lamp co signal is normal)</li> </ul>		<ul><li>Hazard switch</li><li>Harness between the hazard switch and BCM</li><li>BCM</li></ul>	Hazard switch Refer to <u>EXL-56</u> .

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#### NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS > [XENON TYPE]

# NORMAL OPERATING CONDITION

Description INFOID:000000010050256

#### XENON HEADLAMP

- The brightness and color of the light may vary slightly immediately after turning the headlamp ON. This condition will remain 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 auto light system may not turn the headlamp ON/OFF immediately after passing a dark area or a bright area (short tunnel, sky bridge, shadowed area etc.). This is normal.

#### BOTH SIDE HEADLAMPS DO NOT SWITCH TO HIGH BEAM

< SYMPTOM DIAGNOSIS >

[XENON TYPE]

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# BOTH SIDE HEADLAMPS DO NOT SWITCH TO HIGH BEAM

Description INFOID:000000010050257

The headlamps (both sides) do not switch to high beam when the lighting switch is in the HI or PASS setting.

Diagnosis Procedure

1. COMBINATION SWITCH (LIGHTING AND TURN SIGNAL SWITCH) INSPECTION

Check the combination switch (lighting and turn signal switch). Refer to <u>EXL-21</u>, "System Description". Is the combination switch (lighting and turn signal 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. While operating the lighting switch, check the monitor status.

Monitor item	Con	dition	Monitor status
HL HI REQ	Lighting switch	HI or PASS	ON
HE HI KEQ	(2ND)	Except for HI or PASS	OFF

#### Is the item status normal?

YES >> GO TO 3.

NO >> Replace BCM. Refer to BCS-79, "Removal and Installation".

3. HEADLAMP (HI) CIRCUIT INSPECTION

Check the headlamp (HI) circuit. Refer to EXL-36, "Diagnosis Procedure".

Is the headlamp (HI) circuit normal?

YES >> Replace IPDM E/R. Refer to PCS-35, "Removal and Installation".

NO >> Repair or replace the malfunctioning part.

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

< SYMPTOM DIAGNOSIS > [XENON TYPE]

# BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

Description

The headlamps (both sides) do not turn ON in any lighting switch setting.

#### Diagnosis Procedure

INFOID:0000000010050260

# 1. CHECK COMBINATION SWITCH (LIGHTING AND TURN SIGNAL SWITCH)

Check the combination switch (lighting and turn signal switch). Refer to <u>EXL-21</u>, "System Description". Is the combination switch (lighting and turn signal switch) normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

2.CHECK HEADLAMP (LO) REQUEST SIGNAL INPUT

#### **(P)CONSULT DATA MONITOR**

- 1. Select "HL LO REQ" of IPDM E/R DATA MONITOR item.
- 2. While operating the lighting switch, check the monitor status.

Monitor item	Con	dition	Monitor status
HL LO REQ	Lighting switch	2ND	ON
TIE LO NEQ	Lighting Switch	OFF	OFF

#### Is the item status normal?

YES >> GO TO 3.

NO >> Replace BCM. Refer to BCS-79, "Removal and Installation".

3.HEADLAMP (LO) CIRCUIT INSPECTION

Check the headlamp (LO) circuit. Refer to EXL-40, "Diagnosis Procedure".

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

YES >> Replace IPDM E/R. Refer to PCS-35, "Removal and Installation".

NO >> Repair or replace the malfunctioning part.

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

< SYMPTOM DIAGNOSIS > [XENON TYPE]

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

Description INFOID:000000010050261

The parking, license plate and tail lamps do not turn ON in with any lighting switch setting.

Diagnosis Procedure

1.combination switch (Lighting and turn signal switch) inspection

Check the combination switch (lighting and turn signal switch). Refer to <u>EXL-21</u>, "System Description". Is the combination switch (lighting and turn signal switch) normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

2.CHECK TAIL LAMP RELAY REQUEST SIGNAL INPUT

(P)CONSULT DATA MONITOR

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

Monitor item	Con	Monitor status				
TAIL & CLR REQ	Lighting cuitch	1ST	ON			
	Lighting switch	OFF	OFF			

#### Is the item status normal?

YES >> GO TO 3.

NO >> Replace BCM. Refer to BCS-79, "Removal and Installation".

# 3.PARK LAMP CIRCUIT INSPECTION

Check the parking lamp circuit. Refer to EXL-45, "Diagnosis Procedure".

#### Is the tail lamp circuit normal?

YES >> Replace IPDM E/R. Refer to PCS-35, "Removal and Installation".

NO >> Repair or replace the malfunctioning part.

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Revision: August 2013 EXL-145 2014 Maxima NAM

### BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS > [XENON TYPE]

## BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

Description INFOID:000000010050263

The front fog lamps do not turn ON in any setting.

### Diagnosis Procedure

INFOID:0000000010050264

## 1.combination switch (lighting and turn signal switch) inspection

Check the combination switch (lighting and turn signal switch). Refer to <u>EXL-21</u>, "System Description". Is the combination switch (lighting and turn signal switch) normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

2.CHECK FRONT FOG LAMP REQUEST SIGNAL INPUT

#### (P)CONSULT DATA MONITOR

- 1. Select "FR FOG REQ" of IPDM E/R DATA MONITOR item.
- 2. While operating the front fog lamp switch, check the monitor status.

Monitor item	Condition	Monitor status			
FR FOG REQ	Front fog lamp switch	ON	ON		
TRIOGREQ	(Lighting switch 2ND)	OFF	OFF		

### Is the item status normal?

YES >> GO TO 3.

NO >> Replace BCM. Refer to BCS-79, "Removal and Installation".

## 3.FRONT FOG LAMP CIRCUIT INSPECTION

Check the front fog lamp circuit. Refer to EXL-43, "Diagnosis Procedure".

#### Is the front fog lamp circuit normal?

YES >> Replace IPDM E/R. Refer to PCS-35, "Removal and Installation".

NO >> Repair or replace the malfunctioning part.

[XENON TYPE] < PRECAUTION >

# **PRECAUTION**

### **PRECAUTIONS**

Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRF-TFNSIONER"

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 SR and SB section of this Service Manual.

#### **WARNING:**

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which 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 the SR section.
- Do not 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:**

- When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.

Precautions For Xenon Headlamp Service

INFOID:0000000009465267

#### 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.
- Do not work with wet hands.
- Check the xenon headlamp ON-OFF status after assembling it to the vehicle. Do not 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.)
- Do not 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.)
- Do not perform HID circuit inspection with a tester.
- Do not touch the xenon bulb glass with hands. Do not put oil and grease on it.
- Dispose of the used xenon bulb after packing it in thick vinyl without breaking it.
- Do not wipe out dirt and contamination with organic solvent (thinner, gasoline, etc.).

### General precautions for service operations

INFOID:000000009465268

- Turn the lighting switch OFF before disconnecting and connecting the connector.
- When checking the headlamp on/off operation, check it on vehicle and with the power connected to the vehicle-side connector.

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### **PRECAUTIONS**

< PRECAUTION > [XENON TYPE]

• Leaving the bulb removed from the headlamp housing for a long period of time can deteriorate the performance of the lens and reflector (dirt, clouding). Always prepare a new bulb and have it on hand when replacing the bulb.

• When adjusting the headlamp aiming, turn the aiming adjustment screw only in the tightening direction. (If it is necessary to loosen the screw, first fully loosen the screw, and then turn it in the tightening direction.)

Precaution for Work

• When removing or disassembling each component, be careful not to damage or deform it. If a component may be subject to interference, be sure to protect it with a shop cloth.

- When removing (disengaging) components with a screwdriver or similar tool, be sure to wrap the component with a shop cloth or vinyl tape to protect it.
- Protect the removed parts with a shop cloth and prevent them from being dropped.
- Replace a deformed or damaged clip.
- If a part is specified as a non-reusable part, always replace it with a new one.
- · Be sure to tighten bolts and nuts securely to the specified torque.
- After installation is complete, be sure to check that each part works properly.
- Follow the steps below to clean components:
- Water soluble dirt:
- Dip a soft cloth into lukewarm water, wring the water out of the cloth and wipe the dirty area.
- Then rub with a soft, dry cloth.
- Oily dirt:
- Dip a soft cloth into lukewarm water with mild detergent (concentration: within 2 to 3%) and wipe the dirty area.
- Then dip a cloth into fresh water, wring the water out of the cloth and wipe the detergent off.
- Then rub with a soft, dry cloth.
- Do not use organic solvent such as thinner, benzene, alcohol or gasoline.
- For genuine leather seats, use a genuine leather seat cleaner.

**PREPARATION** [XENON TYPE] < PREPARATION > **PREPARATION** Α **PREPARATION Special Service Tool** INFOID:0000000009465270 В The actual shapes of the tools may differ from those illustrated here. Tool number Description С (TechMate No.) Tool name Removing trim components  $\mathsf{D}$ (J-46534) Trim Tool Set Е AWJIA0483ZZ G Н

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# PERIODIC MAINTENANCE

## HEADLAMP AIMING ADJUSTMENT

Description INFOID:000000009465271

#### PREPARATION BEFORE ADJUSTING

#### **CAUTION:**

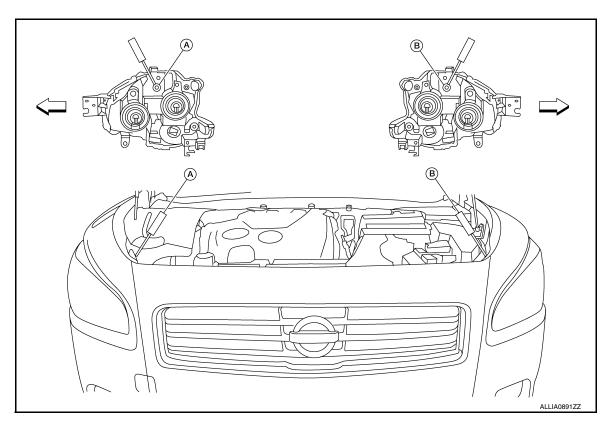
# Do not use organic solvent (thinner, gasoline etc.). NOTE:

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

Before performing aiming adjustment, check the following.

- Keep all tires inflated to correct pressure.
- · Place vehicle on level ground.
- See that the vehicle is unloaded (except for full levels of coolant, engine oil and fuel, and spare tire, jack, and tools). Have the driver or equivalent weight placed in drivers seat.

#### 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			
	Headlamp RH (UP/DOWN)	Clockwise	DOWN			
A   H	neadiamp Kn (OF/DOWN)	Counterclockwise	UP			
В	Headlemp I H (UD/DOWN)	Clockwise	DOWN			
В	Headlamp LH (UP/DOWN)	Counterclockwise	UP			

## Aiming Adjustment Procedure

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#### NOTE:

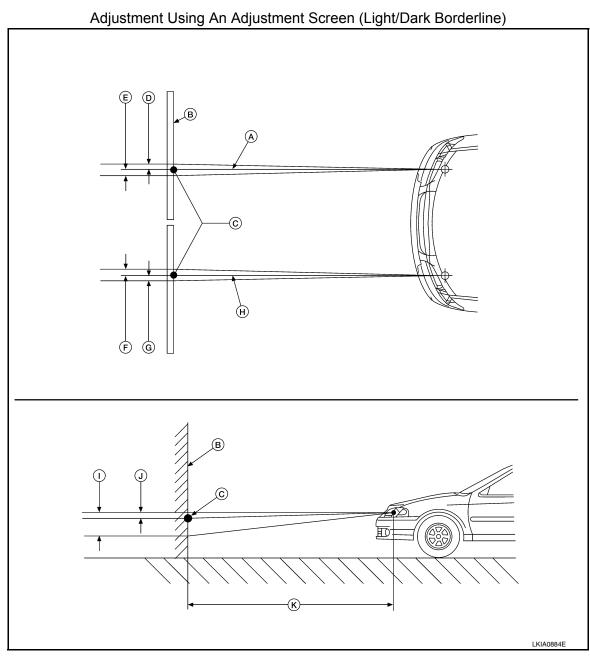
Set the screen so that it is perpendicular to the road.

- 1. Position the screen.
- Make the distance between the headlamp center and the screen 7.62 m (25 ft).
- Start the engine and illuminate the headlamp (LO). CAUTION:

# Do not cover the lens surface with tape, etc. The lens is made of plastic. NOTE:

Block the light from the headlamp that is not being adjusted with a thick fabric or similar object, so that it does not reach the screen.

4. Use the adjustment screw to adjust the low beams on the screen, so that it is within the aiming adjustment area.



- A. Headlamp beam (RH)
- D. 66.5 mm (2.6 in)
- B. Screen
- E. 66.5 mm (2.6 in)
- C. Horizontal/Vertical center point of headlamp
- F. 66.5 mm (2.6 in)

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## **HEADLAMP AIMING ADJUSTMENT**

### < PERIODIC MAINTENANCE >

[XENON TYPE]

G. 66.5 mm (2.6 in)

H. Headlamp beam (LH)

I. 53.2 mm (2.1 in)

J. 13.3 mm (0.5 in)

K. 7.62 m (25 ft)

#### FRONT FOG LAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

[XENON TYPE]

## FRONT FOG LAMP AIMING ADJUSTMENT

Description INFOID:000000009465273

#### PREPARATION BEFORE ADJUSTING

#### NOTE:

For details, refer to the regulations in your area.

Before performing aiming adjustment, check the following.

- Adjust the tire pressure to specification.
- Position vehicle and screen on level surface.
- Ensure there is no load in vehicle other than the driver (or equivalent weight placed in driver's position).
- Ensure engine coolant and engine oil are filled to correct levels and fuel tank is full.
- Confirm spare tire, jack and tools are properly stowed.
- Wipe off dirt on the fog lamp.

#### **CAUTION:**

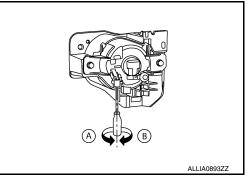
Do not use organic solvent (thinner, gasoline etc.).

#### AIMING ADJUSTMENT SCREW

Turn the aiming adjusting screw for adjustment as shown.
 NOTE:

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

- A: Up
- · B: Down



## Aiming Adjustment Procedure

NOTE:

Set the screen so that it is perpendicular to the road.

- 1. Position the screen.
- 2. Make the distance between the fog lamp center and the screen 7.62 m (25.0 ft).
- 3. Start the engine and illuminate fog lamp.

#### **CAUTION:**

Do not cover the lens surface with tape, etc. because it is made of plastic. NOTE:

Block the light from the headlamp that is not being adjusted with a thick fabric or similar object, so that it does not reach the 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 100 mm (4.0 in).
- Front fog lamp light distribution on the screen is as shown.
- A: Cutoff line
- B: High illuminance area
- · H: Horizontal center line of front fog lamp
- V: Vertical center line of front fog lamp
- X: Cutoff line height

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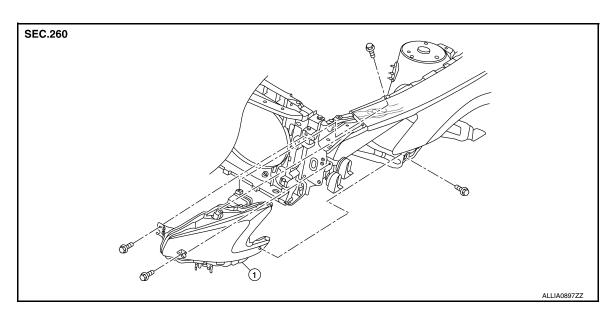
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## REMOVAL AND INSTALLATION

### FRONT COMBINATION LAMP

Exploded View



1. Front combination lamp

#### Removal and Installation

INFOID:0000000009465276

#### FRONT COMBINATION LAMP

#### Removal

#### **CAUTION:**

Disconnect the battery negative terminal or remove the fuse.

- Remove the front bumper fascia. Refer to <u>EXT-16</u>, "Removal and Installation".
- 2. Remove the front combination lamp bolts.
- Remove the harness clips from the front combination lamp assembly.
- 4. Pull out the front combination lamp toward the front of vehicle.
- 5. Disconnect the harness connectors from the front combination lamp and remove.

#### Installation

Installation is in the reverse order of removal.

#### NOTE:

After installation, perform headlamp aiming adjustment. Refer to EXL-150, "Description".

#### XENON BULB

#### Removal

#### **WARNING:**

Do not touch bulb with your hand while it is on or right after being turned off, a burn injury may result. CAUTION:

- After installing the bulb, install the plastic cover and the bulb socket securely for watertightness.
- Do not touch bulb glass with your hand or keep other grease and oily substances away from bulb glass.
- Do not 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.
- Disconnect the battery negative terminal or remove the fuse.
- Remove the front combination lamp. Refer to <u>EXL-154, "Removal and Installation"</u>.

### FRONT COMBINATION LAMP

### < REMOVAL AND INSTALLATION >

[XENON TYPE]

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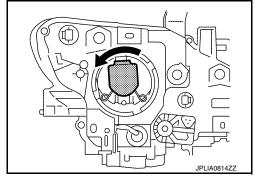
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- Remove screw from cover and rotate the plastic cover counterclockwise and unlock from the front combination lamp.
- 3. Rotate the xenon bulb socket counterclockwise and unlock from the front combination lamp.
- 4. Unlock the retaining spring and remove the xenon bulb from the front combination lamp.

#### **CAUTION:**

Do not break the xenon bulb ceramic tube when replacing the bulb.



Installation

Installation is in the reverse order of removal.

#### HALOGEN BULB (HIGH BEAM)

Removal

- Remove the front combination lamp. Refer to EXL-154, "Removal and Installation".
- Rotate the bulb socket counterclockwise and unlock from the front combination lamp.
- Remove the bulb from the bulb socket.

Installation

Installation is in the reverse order of removal.

#### FRONT TURN SIGNAL LAMP BULB

#### Removal

- 1. Remove the front combination lamp. Refer to EXL-154, "Removal and Installation".
- 2. Rotate the bulb socket counterclockwise and unlock from the front combination lamp.
- Remove the bulb from the bulb socket.

Installation

Installation is in the reverse order of removal.

#### FRONT SIDE MARKER LAMP BULB

#### Removal

- 1. Remove the front combination lamp. Refer to EXL-154, "Removal and Installation".
- Rotate the bulb socket counterclockwise and unlock from the front combination lamp.
- 3. Remove the bulb from the bulb socket.

Installation

Installation is in the reverse order of removal.

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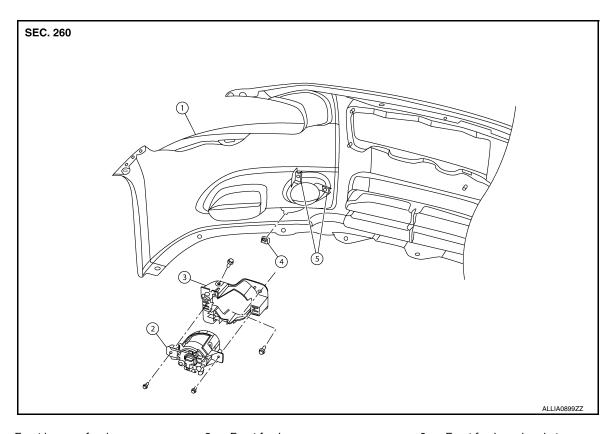
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## FRONT FOG LAMP

Exploded View



- 1. Front bumper fascia
- 2. Front fog lamp

4. Clip

Spring nuts

Front fog lamp bracket

INFOID:0000000009465278

#### Removal and Installation

## FRONT FOG LAMP

#### Removal

- Remove the front bumper fascia. Refer to EXT-16, "Removal and Installation".
- Disconnect the harness connector from the fog lamp.
- Remove the front fog lamp bolts.
- Remove the front fog lamp.

#### Installation

Installation is in the reverse order of removal.

#### NOTE:

After installation, perform front fog lamp aiming adjustment. Refer to <u>EXL-153</u>, "Aiming Adjustment Procedure".

#### FRONT FOG LAMP BULB

#### Removal

#### **WARNING:**

Do not touch bulb with your hand while it is on or right after being turned off, a burn injury may result. CAUTION:

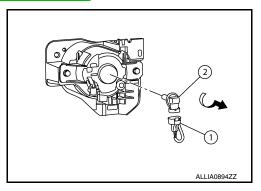
- Do not touch bulb glass with your hand or keep other grease and oily substances away from bulb glass.
- Do not leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.

## **FRONT FOG LAMP**

#### < REMOVAL AND INSTALLATION >

[XENON TYPE]

- 1. Remove the front fender protector. Refer to EXT-24, "Removal and Installation".
- 2. Disconnect the harness connector (1) from the fog lamp.
- 3. Rotate the bulb (2) counterclockwise and unlock it.



Installation

Installation is in the reverse order of removal.

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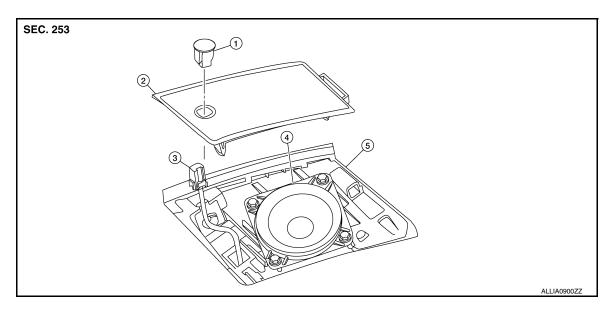
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## **OPTICAL SENSOR**

**Exploded View** INFOID:0000000009465279



- Optical sensor
- 4. LH front tweeter speaker
- LH front tweeter speaker grille Instrument panel
- Optical sensor harness connector

### Removal and Installation

INFOID:0000000009465280

Whenever a suitable tool is used, always wrap a cloth around the end of the tool to protect components from damage.

#### **REMOVAL**

- Carefully remove the LH front tweeter speaker grille using a suitable tool.
- Insert a suitable tool between the optical sensor and the LH front tweeter speaker grille. Lift the optical sensor upward.
- Disconnect the harness connector from the optical sensor and remove.

#### INSTALLATION

Installation is in the reverse order of removal.

## DOOR MIRROR TURN SIGNAL LAMP

< REMOVAL AND INSTALLATION >

[XENON TYPE]

## DOOR MIRROR TURN SIGNAL LAMP

## Removal and Installation

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The door mirror turn signal lamp is an integral part of the door mirror and must be replaced as an assembly. Refer to MIR-19, "Removal and Installation".

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#### **LIGHTING & TURN SIGNAL SWITCH**

< REMOVAL AND INSTALLATION >

[XENON TYPE]

### LIGHTING & TURN SIGNAL SWITCH

### Removal and Installation

INFOID:0000000009465282

#### NOTE

The lighting and turn signal switch is integral with the combination switch assembly.

#### **REMOVAL**

1. Unlock steering wheel.

#### **CAUTION:**

- Before servicing, disconnect both battery terminals and wait at least three minutes
- · Do not use air tools or electric tools for servicing.
- After the work is completed, make sure no system malfunction is detected by air bag warning lamp.
- In case a malfunction is detected by the air bag warning lamp, reset with the self-diagnosis function and delete the memory with CONSULT.
- If a malfunction is still detected after the above operation, perform self-diagnosis to repair malfunctions. Refer to <a href="SRC-12">SRC-12</a>, "SRS Operation Check".
- 2. Remove steering column covers. Refer to IP-13, "Removal and Installation".
- 3. Rotate steering wheel clockwise to access first combination switch bolt, then remove bolt.
- 4. Rotate steering wheel counter-clockwise to access second combination switch bolt, then remove bolt.
- 5. Disconnect the harness connectors from the lighting and turn signal switch and remove.

#### INSTALLATION

Installation is in the reverse order of removal.

### [XENON TYPE]

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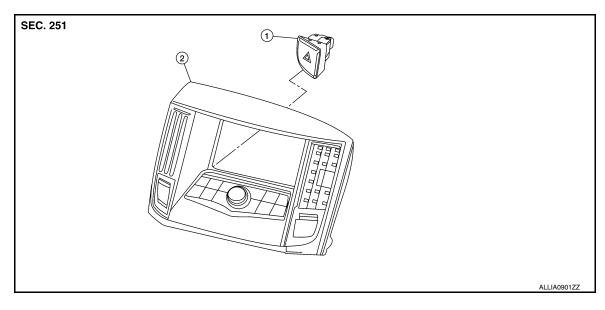
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## HAZARD SWITCH

Exploded View



Hazard switch

2. Cluster lid D

### Removal and Installation

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#### **REMOVAL**

- 1. Remove cluster lid D. Refer to IP-18, "Removal and Installation".
- 2. Disconnect the harness connector from the hazard switch and remove.

#### **INSTALLATION**

Installation is in the reverse order of removal.

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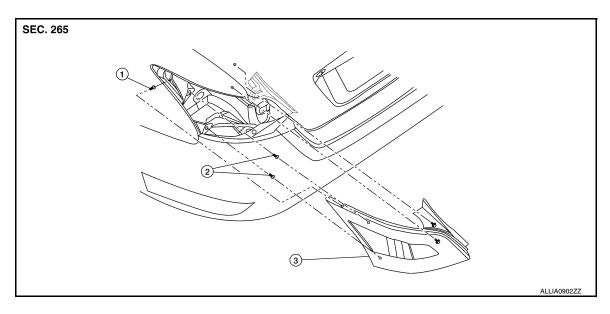
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### REAR COMBINATION LAMP

Exploded View



1. Slide clip 2. Grommets 3. Rear combination lamp

#### Removal and Installation

INFOID:0000000009465286

#### REAR COMBINATION LAMP

#### Removal

- Remove the trunk side finisher. Refer to <u>INT-36</u>, "Removal and Installation".
- Remove the rear combination lamp nuts.
- Pull the rear combination lamp toward the rear of the vehicle to remove it.
- 4. Disconnect the harness connector from the rear combination lamp.

#### Installation

Installation is in the reverse order of removal.

#### **WARNING:**

Do not touch bulb with your hand while it is on or right after being turned off, a burn injury may result. **CAUTION**:

- Do not touch bulb glass with your hand or keep other grease and oily substances away from bulb glass.
- Do not 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 is integral with rear combination lamp. Refer to EXL-162, "Exploded View".

#### REAR SIDE MARKER LAMP BULB

#### Removal

- 1. Remove the rear combination lamp. Refer to <a>EXL-162</a>, "Exploded View"</a>.
- Rotate the rear side marker lamp socket counterclockwise and unlock from rear combination lamp.
- 3. Remove the bulb from the rear side marker lamp socket.

#### Installation

Installation is in the reverse order of removal.

#### REAR TURN SIGNAL LAMP BULB

#### **REAR COMBINATION LAMP**

### < REMOVAL AND INSTALLATION >

[XENON TYPE]

Removal

- 1. Remove the rear combination lamp. Refer to <a>EXL-162</a>, "Exploded View"</a>.
- 2. Rotate the rear turn signal lamp socket counterclockwise and unlock from rear combination lamp.
- 3. Remove the bulb from the rear turn signal lamp socket.

Installation

Installation is in the reverse order of removal.

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

#### Removal

- 1. Remove the rear combination lamp. Refer to EXL-162, "Exploded View".
- 2. Rotate the back-up lamp socket counterclockwise and unlock from rear combination lamp.
- 3. Remove the bulb from the back-up lamp socket.

Installation

Installation is in the reverse order of removal.

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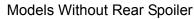
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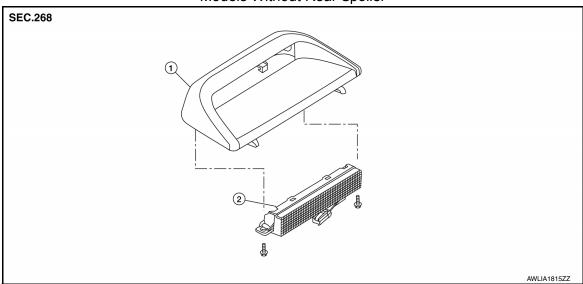
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## **HIGH-MOUNTED STOP LAMP**

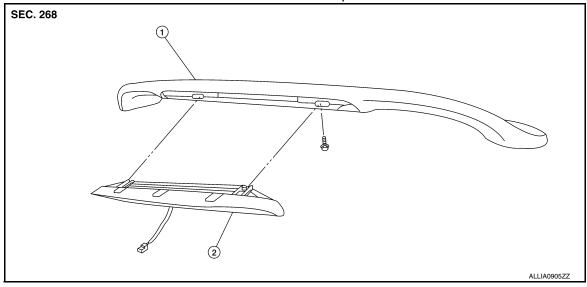
Exploded View





- 1. High-mounted stop lamp cover
- 2. High-mounted stop lamp bulb

### Models With Rear Spoiler



1. Rear spoiler

2. High-mounted stop lamp assembly

## Removal and Installation

WITHOUT REAR SPOILER

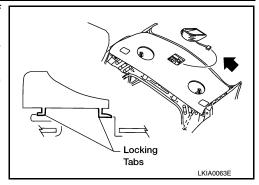
Removal

#### **HIGH-MOUNTED STOP LAMP**

#### < REMOVAL AND INSTALLATION >

[XENON TYPE]

- 1. Slide the high-mounted stop lamp rearward on the parcel shelf to give clearance to the front locking tabs.
- 2. Lift the front of the high-mounted stop lamp up and slide it forward to give clearance to the rear locking tabs.
- 3. Disconnect the harness connector from the high-mounted stop lamp and remove.



Installation

Installation is in the reverse order of removal.

#### WITH REAR SPOILER

#### Removal

- 1. Remove the high-mounted stop lamp screws.
- 2. Remove the high-mounted stop lamp from the rear spoiler far enough to gain access to the connector.
- 3. Disconnect the harness connector from the high-mounted stop lamp and remove.

#### Installation

Installation is in the reverse order of removal.

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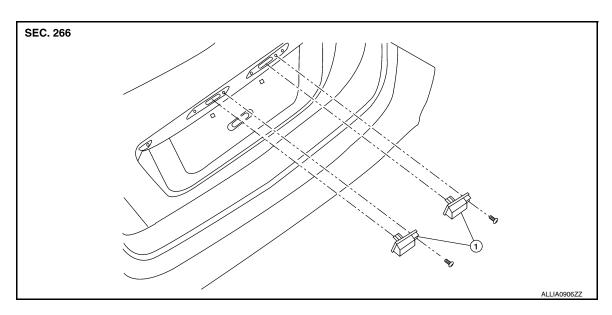
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## LICENSE PLATE LAMP

Exploded View



1. License plate lamp

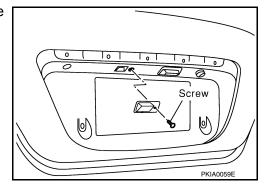
#### Removal and Installation

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#### LICENSE PLATE LAMP

#### Removal

- 1. Remove the license lamp finisher. Refer to EXT-31, "Removal and Installation".
- Position trunk lid finisher aside. Refer to <u>INT-36, "Exploded View"</u>.
- 3. Remove the license plate lamp screw and remove the license plate lamp.



#### Installation

Installation is in the reverse order of removal.

#### LICENSE PLATE LAMP BULB

#### Removal

#### **WARNING:**

Do not touch bulb with your hand while it is on or right after being turned off, a burn injury may result. **CAUTION**:

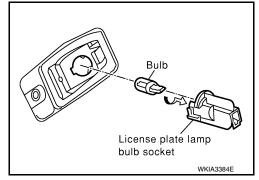
- Do not touch bulb glass with your hand or keep other grease and oily substances away from bulb glass.
- Do not leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.
- Position trunk lid finisher aside. Refer to <a href="INT-36">INT-36</a>, "Exploded View".

## LICENSE PLATE LAMP

### < REMOVAL AND INSTALLATION >

[XENON TYPE]

- 2. Turn the license plate lamp bulb socket counterclockwise and unlock it.
- 3. Remove the bulb from the license plate lamp bulb socket.



#### Installation

Installation is in the reverse order of removal.

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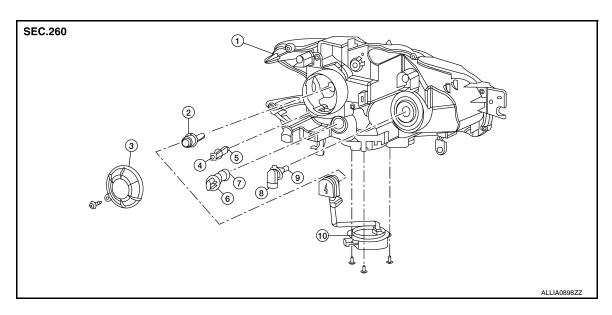
INFOID:000000009465291

## UNIT DISASSEMBLY AND ASSEMBLY

## FRONT COMBINATION LAMP

## Disassembly and Assembly

#### **EXPLODED VIEW**



- 1. Front combination lamp
- 4. Side marker lamp socket
- 7. Front turn signal lamp bulb
- 10. HID control unit and xenon bulb socket
- 2. Xenon bulb
- 5. Side marker lamp bulb
- 8. Halogen bulb socket (high beam)
- 3. Plastic cover
- 6. Front turn signal lamp socket
- 9. Halogen bulb (high beam)

#### **CAUTION:**

#### HID control unit and xenon bolb socket cannot be disassembled.

#### DISASSEMBLY

- 1. Remove the screw from cover and rotate the plastic cover counterclockwise and unlock it.
- 2. Rotate the xenon bulb socket counterclockwise and unlock it.
- 3. Unlock the retaining spring and remove the xenon bulb.
- 4. Remove the HID control unit installation screws.
- 5. Remove the screw and disconnect the harness connector from the HID control unit.
- 6. Remove the xenon bulb socket from front combination lamp.
- 7. Rotate the halogen bulb socket counterclockwise and unlock it.
- 8. Remove the bulb from halogen bulb socket.
- 9. Rotate the front turn signal lamp socket counterclockwise and unlock it.
- 10. Remove the bulb from front turn signal lamp socket.
- Rotate the front side marker lamp socket counterclockwise and unlock it.
- 12. Remove the bulb from front side marker lamp socket.

#### **ASSEMBLY**

Assembly is in the reverse order of disassembly.

### **CAUTION:**

- Install HID control unit securely.
- After installing the bulb, install the plastic cover and the bulb socket securely for watertightness.

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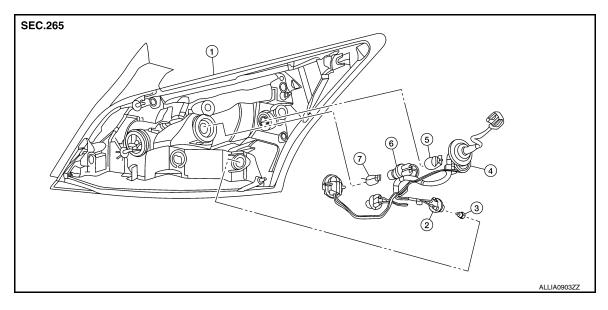
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## **REAR COMBINATION LAMP**

## Disassembly and Assembly



- 1. Rear combination lamp
- 4. Rear turn signal lamp socket
- 7. Back-up lamp bulb
- 2. Rear side marker lamp socket
- 5. Rear turn signal lamp bulb
- 3. Rear side marker lamp bulb
- 6. Back-up lamp socket

#### DISASSEMBLY

- 1. Rotate the rear side marker lamp socket counterclockwise and unlock it.
- 2. Remove the bulb from rear side marker lamp socket.
- 3. Rotate the rear turn signal lamp socket counterclockwise and unlock it.
- 4. Remove the bulb from rear turn signal lamp socket.
- 5. Rotate the back-up lamp socket counterclockwise and unlock it.
- 6. Remove the bulb from back up lamp socket.

#### **ASSEMBLY**

Assembly is in the reverse order of disassembly.

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

< SERVICE DATA AND SPECIFICATIONS (SDS)

[XENON TYPE]

# SERVICE DATA AND SPECIFICATIONS (SDS)

# SERVICE DATA AND SPECIFICATIONS (SDS)

**Bulb Specifications** 

INFOID:0000000009465293

	Wattage (W)*			
	Headlamp (Xenon low beam)	35		
Front combination laws	Headlamp (Halogen high beam)	65		
Front combination lamp	Park/Turn lamp	28/8		
	Front side marker lamp	5		
Front fog lamp	nt fog lamp			
Door mirror turn signal lamp		_		
	Stop lamp	_		
	Tail lamp	_		
Rear combination lamp	Rear turn signal lamp	21		
	Rear side marker lamp	5		
	Back-up lamp	18		
License plate lamp		5		
High grounded step leave	Without rear spoiler	_		
High-mounted stop lamp	With rear spoiler	_		

<sup>\*:</sup> Always check with the Parts Department for the latest parts information.

## **BASIC INSPECTION**

## DIAGNOSIS AND REPAIR WORKFLOW

Work Flow INFOID:0000000010051020 В

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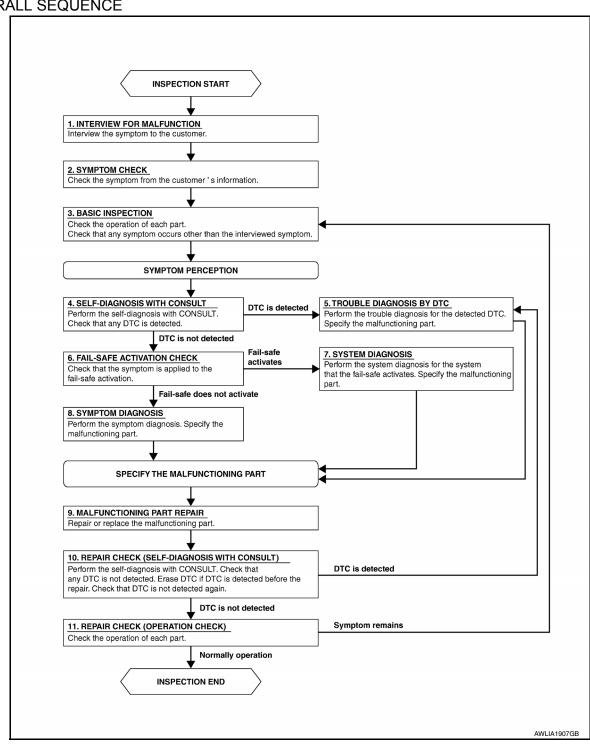
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#### **OVERALL SEQUENCE**



### **DETAILED FLOW**

## 1.INTERVIEW FOR MALFUNCTION

Find out what the customer's concerns are.

**EXL-171** Revision: August 2013 2014 Maxima NAM

#### DIAGNOSIS AND REPAIR WORKFLOW

#### < BASIC INSPECTION >

[HALOGEN TYPE]

>> GO TO 2.

## 2.SYMPTOM CHECK

Verify the symptom from the customer's information.

>> GO TO 3.

## 3.BASIC INSPECTION

Check the operation of each part. Check if any concerns occur other than those mentioned in the customer interview.

>> GO TO 4.

## 4. SELF-DIAGNOSIS WITH CONSULT

Perform the self diagnosis with CONSULT. Check if any DTC is detected.

#### Is any DTC detected?

YES >> GO TO 5.

NO >> GO TO 6.

## TROUBLE DIAGNOSIS BY DTC

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

>> GO TO 9.

## 6. FAIL-SAFE ACTIVATION CHECK

Determine if the customer's concern is related to fail-safe activation.

#### Does the fail-safe activate?

YES >> GO TO 7.

NO >> GO TO 8.

## 7. SYSTEM DIAGNOSIS

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

>> GO TO 9.

## 8. SYMPTOM DIAGNOSIS

Perform the symptom diagnosis. Specify the malfunctioning part.

>> GO TO 9.

## 9. MALFUNCTION PART REPAIR

Repair or replace the malfunctioning part.

>> GO TO 10.

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

Perform the self diagnosis with CONSULT. Verify that no DTCs are detected. Erase all DTCs which were detected prior to the repair. Perform the self diagnosis with CONSULT again. Verify that DTC is not detected again.

#### Is any DTC detected?

YES >> GO TO 5.

NO >> GO TO 11.

## 11. REPAIR CHECK (OPERATION CHECK)

Check the operation of each part.

## **DIAGNOSIS AND REPAIR WORKFLOW**

< BASIC INSPECTION > [HALOGEN TYPE]

Does it operate normally?

YES >> Inspection End.

NO >> GO TO 3.

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# SYSTEM DESCRIPTION

### **HEADLAMP**

System Diagram

INFOID:0000000010051021 Combination switch Combination reading function IPDM E/R Headlamp switch (lighting and turn CAN communication line **BCM** HEAD LAMP signal switch) Low beam •High beam LOW RELAY request signal •Low beam HEAD LAMP High beam request signal HIGH RELAY Combination meter High beam indicator lamp

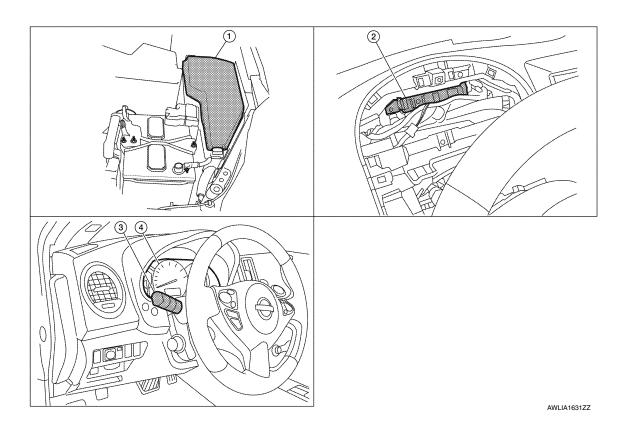
## System Description

INFOID:0000000010051022

Control of the headlamp system operation is dependent upon the position of the combination switch (lighting and turn signal switch). When the lighting switch is placed in the 2nd position, the BCM (body control module) receives input requesting the headlamps and park lamps to illuminate. This input is communicated to the IPDM E/R (intelligent power distribution module engine room) across the CAN communication lines. The CPU (central processing unit) of the IPDM E/R controls the headlamp high and headlamp low relay coils. When energized, these relays direct power to the respective headlamps, which then illuminate.

## Component Parts Location

INFOID:0000000010051023



#### **HEADLAMP**

#### < SYSTEM DESCRIPTION >

[HALOGEN TYPE]

- 1. IPDM E/R E17, E18, E200
- 2. BCM M16, M17, M18, M19 (view with 3. combination meter removed)
- Combination switch (lighting and turn signal switch) M28

4. Combination meter M24

## Component Description

INFOID:0000000010051024

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#### LOW BEAM OPERATION

When the lighting switch is in 2ND position, the BCM receives input requesting the headlamps to illuminate. This input is communicated to the IPDM E/R across the CAN communication lines. The CPU of the IPDM E/R controls the headlamp low relay coil which supplies power to the low beam headlamps.

### HIGH BEAM OPERATION/FLASH-TO-PASS OPERATION

With the lighting switch in the 2ND position and placed in HIGH position, the BCM receives input requesting the headlamp high beams to illuminate. The flash-to-pass feature can be used any time and also sends a signal to the BCM. This input is communicated to the IPDM E/R across the CAN communication lines. The CPU of the combination meter controls the ON/OFF status off the HIGH BEAM indicator. The CPU of the IPDM E/R controls the headlamp high relay coil which supplies power to the high beam headlamps.

The combination meter receives a high beam request signal (ON) through the CAN communication lines and turns the high beam indicator lamp ON.

#### EXTERIOR LAMP BATTERY SAVER CONTROL

With the lighting switch (combination switch) in the 2nd position and the ignition switch is turned from ON or ACC to OFF, the battery saver feature is activated.

Under this condition, the headlamps remain illuminated for 5 minutes unless the lighting switch position is changed. If the lighting switch position is changed, then the headlamps are turned off.

This setting can be changed by CONSULT. Refer to <u>EXL-193</u>, "BATTERY SAVER : <u>CONSULT Function</u> (<u>BCM</u> - BATTERY SAVER)".

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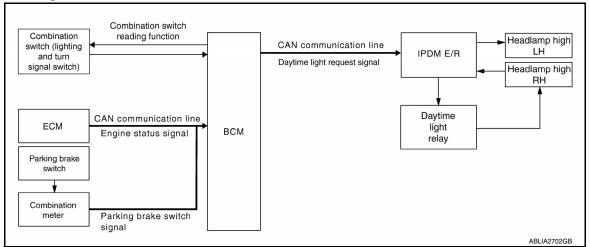
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## DAYTIME RUNNING LIGHT SYSTEM

## System Diagram

INFOID:0000000010051025



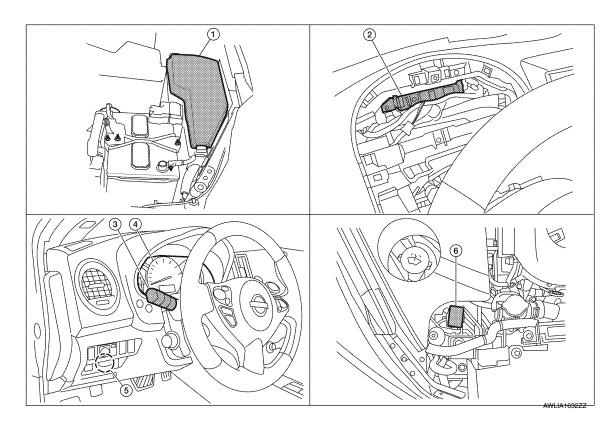
## System Description

INFOID:0000000010051026

The headlamp system for Canada vehicles is equipped with a daytime light relay that activates the high beam headlamps at approximately half illumination whenever the engine is running. If the parking brake is depressed before the engine is started, the daytime lights will not be illuminated. The daytime lights will illuminate once the parking brake is released. Thereafter, the daytime lights will continue to operate when the parking brake is depressed.

## **Component Parts Location**

INFOID:0000000010051027



- 1. IPDM E/R E17, E18, E200, E201
- 4. Combination meter M24
- BCM M16,M17, M18, M19 (view with combination meter removed)
- 5. Parking brake switch E35
- Combination switch (lighting and turn signal switch) M28
- 6. Daytime light relay E228

#### DAYTIME RUNNING LIGHT SYSTEM

< SYSTEM DESCRIPTION >

[HALOGEN TYPE]

## Component Description

INFOID:0000000010051028

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After starting the engine with the parking brake released and the lighting switch in the OFF or 1ST position, the headlamp high beam automatically turns on. With the lighting switch in the 2nd position or with autolamps ON, the headlamps function the same as conventional light systems.

#### **OPERATION**

The BCM monitors inputs from the parking brake switch and the combination switch (lighting and turn signal switch) to determine when to activate the daytime light system. The BCM sends a daytime light request to the IPDM E/R via the CAN communication lines. The IPDM E/R grounds the daytime light relay which in turn, provides power to the ground side of the RH high beam lamp. Power flows backward through the RH high beam lamp to the IPDM E/R, through the high beam fuses, through the LH high beam lamp circuit to the LH high beam lamp and on to ground. The high beam lamps are wired in series which causes them to illuminate at a reduced intensity.

Engine			With engine stopped								With engine running								
Lighting switch		OFF		1ST		2ND		OFF		1ST			2ND						
		Hi	Lo	Р	Hi	Lo	Р	Hi	Lo	Р	Hi	Lo	Р	Hi	Lo	Р	Hi	Lo	Р
Headlamp	High beam	-	_	-	_	_	×	×	_	×	•*	•*	×	●*	•*	×	×	_	×
	Low beam	-	-	_	-	_	×	×	×	×	-	_	×	-	-	×	×	×	×
Tail lamp		-	_	_	×	×	×	×	×	×	_	_	-	×	×	×	×	×	×
License and instrument illumination lamp		_	-	_	×	×	×	×	×	×	_	_	-	×	×	×	×	×	×

- · Hi: "HIGH BEAM" position
- · Lo: "LOW BEAM" position
- · P: "FLASH TO PASS" position
- x: Lamp "ON"
- · -: Lamp "OFF"
- •: Lamp dims. (Added functions)
- \*: When starting the engine with the parking brake released, the daytime lights will operate.

  When starting the engine with the parking brake depressed, the daytime lights will not operate.

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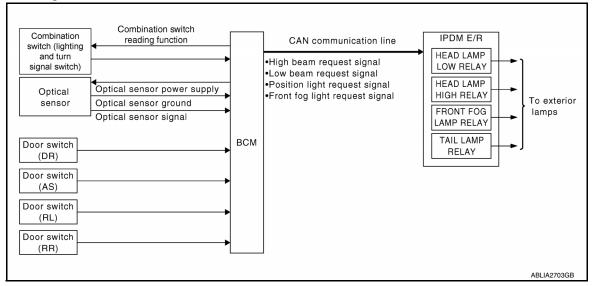
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### **AUTO LIGHT SYSTEM**

### System Diagram

INFOID:0000000010051029



## System Description

INFOID:0000000010051030

- BCM (Body Control Module) controls auto light operation according to signals from optical sensor, lighting switch and ignition switch.
- IPDM E/R (Intelligent Power Distribution Module Engine Room) operates parking, license plate, tail, front fog lamps and headlamps according to CAN communication signals from BCM.
- Optical sensor detects ambient brightness of 800 to 2,500 lux, converts light (lux) to voltage, and then sends the optical sensor signal to BCM.

#### **OUTLINE**

The auto light control system has an optical sensor that detects outside brightness.

When the lighting switch is in AUTO position, it automatically turns ON/OFF the parking, license plate, tail, front fog lamps and headlamps in accordance with the ambient light. Sensitivity can be adjusted in four steps. For the details of the setting, refer to <a href="EXL-191">EXL-191</a>, "HEADLAMP: CONSULT Function (BCM - HEAD LAMP)".

## **Component Parts Location**

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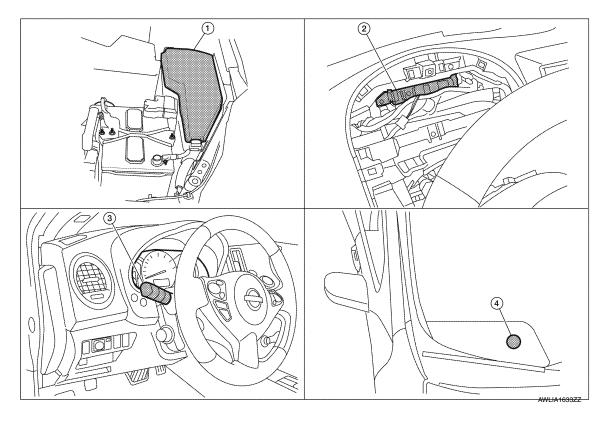
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- 1. IPDM E/R E17, E18, E200
- 2. BCM M16, M17, M18, M19, M21 (view 3. with combination meter removed)
- Combination switch (lighting and turn signal switch) M28

Optical sensor M66

## Component Description

INFOID:0000000010051032

#### **AUTO LIGHT OPERATION**

Applicable lamps

- Low beam headlamp
- · Parking, license plate and tail lamps
- High beam headlamp (with the lighting switch in HIGH BEAM position)
- Front fog lamp (with the lighting switch in front fog lamp ON position)

When the lighting switch is in AUTO position with the ignition switch in ON position, BCM detects the AUTO LIGHT (ON) by BCM combination switch (lighting and turn signal switch) reading function. BCM automatically turns ON/OFF the applicable lamps according to ambient brightness.

NOTE:

Timing for when lamps turn ON/OFF can be changed by the function setting of CONSULT. Refer to <u>EXL-191</u>, <u>"HEADLAMP : CONSULT Function (BCM - HEAD LAMP)"</u>.

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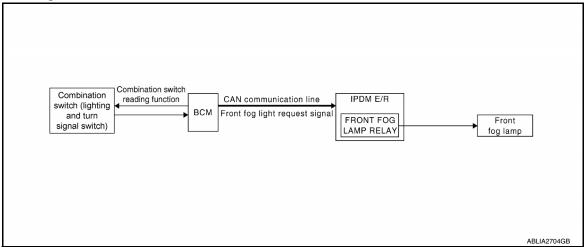
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## FRONT FOG LAMP

System Diagram

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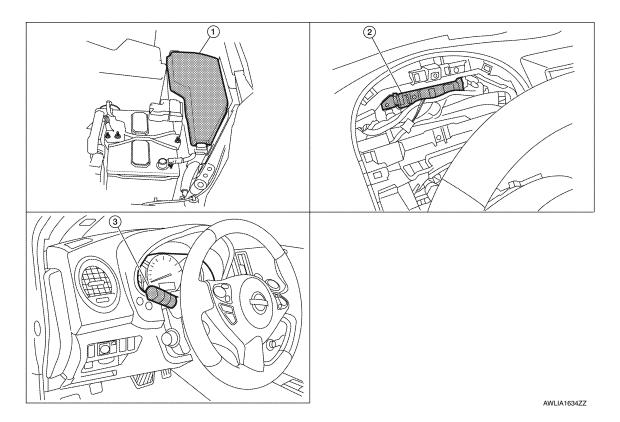
## System Description

INFOID:0000000010051034

- BCM (Body Control Module) controls front fog lamp operation.
- IPDM E/R (Intelligent Power Distribution Module Engine Room) operates front fog lamp according to CAN communication signals from BCM.
- Combination meter operates front fog lamp indicator according to inputs via the CAN communication lines.

## **Component Parts Location**

INFOID:0000000010051035



- 1. IPDM E/R E17, E18, E200
- 2. BCM M16, M17, M18, M19 (view with 3. combination meter removed)
- Combination switch (lighting and turn signal switch) M28

# FRONT FOG LAMP

< SYSTEM DESCRIPTION >

[HALOGEN TYPE]

# **Component Description**

INFOID:0000000010051036

# FRONT FOG LAMP OPERATION

When the lighting switch is in front fog lamp ON position and also in 1ST or 2ND position or AUTO position (headlamp is ON), the BCM detects FR FOG ON and the HEAD LAMP1, 2 ON or the AUTO LIGHT ON. The BCM sends a front fog lamp request ON signal through the CAN communication lines to the IPDM E/R. The IPDM E/R then turns ON the front fog lamp relay sending power to the front fog lamps.

The combination meter also receives a front fog lamp request ON signal through the CAN communication lines at which time it turns the front fog indicator ON.

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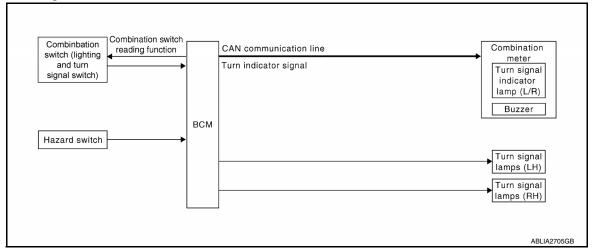
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# TURN SIGNAL AND HAZARD WARNING LAMPS

# System Diagram

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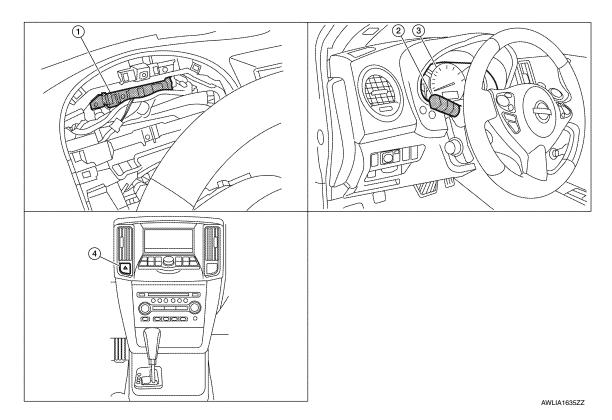
# System Description

INFOID:0000000010051038

- BCM (Body Control Module) controls turn signal lamp (RH and LH) and hazard warning lamp operation.
- · Combination meter operates turn signal indicator (RH and LH) according to CAN communication signals from BCM.

# **Component Parts Location**

INFOID:0000000010051039



- BCM M16, M17, M18, M19 (view with 2. combination meter removed)
- Combination switch (lighting and turn 3. Combination meter M24 signal switch) M28

Hazard switch M54

# TURN SIGNAL AND HAZARD WARNING LAMPS

< SYSTEM DESCRIPTION > [HALOGEN TYPE]

# Component Description

INFOID:0000000010051040

### **TURN SIGNAL OPERATION**

When the turn signal switch is in LH or RH position with the ignition switch in ON position, the BCM detects the TURN RH or TURN LH ON request. The BCM outputs the flasher output signal to the respective turn signal lamp. The BCM sends a turn signal indicator ON request through the CAN communication lines to the combination meter. The combination meter then activates the appropriate turn signal indicator and audible buzzer.

### HAZARD LAMP OPERATION

When the hazard switch is in ON position, the BCM detects the hazard switch signal ON. The BCM outputs the flasher output signal (right and left). The BCM sends a hazard indicator signal ON request through the CAN communication lines to the combination meter. The combination meter then activates the hazard indicator and audible buzzer.

### REMOTE KEYLESS ENTRY OPERATION

The remote keyless entry receiver transmits Intelligent Key signal to BCM, then BCM controls hazard lamps. Refer to <a href="SEC-19">SEC-19</a>, "System Description".

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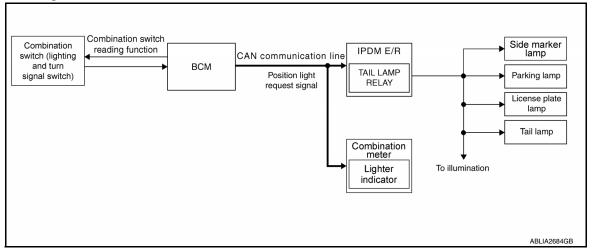
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# PARKING, LICENSE PLATE AND TAIL LAMPS

# System Diagram

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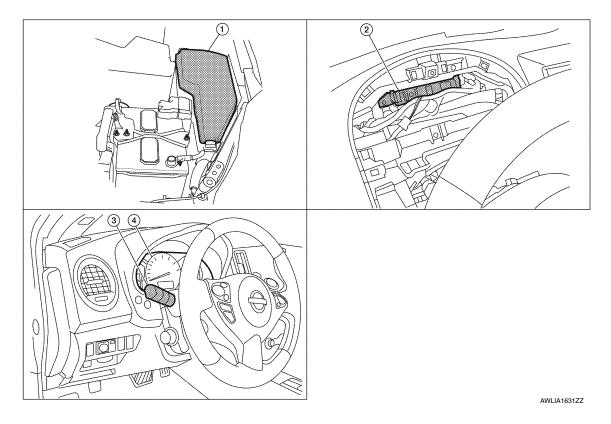
# System Description

INFOID:0000000010051042

- BCM (Body Control Module) controls parking, license plate and tail lamps operation.
- IPDM E/R (Intelligent Power Distribution Module Engine Room) operates parking, license plate and tail lamps according to CAN communication signals from BCM.

# **Component Parts Location**

INFOID:0000000010051043



- 1. IPDM E/R E17, E18, E201
- 2. BCM M16, M17, M18, M19 (view with 3. combination meter removed)
- Combination switch (lighting and turn signal switch) M28

4. Combination Meter M24

# PARKING, LICENSE PLATE AND TAIL LAMPS

SYSTEM DESCRIPTION >

# Component Description

INFOID:0000000010051044

[HALOGEN TYPE]

# PARKING, LICENSE PLATE AND TAIL LAMPS OPERATION

When the lighting switch is in 1ST position, BCM detects the LIGHTING SWITCH 1ST POSITION ON. The BCM sends a parking light ON request through the CAN communication lines to the IPDM E/R. The IPDM E/R then activates the tail lamp relay which sends power to the parking and instrument illumination circuits.

### EXTERIOR LAMP BATTERY SAVER CONTROL

With the combination switch (lighting and turn signal switch) in the 2nd position and the ignition switch is turned from ON or ACC to OFF, the battery saver feature is activated.

Under this condition, the headlamps remain illuminated for 5 minutes unless the lighting switch position is changed. If the lighting switch position is changed, then the headlamps are turned off.

This setting can be changed by CONSULT. Refer to <u>EXL-193</u>, "<u>BATTERY SAVER</u>: <u>CONSULT Function (BCM - BATTERY SAVER</u>)".

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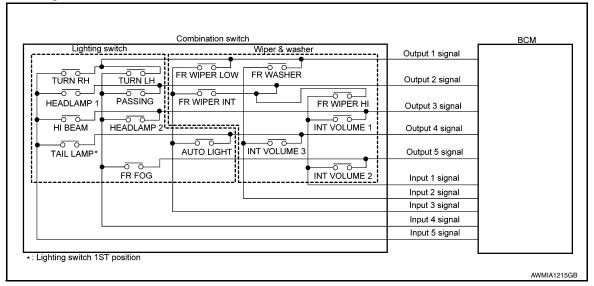
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# System Diagram

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# **System Description**

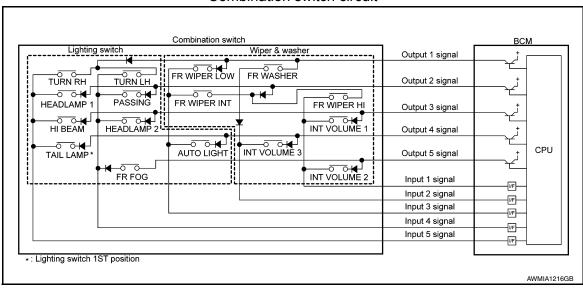
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### **OUTLINE**

- BCM reads the status of the combination switch (light, turn signal, wiper and washer) and recognizes the status of each switch.
- BCM has a combination of 5 output terminals (OUTPUT 1 5) and 5 input terminals (INPUT 1 5) and reads a maximum of 20 switch states.

### **COMBINATION SWITCH MATRIX**

### Combination switch circuit



### Combination switch INPUT-OUTPUT system list

System	INPUT 1	INPUT 2	INPUT 3	INPUT 4	INPUT 5
OUTPUT 1	_	FR WASHER	FR WIPER LOW	TURN LH	TURN RH
OUTPUT 2	FR WIPER HI	_	FR WIPER INT	PASSING	HEADLAMP 1
OUTPUT 3	INT VOLUME 1	_	_	HEADLAMP 2	HI BEAM

# < SYSTEM DESCRIPTION >

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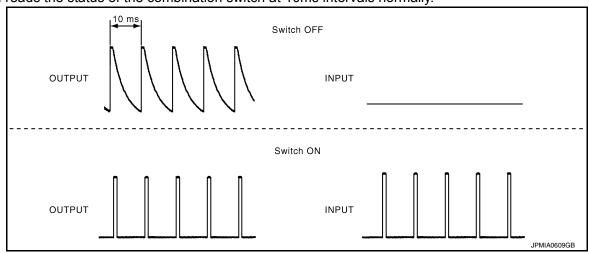
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System	INPUT 1	INPUT 2	INPUT 3	INPUT 4	INPUT 5
OUTPUT 4	_	INT VOLUME 3	AUTO LIGHT	_	TAIL LAMP
OUTPUT 5	INT VOLUME 2	_	_	FR FOG	_

### COMBINATION SWITCH READING FUNCTION

### Description

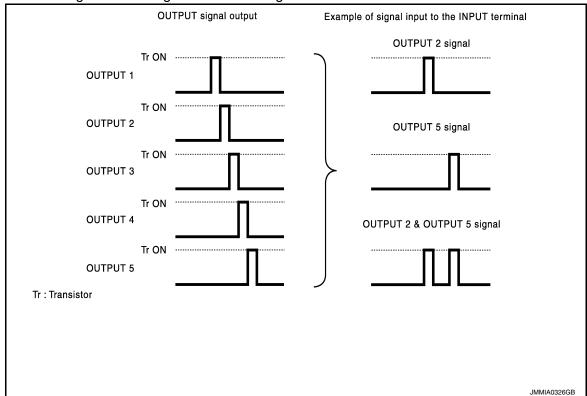
• BCM reads the status of the combination switch at 10ms intervals normally.



### NOTE:

BCM reads the status of the combination switch at 60ms intervals when BCM is controlled at low power consumption mode.

- BCM operates as follows and judges the status of the combination switch.
- It operates the transistor on OUTPUT side in the following order: OUTPUT 1  $\rightarrow$  2  $\rightarrow$ 3  $\rightarrow$ 4  $\rightarrow$ 5 and outputs voltage waveform.
- The voltage waveform of OUTPUT corresponding to the formed circuit is input into the interface on INPUT side if any (1 or more) switches are ON.
- It reads this change of the voltage as the status signal of the combination switch.



Operation Example

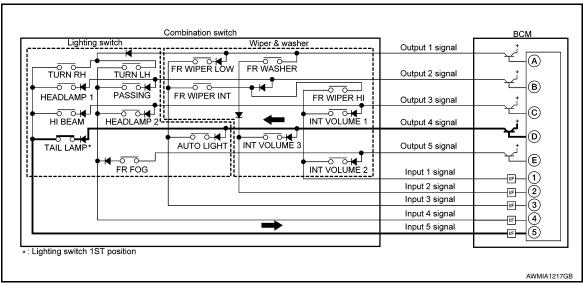
< SYSTEM DESCRIPTION >

[HALOGEN TYPE]

In the following operation example, the combination of the status signals of the combination switch is replaced as follows: INPUT 1 - 5 to "1 - 5" and OUTPUT 1 - 5 to "A - E".

Example 1: When a switch (TAIL LAMP) is turned ON

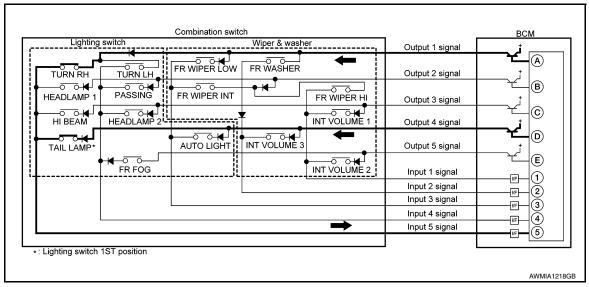
• The circuit between OUTPUT 4 and INPUT 5 is formed when the TAIL LAMP is turned ON.



- BCM detects the combination switch status signal "5D" when the signal of OUTPUT 4 is input to INPUT 5.
- BCM judges that the TAIL LAMP switch is ON when the signal "5D" is detected.

Example 2: When some switches (TRUN RH, TAIL LAMP) are turned ON

 The circuits between OUTPUT 1 and INPUT 5 and between OUTPUT 4 and INPUT 5 are formed when the TURN RH switch and TAIL LAMP switch are turned ON.



- BCM detects the combination switch status signal "5AD" when the signals of OUTPUT 1 and OUTPUT 4 are input to INPUT 5.
- BCM judges that the TURN RH switch and TAIL LAMP switch are ON when the signal "5AD" is detected.

WIPER INTERMITTENT DIAL POSITION SETTING (FRONT WIPER INTERMITTENT OPERATION) BCM judges the wiper intermittent dial 1 - 7 by the status of INT VOLUME 1, 2, and 3 switches.

< SYSTEM DESCRIPTION >

[HALOGEN TYPE]

Wiper intermittent dial posi-	Intermittent oper-	INT VOLUME switch ON/OFF status				
tion	ation delay inter- val	INT VOLUME 1 switch	INT VOLUME 2 switch	INT VOLUME 3 switch		
1	01. 1	ON	ON	ON		
2	Short ↑	ON	ON	OFF		
3		ON	OFF	OFF		
4		OFF	OFF	OFF		
5		OFF	OFF	ON		
6	↓ Long	OFF	ON	ON		
7		OFF	ON	OFF		

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# **DIAGNOSIS SYSTEM (BCM)**

< SYSTEM DESCRIPTION >

[HALOGEN TYPE]

# DIAGNOSIS SYSTEM (BCM)

**COMMON ITEM** 

COMMON ITEM: CONSULT Function (BCM - COMMON ITEM)

INFOID:0000000010070051

### APPLICATION ITEM

CONSULT performs the following functions via CAN communication with BCM.

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

# SYSTEM APPLICATION

BCM can perform the following functions.

				Direct [	Diagnosti	c Mode		
System	Sub System	Ecu Identification	Self Diagnostic Result	Data Monitor	Active Test	Work support	Configuration	CAN Diag Support Mntr
Door lock	DOOR LOCK		×	×	×	×		
Rear window defogger	REAR DEFOGGER			×	×			
Warning chime	BUZZER			×	×			
Interior room lamp timer	INT LAMP			×	×	×		
Exterior lamp	HEADLAMP			×	×	×		
Wiper and washer	WIPER			×	×	×		
Turn signal and hazard warning lamps	FLASHER			×	×	×		
Intelligent Key system	INTELLIGENT KEY			×	×	×		
Combination switch	COMB SW			×				
BCM	BCM	×	×			×	×	×
Immobilizer	IMMU		×	×	×			
Interior room lamp battery saver	BATTERY SAVER			×	×	×		
Trunk open	TRUNK			×	×			
Vehicle security system	THEFT ALM			×	×	×		
RAP system	RETAINED PWR			×				
Signal buffer system	SIGNAL BUFFER			×	×			
TPMS	AIR PRESSURE MONITOR		×	×	×	×		

**HEADLAMP** 

# **DIAGNOSIS SYSTEM (BCM)**

< SYSTEM DESCRIPTION >

[HALOGEN TYPE]

# HEADLAMP : CONSULT Function (BCM - HEAD LAMP)

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# **DATA MONITOR**

Monitor Item [Unit]	Description			
PUSH SW [On/Off]	Indicates condition of push button ignition switch			
ENGINE STATE [Stop/Stall/Crank/Run]	Indicates engine status received from ECM on CAN communication line			
VEH SPEED 1 [km/h]	Indicates vehicle speed signal received from ABS on CAN communication line			
KEY SW -SLOT [On/Off]	Indicates condition of key slot			
TURN SIGNAL R [On/Off]				
TURN SIGNAL L [On/Off]				
TAIL LAMP SW [On/Off]				
HI BEAM SW [On/Off]				
HEAD LAMP SW 1 [On/Off]	Indicates condition of combination switch			
HEAD LAMP SW 2 [On/Off]				
PASSING SW [On/Off]				
AUTO LIGHT SW [On/Off]				
FR FOG SW [On/Off]				
DOOR SW-DR [On/Off]	Indicates condition of front door switch LH			
DOOR SW-AS [On/Off]	Indicates condition of front door switch RH			
DOOR SW-RR [On/Off]	Indicates condition of rear door switch RH			
DOOR SW-RL [On/Off]	Indicates condition of rear door switch LH			
DOOR SW-BK [On/Off]	Indicates condition of trunk switch			
OPTICAL SENSOR [V]	Indicates voltage signal from optical sensor			
A O T !! (E T E O T				

# **ACTIVE TEST**

Test Item	Description
TAIL LAMP	This test is able to check tail lamp operation [On/Off].
HEAD LAMP	This test is able to check head lamp operation [Hi/Low/Off].
FR FOG LAMP	This test is able to check front fog lamp operation [On/Off].
DAYTIME RUNNING LIGHT	This test is able to check daytime running light operation [LH/RH/Off].
ILL DIM SIGNAL	This test is able to check head lamp illumination dimming operation [On/Off].

# **WORK SUPPORT**

Support Item	Setting	Description
	MODE 4	Less sensitive setting than normal setting (Turns ON later than normal operation.)
CUSTOM A/LIGHT SETTING	MODE 3	More sensitive setting than MODE 2 (Turns ON earlier than MODE 2.)
	MODE 2	More sensitive setting than normal setting (Turns ON earlier than normal operation.)
	MODE 1*	Normal
BATTERY SAVER SET	On*	Exterior lamp battery saver function ON
DATTEIN GAVEN GET	Off	Exterior lamp battery saver function OFF

Support Item	Setting		Description
	MODE 8	180 sec.	
	MODE 7	150 sec.	
	MODE 6	120 sec.	
ILL DELAY SET	MODE 4	60 sec.	Sets delay timer function operation time
ILL DELAT SET	MODE 5	90 sec.	(All doors closed)
	MODE 3	30 sec.	
	MODE 2	OFF	
	MODE 1*	45 sec.	

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

# **FLASHER**

# FLASHER: CONSULT Function (BCM - FLASHER)

INFOID:0000000010070053

# **DATA MONITOR**

Monitor Item [Unit]	Description			
REQ SW -DR [On/Off]	Indicates condition of door request switch LH			
REQ SW -AS [On/Off]	Indicates condition of door request switch RH			
PUSH SW [On/Off]	Indicates condition of push button ignition switch			
TURN SIGNAL R [On/Off]	Indicates condition of turn signal function of combination switch			
TURN SIGNAL L [On/Off]	indicates condition of turn signal function of combination switch			
HAZARD SW [On/Off]	Indicates condition of hazard switch			
RKE-LOCK [On/Off]	Indicates condition of lock signal from Intelligent Key			
RKE-UNLOCK [On/Off]	Indicates condition of unock signal from Intelligent Key			
RKE-PANIC [On/Off]	Indicates condition of panic alarm signal from Intelligent Key			

# **ACTIVE TEST**

Test Item	Description
FLASHER	This test is able to check turn signal lamp operation [Off/LH/RH].

# **WORK SUPPORT**

Support Item	Setting	Description
HAZARD ANSWER BACK	Lock/Unlock*	Hazard warning lamp activation when doors are locked or unlocked with the Intelligent Key.
	Unlock Only	Hazard warning lamp activation when doors are unlocked with the Intelligent Key.
	Lock Only	Hazard warning lamp activation when doors are locked with the Intelligent Key.
	Off	No hazard warning lamp activation when doors are locked or unlocked with the Intelligent Key.

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

**COMB SW** 

COMB SW: CONSULT Function (BCM-COMB SW)

INFOID:0000000010070054

**DATA MONITOR** 

# **DIAGNOSIS SYSTEM (BCM)**

< SYSTEM DESCRIPTION >

[HALOGEN TYPE]

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Monitor Item [Unit]	Description			
FR WIPER HI [On/Off]				
FR WIPER LOW [On/Off]	Indicates condition of winer eneration of combination quitab			
FR WASHER SW [On/Off]	Indicates condition of wiper operation of combination switch			
FR WIPER INT [On/Off]				
FR WIPER STOP [On/Off]	Indicates front wiper auto stop signal received from IPDM E/R on CAN communication line			
INT VOLUME [1 - 7]	Indicates condition of intermittent wiper operation of combination switch			
TURN SIGNAL R [On/Off]	Indicates condition of right turn signal operation of combination switch			
TURN SIGNAL L [On/Off]	Indicates condition of left turn signal operation of combination switch			
TAIL LAMP SW [On/Off]	Indicates condition of tail lamp switch operation of combination switch			
HI BEAM SW [On/Off]	Indicates condition of Hi beam switch operation of combination switch			
HEAD LAMP SW 1 [On/Off]	Indicates condition of head lamp switch 1 operation of combination switch			
HEAD LAMP SW 2 [On/Off]	Indicates condition of head lamp switch 2 operation of combination switch			
PASSING SW [On/Off]	Indicates condition of passing switch operation of combination switch			
AUTO LIGHT SW [On/Off]	Indicates condition of auto light switch operation of combination switch			
FR FOG SW [On/Off]	Indicates condition of front fog lamp switch operation of combination switch			

# **BATTERY SAVER**

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

INFOID:0000000010070055

# **DATA MONITOR**

Monitor Item [Unit]	Description	
REQ SW -DR [On/Off]	Indicates condition of door request switch LH	
REQ SW -AS [On/Off]	Indicates condition of door request switch RH	
PUSH SW [On/Off]	Indicates condition push button ignition switch	
ACC RLY -F/B [On/Off]	Indicates condition of accessory relay	
UNLK SEN -DR [On/Off]	Indicates condition of door unlock sensor	
KEY SW -SLOT [On/Off]	Indicates condition of key slot	
DOOR SW-DR [On/Off]	Indicates condition of front door switch LH	
DOOR SW-AS [On/Off]	Indicates condition of front door switch RH	
DOOR SW-RR [On/Off]	Indicates condition of rear door switch RH	
DOOR SW-RL [On/Off]	Indicates condition of rear door switch LH	
DOOR SW-BK [On/Off]	Indicates condition of trunk switch	
CDL LOCK SW [On/Off]	Indicates condition of lock signal from door lock and unlock switch	
CDL UNLOCK SW [On/Off]	Indicates condition of unlock signal from door lock and unlock switch	
KEY CYL LK-SW [On/Off]	Indicates condition of lock signal from door key cylinder switch	
KEY CYL UN-SW [On/Off]	Indicates condition of unlock signal from door key cylinder switch	
TRNK/HAT MNTR [On/Off]	Indicates condition of trunk room lamp switch	
RKE-LOCK [On/Off]	Indicates condition of lock signal from Intelligent Key	
RKE-UNLOCK [On/Off]	Indicates condition of unlock signal from Intelligent Key	

# **ACTIVE TEST**

Test item	Description
BATTERY SAVER	This test is able to check battery saver operation [On/Off].

# **WORK SUPPORT**

# **DIAGNOSIS SYSTEM (BCM)**

# < SYSTEM DESCRIPTION >

[HALOGEN TYPE]

Support Item	Sett	ing	Description
ROOM LAMP BAT SAV SET	ON*		Interior room lamp battery saver function ON
ROOM LAIMF BAT SAV SET	OFF		Interior room lamp battery saver function OFF
	MODE 3* 10 min.		
ROOM LAMP TIMER SET	MODE 2	60 min.	Sets interior room lamp battery saver timer operating time
	MODE 1	15 min.	
BATTERY SAVER SET	ON*	II.	Exterior lamp battery saver function ON
BALLERY SAVER SEL	OFF		Exterior lamp battery saver function OFF

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

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

< SYSTEM DESCRIPTION >

[HALOGEN TYPE]

# DIAGNOSIS SYSTEM (IPDM E/R)

# **Diagnosis Description**

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### **AUTO ACTIVE TEST**

### Description

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

- Oil pressure warning lamp
- Front wiper (LO, HI)
- Parking lamps
- Side marker lamps
- License plate lamps
- Tail lamps
- Front fog lamps (if equipped)
- Headlamps (LO, HI)
- A/C compressor (magnet clutch)
- · Cooling fans

### Operation Procedure

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

### NOTE:

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

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

### **CAUTION:**

### Close front door RH.

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

### NOTE:

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

- If auto active test mode cannot be actuated, check door switch system. Refer to <u>DLK-67</u>, <u>"Component Function Check"</u>.
- Do not start the engine.

Inspection in Auto Active Test Mode

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

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

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

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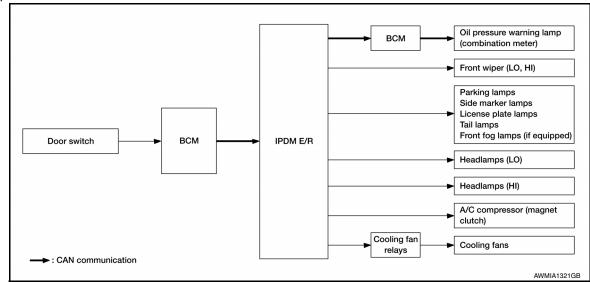
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Revision: August 2013 EXL-195 2014 Maxima NAM

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 energic		YES	BCM signal input circuit
Any of the following components do not operate Parking lamps Side marker lamps License plate lamps Tail lamps Front fog lamps (if equipped) Headlamp (HI, LO) Front wiper	Perform auto active test.  Does the applicable system operate?	NO	Lamp or motor Lamp or motor ground circuit Harness or connector between IPDM E/R and applicable system IPDM E/R
A/C compressor does not operate	Perform auto active test. Does the magnet clutch operate?	YES	Combination meter signal input circuit     CAN communication signal between combination meter 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

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

# < SYSTEM DESCRIPTION >

# [HALOGEN TYPE]

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Symptom	Inspection contents		Possible cause
	Perform auto active test.	YES	Harness or connector between IPDM E/R and oil pressure switch     Oil pressure switch     IPDM E/R
Oil pressure warning lamp does not operate	Does the oil pressure warning lamp blink?	NO	CAN communication signal between IPDM E/R and BCM CAN communication signal between BCM and combination meter Combination meter
	Perform auto active test. Does the cooling fan operate?	YES	ECM signal input circuit     CAN communication signal between ECM and IPDM E/R
Cooling fan does not operate		NO	Cooling fan Harness or connector between cooling fan and cooling fan relays Cooling fan relays Harness or connector between IPDM E/R and cooling fan relays IPDM E/R

# CONSULT Function (IPDM E/R)

INFOID:0000000010070057

# APPLICATION ITEM

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

Direct Diagnostic Mode	Description
ECU Identification	The IPDM E/R part number is displayed.
Self Diagnostic Result	The IPDM E/R self diagnostic results are displayed.
Data Monitor	The IPDM E/R input/output data is displayed in real time.
Active Test	The IPDM E/R activates outputs to test components.
CAN Diag Support Mntr	The result of transmit/receive diagnosis of CAN communication is diplayed.

# **ECU IDENTIFICATION**

The IPDM E/R part number is displayed.

# SELF DIAGNOSTIC RESULT

Refer to PCS-27, "DTC Index".

# **DATA MONITOR**

Monitor Item [Unit]	Main Signals	Description
MOTOR FAN REQ [1/2/3/4]	×	Indicates cooling fan speed signal received from ECM on CAN communication line
AC COMP REQ [On/Off]	×	Indicates A/C compressor request signal received from ECM on CAN communication line
TAIL&CLR REQ [On/Off]	×	Indicates position light request signal received from BCM on CAN communication line
HL LO REQ [On/Off]	×	Indicates low beam request signal received from BCM on CAN communication line

Revision: August 2013 EXL-197 2014 Maxima NAM

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

# < SYSTEM DESCRIPTION >

[HALOGEN TYPE]

Monitor Item [Unit]	Main Signals	Description	
HL HI REQ [On/Off]	×	Indicates high beam request signal received from BCM on CAN communication line	
FR FOG REQ [On/Off]	×	Indicates front fog light request signal received from BCM on CAN communication line	
FR WIP REQ [Stop/1LOW/Low/Hi]	×	Indicates front wiper request signal received from BCM on CAN communication line	
WIP AUTO STOP [STOP P/ACT P]	×	Indicates condition of front wiper auto stop signal	
WIP PROT [Off/BLOCK]	×	Indicates condition of front wiper fail-safe operation	
IGN RLY1 -REQ [On/Off]		Indicates ignition switch ON signal received from BCM on CAN communication line	
IGN RLY [On/Off]	×	Indicates condition of ignition relay-1	
PUSH SW [On/Off]		Indicates condition of push-button ignition switch	
INTER/NP SW [On/Off]		Indicates condition of CVT shift position	
ST RLY CONT [On/Off]		Indicates starter relay status signal received from BCM on CAN communication line	
IHBT RLY -REQ [On/Off]		Indicates starter control relay signal received from BCM on CAN communication line	
ST/INHI RLY [Off/ ST /INHI]		Indicates condition of starter relay and starter control relay	
DETENT SW [On/Off]		Indicates condition of CVT shift selector (park position switch)	
DTRL REQ [Off]		Indicates daytime light request signal received from BCM on CAN communication line	
OIL P SW [Open/Close]		Indicates condition of oil pressure switch	
THFT HRN REQ [On/Off]		Indicates theft warning horn request signal received from BCM on CAN communication line	
HORN CHIRP [On/Off]		Indicates horn reminder signal received from BCM on CAN communication line	

# **ACTIVE TEST**

Test item	Description
HORN	This test is able to check horn operation [On].
FRONT WIPER	This test is able to check wiper motor operation [Hi/Lo/Off].
MOTOR FAN	This test is able to check cooling fan operation [4/3/2/1].
EXTERNAL LAMPS	This test is able to check external lamp operation [Fog/Hi/Lo/Tail/Off].

# CAN DIAG SUPPORT MNTR

Refer to LAN-12, "CAN Diagnostic Support Monitor".

# POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN TYPE]

# DTC/CIRCUIT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT BCM (BODY CONTROL MODULE)

BCM (BODY CONTROL MODULE): Diagnosis Procedure

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Regarding Wiring Diagram information, refer to BCS-67, "Wiring Diagram".

# 1. CHECK FUSE AND FUSIBLE LINK

Check if the following BCM fuses or fusible link are blown.

Terminal No.	Signal name	Fuse and fusible link No.
1		Н
11	Battery power supply	10
24		7

# Is the fuse or fusible link blown?

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

NO >> GO TO 2

# $2.\,$ CHECK POWER SUPPLY CIRCUIT

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

(	(+)	(-)	Voltage
В	CM		Voltage (Approx.)
Connector	Terminal		
M16	1	Ground	
M17	11		Battery voltage
M18	24		

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### Is the measurement normal?

YES >> GO TO 3

NO >> Repair or replace harness.

# 3. CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

В	CM		Continuity	
Connector	Connector Terminal		Continuity	
M17	13		Yes	

### Does continuity exist?

YES >> Inspection End.

NO >> Repair or replace harness.

# BCM (BODY CONTROL MODULE): Special Repair Requirement

1. REQUIRED WORK WHEN REPLACING BCM

INFOID:0000000010070071

# POWER SUPPLY AND GROUND CIRCUIT

# < DTC/CIRCUIT DIAGNOSIS >

[HALOGEN TYPE]

Initialize control unit. Refer to <u>BCS-5</u>, "<u>ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT (BCM)</u>: Work Procedure".

>> Work End.

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

Regarding Wiring Diagram information, refer to PCS-28, "Wiring Diagram".

# 1. CHECK FUSES AND FUSIBLE LINK

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

Terminal No.	Signal name	Fuses and fusible link No.
1		В
2	Battery power supply	A, D
36		A, E, L

### Is the fuse blown?

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

NO >> GO TO 2

# 2. CHECK POWER SUPPLY CIRCUIT

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

(+) IPDM E/R		(-)	Voltage (V) (Approx.)
		(-)	
Connector	Terminal		
E16	1	Ground	
LIO	2	Ground	Battery voltage
E18	36		

### Is the measurement value normal?

YES >> GO TO 3

NO >> Repair harness or connector.

# 3. CHECK GROUND CIRCUIT

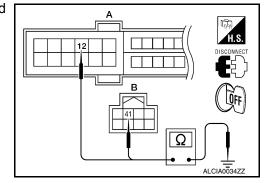
Check continuity between IPDM E/R harness connectors and ground.

IPDM E	E/R		Continuity	
Connector	Terminal	Ground	Continuity	
A: E18	12	Glound	Yes	
B: E17	41		res	

### Does continuity exist?

YES >> Inspection End.

NO >> Repair harness or connector.



# **HEADLAMP (HI) CIRCUIT**

### < DTC/CIRCUIT DIAGNOSIS >

### [HALOGEN TYPE]

# **HEADLAMP (HI) CIRCUIT**

Description INFOID:0000000010051057

The IPDM E/R (intelligent power distribution module engine room) controls the headlamp high relay based on inputs from the BCM over the CAN communication lines. When the headlamp high relay is energized, power flows through fuses 48 and 49, located in the IPDM E/R. Power then flows to the front combination lamps to the headlamp high beam.

# Component Function Check

INFOID:0000000010051058

# 1. CHECK HEADLAMP (HI) OPERATION

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# **MWITHOUT CONSULT**

Start IPDM E/R auto active test. Refer to PCS-11, "Diagnosis Description".

Check that the headlamp switches to the high beam.

### NOTE:

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

# CONSULT

Select "EXTERNAL LAMPS" of IPDM E/R active test item.

While operating the test item, check that the headlamp switches to the high beam.

ΗΙ : Headlamp switches to the high beam.

**OFF** : Headlamp OFF

Does the headlamp switch to the high beam?

YES >> Headlamp (HI) circuit is normal.

NO >> Refer to EXL-201, "Diagnosis Procedure".

# Diagnosis Procedure

INFOID:0000000010051059

Regarding Wiring Diagram information, refer to EXL-257, "Wiring Diagram" (without DTRL), EXL-263, "Wiring Diagram" (With DTRL).

# 1.CHECK HEADLAMP (HI) FUSES

Turn the ignition switch OFF.

Check that the following fuses are not open.

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Unit	Location	Fuse No.	Capacity
Headlamp HI (LH)	IPDM E/R	48	10A
Headlamp HI (RH)	IPDM E/R	49	10A

### Is the fuse open?

YES >> Repair the harness and replace the fuse.

NO >> GO TO 2.

# 2.CHECK HEADLAMP (HI) OUTPUT VOLTAGE

### (P)CONSULT ACTIVE TEST

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

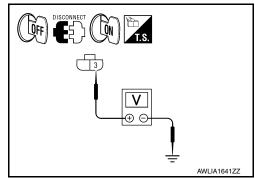
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### < DTC/CIRCUIT DIAGNOSIS >

5. With EXTERNAL LAMP ON, check the voltage between the combination lamp connector and ground.

(+)		(-)	Voltage	
Connector		Terminal	(-)	voltage
RH	E222 (without DTRL)			
КΠ	E233 (with DTRL)	3	Ground	Battery voltage
LH	E213			



### Is battery voltage present?

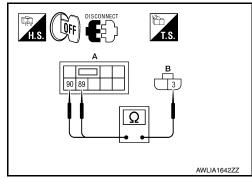
YES >> GO TO 4.

NO >> GO TO 3.

# 3.CHECK HEADLAMP (HI) CIRCUIT FOR OPEN

- 1. Turn the ignition switch OFF.
- 2. Disconnect IPDM E/R connector E200.
- 3. Check continuity between the IPDM E/R harness connector (A) and the front combination lamp harness connector (B).

	Α		В		Continuity
Conn	ector	Terminal	Connector	Terminal	Continuity
RH		89	E222 (without DTRL)		
КП	E200	69	E233 (with DTRL)	3	Yes
LH		90	E213		



### Does continuity exist?

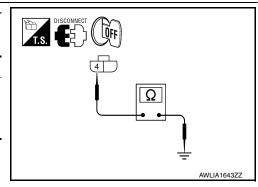
YES >> Replace IPDM E/R. Refer to <u>PCS-35, "Removal and</u> Installation".

NO >> Repair the harnesses or connectors.

# 4. CHECK FRONT COMBINATION LAMP (HI) GROUND CIRCUIT

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

	Connector	Terminal	_	Continuity
RH	E222 (without DTRL)			
КП	E233 (with DTRL)	4	Ground	Yes
LH	E213	•		



### Does continuity exist?

YES >> Inspect the headlamp bulb.

NO (Except RH with DTRL)>>Repair the harness.

NO (RH with DTRL)>>GO TO 5.

# $5.\mathsf{check}$ continuity between front combination Lamp RH (HI) and daytime light relay

- 1. Disconnect daytime light relay connector.
- Check continuity between front combination lamp RH harness connector and daytime light relay harness connector.

Front combination	ation lamp RH	Daytime light relay		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
E233	4	E228	3	Yes	

### Does continuity exist?

YES >> GO TO 6.

NO >> Repair the harness or connector.

# **HEADLAMP (HI) CIRCUIT**

### < DTC/CIRCUIT DIAGNOSIS >

[HALOGEN TYPE]

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# 6.CHECK DAYTIME LIGHT RELAY GROUND CIRCUIT

Check continuity between daytime light relay harness connector and ground.

Daytime	light relay		Continuity
Connector	Terminal	Ground	Continuity
E228	4		Yes

# Does continuity exist?

YES >> GO TO 7.

NO >> Repair the harness or connector.

# .CHECK DAYTIME LIGHT RELAY FUSE

- Turn the ignition switch OFF.
- Check that the following fuse is not open.

Unit	Location	Fuse No.	Capacity
Daytime light relay	IPDM E/R	54	10A

### Is the fuse open?

YES >> Replace the fuse after repairing the affected circuit.

NO >> GO TO 8.

# 8.CHECK DAYTIME LIGHT RELAY CIRCUIT FOR OPEN

Disconnect IPDM E/R connector E18 and E201.

Check continuity between the IPDM E/R harness connector and the daytime light relay harness connector.

IPDM E/R		Daytime light relay		Continuity
Connector	Terminal	Connector	Terminal	Continuity
E18	6		1	
E10	6	E228	5	Yes
E201	105		2	

### Does continuity exist?

YES >> GO TO 9

NO >> Repair the harnesses or connectors.

# 9. CHECK DAYTIME LIGHT RELAY

Check daytime light relay. Refer to EXL-203, "Component Inspection".

### Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-35, "Removal and Installation".

NO >> Replace daytime light relay.

# Component Inspection

1. CHECK DAYTIME LIGHT RELAY

- Turn ignition switch OFF.
- Remove daytime light relay. 2.
- Check the continuity between daytime light relay terminals under the following conditions.

Terminals	Condition	Continuity
3 and 5	12V direct current supply between terminals 1 and 2	Yes
No current supply		No

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INFOID:0000000010051060

# **HEADLAMP (HI) CIRCUIT**

# < DTC/CIRCUIT DIAGNOSIS >

[HALOGEN TYPE]

Terminals	Condition	Continuity
3 and 4	12V direct current supply between terminals 1 and 2	No
3 and 4	No current supply	Yes

# Is the inspection result normal?

YES >> Inspection End.

NO >> Replace daytime light relay

# **HEADLAMP (LO) CIRCUIT**

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN TYPE]

# HEADLAMP (LO) CIRCUIT

Description INFOID:000000010051061

The IPDM E/R (intelligent power distribution module engine room) controls the headlamp low relay based on inputs from the BCM over the CAN communication lines. When the headlamp low relay is energized, power flows through fuses 51 and 52, located in the IPDM E/R. Power then flows to the front combination lamps to the headlamp low beam.

# Component Function Check

INFOID:000000010051062

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# 1. CHECK HEADLAMP (LO) OPERATION

# **NWITHOUT CONSULT**

1. Start IPDM E/R auto active test. Refer to PCS-11, "Diagnosis Description".

2. Check that the headlamp is turned ON.

### NOTE:

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

### CONSULT

1. Select "EXTERNAL LAMPS" of IPDM E/R active test item.

2. While operating the test item, check that the headlamp is turned ON.

LO : Headlamp ON OFF : Headlamp OFF

### Is the headlamp turned ON?

YES >> Headlamp (LO) is normal.

NO >> Refer to <u>EXL-205</u>, "<u>Diagnosis Procedure</u>".

# Diagnosis Procedure

INFOID:0000000010051063

Regarding Wiring Diagram information, refer to EXL-257, "Wiring Diagram".

# 1. CHECK HEADLAMP (LO) FUSES

1. Turn the ignition switch OFF.

2. Check that the following fuses are not open.

Unit	Location	Fuse No.	Capacity
Headlamp LO (LH)	IPDM E/R	51	15A
Headlamp LO (RH)	IPDM E/R	52	15A

### Is the fuse open?

YES >> Repair the harness and replace the fuse.

NO >> GO TO 2.

# 2.CHECK HEADLAMP (LO) OUTPUT VOLTAGE

### (P)CONSULT

1. Turn the ignition switch OFF.

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

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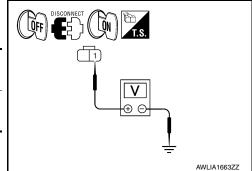
# **HEADLAMP (LO) CIRCUIT**

# < DTC/CIRCUIT DIAGNOSIS >

[HALOGEN TYPE]

5. With EXTERNAL LAMPS ON, check the voltage between the combination lamp connector and ground.

(+)			(-)	Voltage	
Co	nnector	Terminal	(-)	voltage	
RH	E223	1	Ground	Pattory voltago	
LH	E212	1	Giodila	Battery voltage	



### Is battery voltage present?

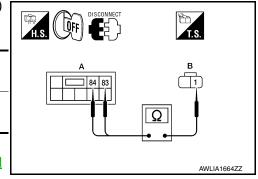
YES >> GO TO 4.

NO >> GO TO 3.

# 3.check headlamp (LO) circuit for open

- 1. Turn the ignition switch OFF.
- 2. Disconnect IPDM E/R connector E200.
- 3. Check continuity between the IPDM E/R harness connector (A) and the front combination lamp harness connector (B).

		1	В		Continuity
Conr	nector	Terminal	Connector	Terminal	Continuity
RH	E200	83	E223	1	Yes
LH	L200	84	E212	1	162



# Does continuity exist?

YES >> Replace the IPDM E/R. Refer to <u>PCS-35, "Removal and Installation"</u>.

NO >> Repair the harnesses or connectors.

# 4. CHECK FRONT COMBINATION LAMP (LO) GROUND CIRCUIT

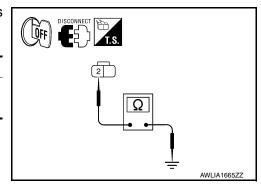
- 1. Disconnect the front combination lamp connector.
- 2. Check continuity between the front combination lamp harness connector terminal and ground.

Cor	nector	Terminal	_	Continuity
RH	E223	2	Ground	Yes
LH	E212	2	Giouna	165

# Does continuity exist?

YES >> Inspect the headlamp bulb.

NO >> Repair the harness.



### FRONT FOG LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN TYPE]

INFOID:0000000010051065

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# FRONT FOG LAMP CIRCUIT

Description INFOID:000000010051064

The IPDM E/R (intelligent power distribution module engine room) controls the front fog lamp relay based on inputs from the BCM over the CAN communication lines. When the front fog lamp relay is energized, power flows from the front fog lamp relay in the IPDM E/R to the front fog lamps.

# Component Function Check

# 1. CHECK FRONT FOG LAMP OPERATION

# ®WITHOUT CONSULT

- 1. Activate IPDM E/R auto active test. Refer to PCS-11, "Diagnosis Description".
- Check that the front fog lamp is turned ON.

# (E)CONSULT

- 1. Select "EXTERNAL LAMPS" of IPDM E/R active test item.
- 2. While operating the test item, 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-207, "Diagnosis Procedure".

# Diagnosis Procedure

Regarding Wiring Diagram information, refer to EXL-276, "Wiring Diagram".

# 1. CHECK FRONT FOG LAMP FUSE

1. Turn the ignition switch OFF.

2. Check that the following fuse is not open.

Unit	Location	Fuse No.	Capacity
Front fog lamp	IPDM E/R	53	15A

### Is the fuse open?

YES >> Repair the harness and replace the fuse.

NO >> GO TO 2.

# 2.CHECK FRONT FOG LAMP OUTPUT VOLTAGE

### CONSULT

Turn the ignition switch OFF.

Disconnect the front fog lamp connector.

Turn the ignition switch ON.

4. Select "EXTERNAL LAMPS" of IPDM E/R active test item.

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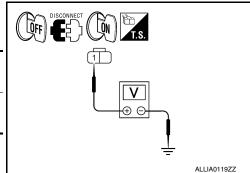
# FRONT FOG LAMP CIRCUIT

# < DTC/CIRCUIT DIAGNOSIS >

[HALOGEN TYPE]

With EXTERNAL LAMPS ON, check the voltage between the fog lamp connector and ground.

(+)			- (-)	Voltage
Со	nnector	Terminal	- (-)	voltage
LH	E214	1	Ground	Patton, voltago
RH	E227	1	Giouna	Battery voltage



H.S. OFF

### Is battery voltage present?

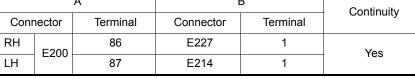
YES >> GO TO 4.

NO >> GO TO 3.

# ${f 3}.$ CHECK FRONT FOG LAMP OPEN CIRCUIT

- Turn the ignition switch OFF.
- Disconnect IPDM E/R connector E200. 2.
- Check continuity between the IPDM E/R harness connector (A) and the front fog lamp harness connector (B).

	A		В		Continuity
Con	nector	Terminal	Connector	Terminal	Continuity
RH	E200	86	E227	1	Yes
LH	E200	87	E214	1	165



# Does continuity exist?

YES >> Replace the IPDM E/R. Refer to PCS-35, "Removal and Installation".

NO >> Repair the harnesses or connectors.

# 4. CHECK FRONT FOG LAMP GROUND CIRCUIT

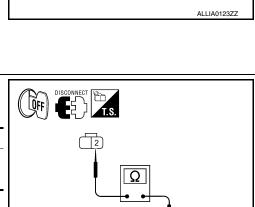
Check continuity between the front fog lamp harness connector terminal and ground.

Со	nnector	Terminal	_	Continuity
RH	E227	2	Ground	Yes
LH	E214	2	Glound	163

# Does continuity exist?

YES >> Inspect the fog lamp bulb.

>> Repair the harness. NO



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< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN TYPE]

# PARKING LAMP CIRCUIT

Description INFOID:000000010051067

The IPDM E/R (intelligent power distribution module engine room) controls the tail lamp relay based on inputs from the BCM over the CAN communication lines. When the tail lamp relay is energized, power flows through fuses 46 and 47, located in the IPDM E/R. Power then flows to the front and rear combination lamps, license plate lamps.

# Component Function Check

INFOID:0000000010051068

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# 1. CHECK PARKING LAMP OPERATION

### **NWITHOUT CONSULT**

- 1. Activate IPDM E/R auto active test. Refer to PCS-11, "Diagnosis Description".
- 2. Check that the parking lamp is turned ON.

# CONSULT

- 1. Select "EXTERNAL LAMPS" of IPDM E/R active test item.
- 2. While operating the test item, 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-209, "Diagnosis Procedure".

# Diagnosis Procedure

INFOID:0000000010051069

Regarding Wiring Diagram information, refer to EXL-288, "Wiring Diagram".

# 1. CHECK PARKING LAMP FUSES

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

Unit	Location	Fuse No.	Capacity
Parking lamps (front)	IPDM E/R	46	10A
Parking lamps (rear)	IPDM E/R	47	10A

# Is the fuse open?

YES >> Repair the harness and replace the fuse.

NO >> GO TO 2.

# 2.CHECK TAIL LAMP RELAY OUTPUT (VOLTAGE)

### CONSULT

- Turn the ignition switch OFF.
- 2. Disconnect the front and rear combination lamp connectors.
- Turn the ignition switch ON.
- Select "EXTERNAL LAMPS" of IPDM E/R active test item.

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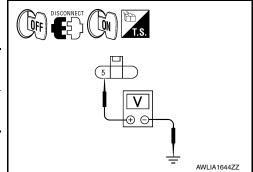
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[HALOGEN TYPE]

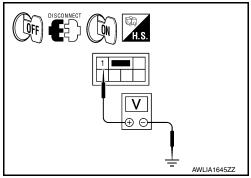
5. With EXTERNAL LAMPS ON, check the voltage between the front combination lamp connector and ground.

	(+)		(-)	Voltage
Con	nector	Terminal	(-)	voltage
LH	E217	5	Ground	Pattory voltage
RH	E224	3	Ground	Battery voltage



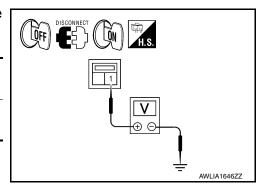
6. With EXTERNAL LAMPS ON, check the voltage between the rear combination lamp connector and ground.

	(+)		(–)	Voltage
Con	nector	Terminal	(-)	voltage
LH	B30	1	Ground Battery	Battery voltage
RH	B45	I	Ground	Battery Voltage



7. With EXTERNAL LAMPS ON, check the voltage between the license plate lamp connector and ground.

	(+)		(–)	Voltage	
Con	nector	Terminal	(-)	vollage	
LH	T6	1	T6 1 Ground	Ground	Battery voltage
RH	T8	1 Ground		Dattery voltage	



# Is battery voltage present?

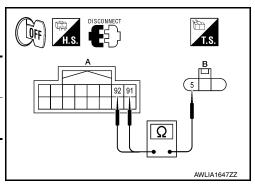
YES >> GO TO 4.

NO >> GO TO 3.

# $3. {\sf CHECK\ PARKING\ LAMP\ CIRCUIT\ (OPEN)}$

- 1. Turn the ignition switch OFF.
- 2. Disconnect IPDM E/R connector E201.
- 3. Check continuity between the IPDM E/R harness connector (A) and the front combination lamp harness connector (B).

	Α		В		Continuity
Cor	nnector	Terminal	Connector	Terminal	Continuity
LH	E201	92	E217	5	Yes
RH	E201	91	E224	5	

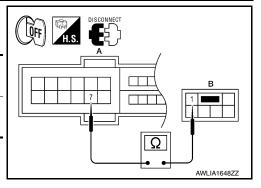


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[HALOGEN TYPE]

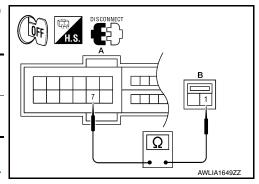
4. Check continuity between the IPDM E/R harness connector (A) and the rear combination lamp harness connector (B).

	Α		В		Continuity
Con	nector	Terminal	Connector	Terminal	Continuity
LH	E18	7	B30	1	Vee
RH	□10	,	B45	ı	Yes



5. Check continuity between the IPDM E/R harness connector (A) and the license plate lamp harness connector (B).

	А		E	Continuity	
Coi	nnector	Terminal	Connector	Terminal	Continuity
LH	E18	7	T6	1	Yes
RH	L10	,	Т8	<b>"</b>	165



Does continuity exist?

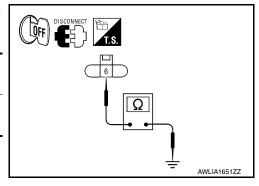
YES >> Replace the IPDM E/R. Refer to <u>PCS-35</u>, "Removal and <u>Installation"</u>.

NO >> Repair the harnesses or connectors.

# 4. CHECK PARKING LAMP GROUND CIRCUIT

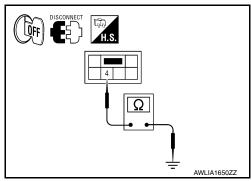
1. Check continuity between the front combination lamp harness connector terminal and ground.

	(+)		(-)	Continuity	
Con	nector	Terminal	(-)	Continuity	
LH	E217	6	Ground	Yes	
RH	E224	0	Ground	163	



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

	(+)		(-)	Continuity
Con	nector	Terminal	(-)	Continuity
LH	B30	30 4 Ground	Ground	Yes
RH	B45	4	Glound	165



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# < DTC/CIRCUIT DIAGNOSIS >

[HALOGEN TYPE]

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

	(+)		(-)	Continuity
Coni	nector	Terminal	(-)	Continuity
LH	T6	2	Ground	Yes
RH	T8	2	Giodila	165

# DISCONNECT H.S. AWLIA1652ZZ

# Does continuity exist?

YES >> Inspect the parking lamp bulb.

NO >> Repair the harness.

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN TYPE]

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# TURN SIGNAL LAMP CIRCUIT

Description

The BCM monitors inputs from the combination switch to determine when to activate the turn signals. The BCM outputs voltage direction to the left and right turn signals during turn signal operation or both during hazard warning operation. The BCM sends a turn signal indicator request to the combination meter via the CAN communication lines.

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

### NOTE:

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

# Component Function Check

# 1. CHECK TURN SIGNAL LAMP

# CONSULT

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

LH : Turn signal lamp LH blinkingRH : Turn signal lamp RH blinkingOFF : The turn signal lamp OFF

### Does the turn signal lamp blink?

YES >> Turn signal lamp circuit is normal.

NO >> Refer to EXL-213, "Diagnosis Procedure".

# Diagnosis Procedure

Regarding Wiring Diagram information, refer to EXL-280, "Wiring Diagram".

# 1. CHECK TURN SIGNAL LAMP BULB

Check the applicable lamp bulb to be sure the proper bulb standard is in use and the bulb is not open.

### Is the bulb OK?

YES >> GO TO 2.

NO >> Replace the bulb.

# 2.CHECK TURN SIGNAL LAMP OUTPUT VOLTAGE

- Turn the ignition switch OFF.
- Disconnect front combination lamp connector, door mirror connector (if equipped with turn signal in mirror) and rear combination lamp connector.
- Turn the ignition switch ON.
- With turn signal switch operating, check the voltage between the front combination lamp harness connector and ground.

(+)		(-)	Voltage
Connector	Terminal	(-)	voltage

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# < DTC/CIRCUIT DIAGNOSIS >

[HALOGEN TYPE]

E217	LH			
E224	RH	7	Ground	(V) 15 10 5 0 1 s

5. With turn signal switch operating, check the voltage between the rear combination lamp harness connector and ground.

	(+)			Voltage	
Connector		Terminal	(–)	voltage	
B30	LH				
B45	RH	6	Ground	(V) 15 10 5 0 1 s	

6. With turn signal switch operating, check the voltage between the door mirror (if equipped with turn signals in the mirrors) harness connector and ground.

(+)			(-)	Voltage
Connector Terminal		Voltage		
D4	LH			
D107	RH	8	Ground	(V) 15 10 5 0 1 s

### Is the measurement value normal?

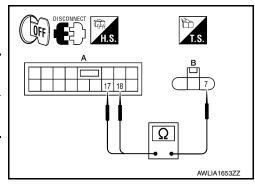
YES >> GO TO 5.

NO >> GO TO 3.

# 3.check turn signal lamp circuit for open

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM connector M17.
- 3. Check continuity between the BCM harness connector (A) and the front combination lamp connector (B).

А		В		Continuity	
Cor	nector	Terminal	Connector Terminal		Continuity
LH	M17	18	E217	7	Yes
RH	IVI I 7	17	E224	,	163

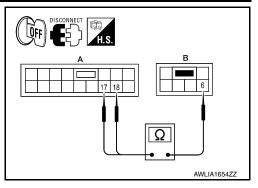


# < DTC/CIRCUIT DIAGNOSIS >

### [HALOGEN TYPE]

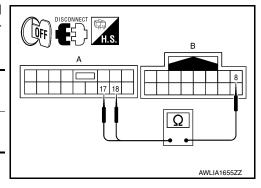
Check continuity between the BCM harness connector (A) and the rear combination lamp harness connector (B).

	А		В		Continuity
Cor	nector	Terminal	Connector Terminal		Continuity
LH	M17	18	B30	6	Yes
RH	IVI I 7	17	B45	O	165



5. Check continuity between the BCM harness connector (A) and the door mirror connector (B) (if equipped with turn signal in mirror).

А			В	Continuity	
Cor	nector	Terminal	Connector Terminal		Continuity
LH	M17	18	D4	8	Yes
RH	IVI I 7	17	D107	0	165



### Does continuity exist?

YES >> GO TO 4.

NO >> Repair the harnesses or connectors.

# 4.CHECK TURN SIGNAL LAMP SHORT CIRCUIT

Check continuity between the BCM harness connector and ground.

Conr	nector	Terminal	_	Continuity
LH	M17	18	Ground	No
RH	IVI I 7	17	Ground	NO

### Does continuity exist?

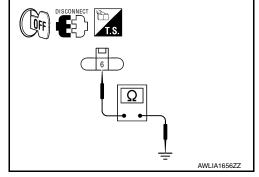
YES >> Repair the harnesses or connectors.

NO >> Replace BCM. Refer to BCS-79, "Removal and Installation".

# 5. CHECK TURN SIGNAL LAMP GROUND CIRCUIT

- Turn ignition switch OFF.
- Check continuity between the front combination lamp and ground.

Со	nnector	Terminal	_	Continuity
LH	E217	6	Ground	Yes
RH	E224	б	Ground	163



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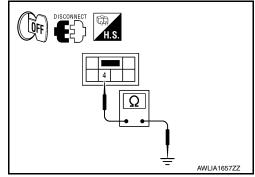
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# < DTC/CIRCUIT DIAGNOSIS >

[HALOGEN TYPE]

3. Check continuity between the rear combination lamp and ground.

Connector		Terminal	_	Continuity
LH	B30	4	Ground	Yes
RH	B45	7	Ground	103



4. Check continuity between the door mirror and ground (if equipped with turn signal in mirror).

С	onnector	Terminal	_	Continuity
LH	D4	7	Ground	Yes
RH	D107	,	Ground	163

# Does continuity exist?

YES >> Replace the front combination lamp. Refer to <u>EXL-318</u>, "Removal and Installation", the rear combination lamp. Refer to <u>EXL-326</u>, "Removal and Installation" or door mirror (if equipped with turn signal in mirror). Refer to <u>EXL-323</u>, "Removal and Installation".

NO >> Repair the harnesses or connectors.

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#### OPTICAL SENSOR

Description INFOID:0000000010051073

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

#### Component Function Check

#### 1.CHECK OPTICAL SENSOR SIGNAL BY CONSULT

#### (P)CONSULT

- Turn the ignition switch ON.
- Select "OPTICAL SENSOR" of BCM (HEAD LAMP) DATA MONITOR item.
- Turn the lighting switch to AUTO.
- While the auto light system is operating, check the monitor status.

Monitor item	Condition	Voltage
OPTICAL SENSOR	When illuminating	3.1V or more *
	When shutting off light	0.6V or less

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

#### Is the item status normal?

YES >> Optical sensor is normal.

NO >> Refer to EXL-217, "Diagnosis Procedure".

#### Diagnosis Procedure

Regarding Wiring Diagram information, refer to EXL-270, "Wiring Diagram".

#### 1. CHECK OPTICAL SENSOR POWER SUPPLY INPUT

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

(+)		(-)	Voltage	
Connector	Terminal	(-)	voitage	
M66	1	Ground	5V	

#### Is the voltage reading as specified?

YES >> GO TO 2.

NO >> GO TO 4.

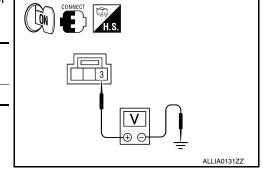
#### 2.CHECK OPTICAL SENSOR GROUND INPUT

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

(+)		(-)	Voltage	
Connector	Terminal	(-)	voitage	
M66	3	Ground	Less than 0.2V	

#### Is the voltage reading as specified?

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



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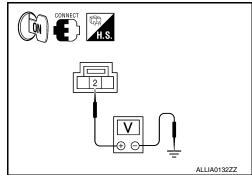
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### $\overline{3}$ .check optical sensor signal output

With the auto light system operating, check voltage between the optical sensor harness connector and ground.

(+)		(-)	Condition	Voltage	
Connector	Terminal	(-)	Condition	voitage	
M66	M66 2 Ground		When illuminating	3.1V or more *	
IVIOO	2	Giodila	When shutting off light	0.6V or less	

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



#### Is the voltage reading as specified?

YES >> GO TO 7.

NO >> Replace the optical sensor. Refer to EXL-322, "Removal and Installation".

#### 4. CHECK OPTICAL SENSOR POWER SUPPLY FOR OPEN CIRCUIT

- Turn the ignition switch OFF.
- Disconnect the optical sensor connector and BCM connector M18.
- Check continuity between the optical sensor harness connector (A) and the BCM harness connector (B).

	A		В	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M66	1	M18	46	Yes

#### Does continuity exist?

YES >> GO TO 5.

NO >> Repair the harnesses or connectors.

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#### ${f 5}$ .CHECK OPTICAL SENSOR POWER SUPPLY FOR SHORT CIRCUIT

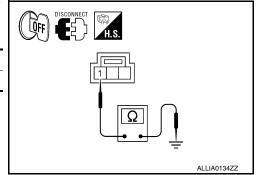
Check the continuity between the optical sensor harness connector and the ground.

Connector	Terminal	_	Continuity
M66	1	Ground	No

#### Does continuity exist?

YES >> Repair the harnesses or connectors.

>> Replace BCM. Refer to BCS-79, "Removal and Installa-NO



#### 6. CHECK OPTICAL SENSOR GROUND FOR OPEN CIRCUIT

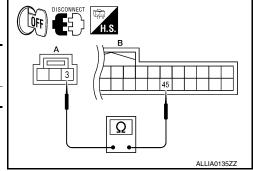
- Turn the ignition switch OFF.
- Disconnect the optical sensor connector and BCM connector M18.
- Check continuity between the optical sensor harness connector (A) and the BCM harness connector (B).

-	A		В	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M66	3	M18	45	Yes

#### Does continuity exist?

YES >> Replace BCM. Refer to BCS-79, "Removal and Installation".

NO >> Repair the harnesses or connectors.



#### **OPTICAL SENSOR**

#### < DTC/CIRCUIT DIAGNOSIS >

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## 7. CHECK OPTICAL SENSOR SIGNAL FOR OPEN CIRCUIT

- 1. Turn the ignition switch OFF.
- 2. Disconnect the optical sensor connector and BCM connector M18.
- 3. Check continuity between the optical sensor harness connector (A) and the BCM harness connector (B).

	A		В	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M66	2	M18	21	Yes

# 

#### Does continuity exist?

YES >> GO TO 8.

NO >> Repair the harnesses or connectors.

#### 8. CHECK OPTICAL SENSOR SIGNAL FOR SHORT CIRCUIT

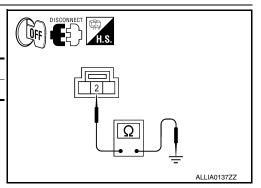
Check the continuity between the optical sensor harness connector and ground.

Connector	Terminal	_	Continuity
M66	2	Ground	No

#### Does continuity exist?

YES >> Repair the harnesses or connectors.

NO >> Replace BCM. Refer to BCS-79, "Removal and Installation".



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Revision: August 2013 EXL-219 2014 Maxima NAM

#### HAZARD SWITCH

#### **Component Function Check**

INFOID:0000000010051076

#### 1. CHECK HAZARD SWITCH SIGNAL BY CONSULT

#### **©CONSULT DATA MONITOR**

- 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 Haz	Hazard switch	ON	On
	Tiazaiu Switch	OFF	Off

#### Is the measurement normal?

YES >> Hazard switch circuit is normal.

NO >> Refer to EXL-220, "Diagnosis Procedure".

#### Diagnosis Procedure

INFOID:0000000010051077

Regarding Wiring Diagram information, refer to EXL-280, "Wiring Diagram".

#### 1. CHECK HAZARD SWITCH SIGNAL INPUT

- 1. Turn ignition switch OFF.
- Disconnect hazard switch connector.
- 3. Turn ignition switch ON.
- 4. Check voltage between hazard switch harness connector and ground.

	(+) Hazard switch		Voltage (Approx.)
Connector	Terminal		,
M54	2	Ground	(V) 15 10 5 0 JPMIA0012GB

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 2.

#### $2.\mathsf{CHECK}$ HAZARD SWITCH SIGNAL OPEN CIRCUIT

- 1. Turn ignition switch OFF.
- Disconnect BCM connector M19.
- 3. Check continuity between hazard harness connector and BCM harness connector.

Hazard switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M54	2	M19	98	Yes

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

#### **HAZARD SWITCH**

#### < DTC/CIRCUIT DIAGNOSIS >

[HALOGEN TYPE]

## $\overline{3}$ .check hazard switch signal short circuit

Check continuity between hazard switch harness connector and ground.

Hazaro	d switch		Continuity	
Connector	Terminal	Ground	Continuity	
M54	2		No	

#### Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-79, "Removal and Installation".

NO >> Repair or replace harness.

#### 4. CHECK HAZARD SWITCH GROUND OPEN CIRCUIT

Check continuity between hazard switch harness connector and ground.

Hazaro	d switch		Continuity
Connector	Terminal	Ground	Continuity
M54	1		Yes

#### Is the inspection result normal?

YES >> Replace hazard switch. Refer to EXL-325, "Removal and Installation".

NO >> Repair or replace harness.

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#### **ECU DIAGNOSIS INFORMATION**

#### BCM (BODY CONTROL MODULE)

Reference Value

#### NOTE:

The Signal Tech II Tool (J-50190) can be used to perform the following functions. Refer to the Signal Tech II User Guide for additional information.

- · Activate and display TPMS transmitter IDs
- Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs
- · Check Intelligent Key relative signal strength
- · Confirm vehicle Intelligent Key antenna signal strength

#### VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
ED WIDED III	Other than front wiper switch HI	OFF
FR WIPER HI	Front wiper switch HI	ON
FR WIPER LOW	Other than front wiper switch LO	OFF
	Front wiper switch LO	ON
FR WASHER SW	Front washer switch OFF	OFF
	Front washer switch ON	ON
ED WIDED INT	Other than front wiper switch INT	OFF
FR WIPER INT	Front wiper switch INT	ON
ED WIDED STOD	Front wiper is not in STOP position	OFF
FR WIPER STOP	Front wiper is in STOP position	ON
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	Wiper intermittent dial position
TUDNI CIONAL D	Other than turn signal switch RH	OFF
TURN SIGNAL R	Turn signal switch RH	ON
TUDNI CIONAL I	Other than turn signal switch LH	OFF
TURN SIGNAL L	Turn signal switch LH	ON
TAIL LAMP CVV	Other than lighting switch 1ST and 2ND	OFF
TAIL LAMP SW	Lighting switch 1ST or 2ND	ON
HI BEAM SW	Other than lighting switch HI	OFF
HI BEAIN SW	Lighting switch HI	ON
HEAD LAMD SW 4	Other than lighting switch 2ND	OFF
HEAD LAMP SW 1	Lighting switch 2ND	ON
HEAD LAMP SW 2	Other than lighting switch 2ND	OFF
HEAD LAWP SW 2	Lighting switch 2ND	ON
DACCING CW	Other than lighting switch PASS	OFF
PASSING SW	Lighting switch PASS	ON
ALITO LICUIT CW	Other than lighting switch AUTO	OFF
AUTO LIGHT SW	Lighting switch AUTO	ON
ED EOC SW	Front fog lamp switch OFF	OFF
FR FOG SW	Front fog lamp switch ON	ON
DOOD SW DD	Driver door closed	OFF
DOOR SW-DR	Driver door opened	ON

#### < ECU DIAGNOSIS INFORMATION >

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Monitor Item	Condition	Value/Status
DOOR SW-AS	Passenger door closed	OFF
DOOR SW-AS	Passenger door opened	ON
DOOR SW-RR	Rear door RH closed	OFF
JOOK SW-KK	Rear door RH opened	ON
DOOR SW-RL	Rear door LH closed	OFF
JOOR SW-RL	Rear door LH opened	ON
DOOR SW-BK	Trunk door closed	OFF
JOOK SW-BK	Trunk door opened	ON
CDL LOCK SW	Other than power door lock switch LOCK	OFF
DDE LOOK OW	Power door lock switch LOCK	ON
CDL UNLOCK SW	Other than power door lock switch UNLOCK	OFF
DDL ONLOOK 3W	Power door lock switch UNLOCK	ON
(EY CYL LK-SW	Other than driver door key cylinder LOCK position	OFF
LI OIL LIX-OVV	Driver door key cylinder LOCK position	ON
(EY CYL UN-SW	Other than driver door key cylinder UNLOCK position	OFF
	Driver door key cylinder UNLOCK position	ON
HAZARD SW	When hazard switch is not pressed	OFF
	When hazard switch is pressed	ON
REAR DEF SW	When rear window defogger switch is pressed	ON
TR CANCEL SW	Trunk lid opener cancel switch OFF	OFF
	Trunk lid opener cancel switch ON	ON
TR/BD OPEN SW	Trunk lid opener switch OFF	OFF
	While the trunk lid opener switch is turned ON	ON
RNK/HAT MNTR	Trunk lid closed	OFF
TOTAL WINTER	Trunk lid opened	ON
RKE-LOCK	When LOCK button of Intelligent Key is not pressed	OFF
KKL-LOOK	When LOCK button of Intelligent Key is pressed	ON
RKE-UNLOCK	When UNLOCK button of Intelligent Key is not pressed	OFF
KKE-UNLOCK	When UNLOCK button of Intelligent Key is pressed	ON
RKE-TR/BD	When TRUNK OPEN button of Intelligent Key is not pressed	OFF
	When TRUNK OPEN button of Intelligent Key is pressed	ON
RKE-PANIC	When PANIC button of Intelligent Key is not pressed	OFF
AINL-I AINIU	When PANIC button of Intelligent Key is pressed	ON
RKE-P/W OPEN	When UNLOCK button of Intelligent Key is not pressed and held	OFF
	When UNLOCK button of Intelligent Key is pressed and held	ON
RKE-MODE CHG	When LOCK/UNLOCK button of Intelligent Key is not pressed and held simultaneously	OFF
MAL-WODE ONG	When LOCK/UNLOCK button of Intelligent Key is pressed and held simultaneously	ON
OPTICAL SENSOR	When outside of the vehicle is bright	Close to 5 V
OF FIGAL SENSOR	When outside of the vehicle is dark	Close to 0 V
DEO SW. DD	When front door request switch is not pressed (driver side)	OFF
REQ SW -DR	When front door request switch is pressed (driver side)	ON
DEO SW AS	When front door request switch is not pressed (passenger side)	OFF
REQ SW -AS	When front door request switch is pressed (passenger side)	ON

#### < ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status
DEO CW. DI	When rear door request switch is not pressed (driver side)	OFF
REQ SW -RL	When rear door request switch is pressed (driver side)	ON
REQ SW -RR	When rear door request switch is not pressed (passenger side)	OFF
REQ SW -RR	When rear door request switch is pressed (passenger side)	ON
REQ SW -BD/TR	When trunk opener request switch is not pressed	OFF
REQ SW -BD/TR	When trunk opener request switch is pressed	ON
DITCH C/W/	When engine switch (push switch) is not pressed	OFF
PUSH SW	When engine switch (push switch) is pressed	ON
ICN DLV2 E/D	Ignition switch OFF or ACC	OFF
IGN RLY2 -F/B	Ignition switch ON	ON
ACC DIV E/D	Ignition switch OFF	OFF
ACC RLY -F/B	Ignition switch ACC or ON	ON
DDAKE OM 4	When the brake pedal is not depressed	ON
BRAKE SW 1	When the brake pedal is depressed	OFF
	When selector lever is in P position	OFF
DETE/CANCL SW	When selector lever is in any position other than P	ON
	When selector lever is in any position other than P or N	OFF
SFT PN/N SW	When selector lever is in P or N position	ON
	Driver door UNLOCK status	OFF
UNLK SEN -DR	Driver door LOCK status	ON
	When engine switch (push switch) is not pressed	OFF
PUSH SW -IPDM	When engine switch (push switch) is pressed	ON
1011 511/4 5/5	Ignition switch OFF or ACC	OFF
IGN RLY1 -F/B	Ignition switch ON	ON
DETE OW IDDM	When selector lever is in P position	OFF
DETE SW -IPDM	When selector lever is in any position other than P	ON
OFT DN IDDM	When selector lever is in any position other than P or N	OFF
SFT PN -IPDM	When selector lever is in P or N position	ON
057.0.1457	When selector lever is in any position other than P	OFF
SFT P -MET	When selector lever is in P position	ON
OFT N. MET	When selector lever is in any position other than N	OFF
SFT N -MET	When selector lever is in N position	ON
	Engine stopped	STOP
ENOINE OTATE	While the engine stalls	STALL
ENGINE STATE	At engine cranking	CRANK
	Engine running	RUN
VEH SPEED 1	While driving	Equivalent to speedometer reading
VEH SPEED 2	While driving	Equivalent to speedometer reading
	Driver door LOCK status	LOCK
DOOR STAT-DR	Wait with selective UNLOCK operation (5 seconds)	READY
	Driver door UNLOCK status	UNLK
	Passenger door LOCK status	LOCK
DOOR STAT-AS	Wait with selective UNLOCK operation (5 seconds)	READY
	Passenger door UNLOCK status	UNLK

#### < ECU DIAGNOSIS INFORMATION >

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Monitor Item	Condition	Value/Status
ID OK FLAG	Ignition switch ACC or ON	RESET
ID OK FLAG	Ignition switch OFF	SET
DDMT ENG CTDT	When the engine start is prohibited	RESET
PRMT ENG STRT	When the engine start is permitted	SET
KEY SW -SLOT	When Intelligent Key is not inserted into key slot	OFF
KET SW -SLUT	When Intelligent Key is inserted into key slot	ON
RKE OPE COUN1	During the operation of Intelligent Key	Operation frequency of Intelligent Key
CONFRM ID ALL	The key ID that the key slot receives does not accord with any key ID registered to BCM.	YET
CONFRIN ID ALL	The key ID that the key slot receives accords with any key ID registered to BCM.	DONE
CONFIRM ID4	The key ID that the key slot receives does not accord with the fourth key ID registered to BCM.	YET
CONFIRM ID4	The key ID that the key slot receives accords with the fourth key ID registered to BCM.	DONE
CONFIDM ID2	The key ID that the key slot receives does not accord with the third key ID registered to BCM.	YET
CONFIRM ID3	The key ID that the key slot receives accords with the third key ID registered to BCM.	DONE
CONFIRM ID2	The key ID that the key slot receives does not accord with the second key ID registered to BCM.	YET
CONFIRM ID2	The key ID that the key slot receives accords with the second key ID registered to BCM.	DONE
	The key ID that the key slot receives does not accord with the first key ID registered to BCM.	YET
CONFIRM ID1	The key ID that the key slot receives accords with the first key ID registered to BCM.	DONE
TD 4	The ID of fourth key is not registered to BCM	YET
ΓP 4	The ID of fourth key is registered to BCM	DONE
FD 0	The ID of third key is not registered to BCM	YET
TP 3	The ID of third key is registered to BCM	DONE
	The ID of second key is not registered to BCM	YET
TP 2	The ID of second key is registered to BCM	DONE
	The ID of first key is not registered to BCM	YET
ΓP 1	The ID of first key is registered to BCM	DONE
AIR PRESS FL	Ignition switch ON (only when the signal from the transmitter is received)	Air pressure of front LH tire
AIR PRESS FR	Ignition switch ON (only when the signal from the transmitter is received)	Air pressure of front RH tire
AIR PRESS RR	Ignition switch ON (only when the signal from the transmitter is received)	Air pressure of rear RH tire
AIR PRESS RL	Ignition switch ON (only when the signal from the transmitter is received)	Air pressure of rear LH tire
D REGST FL1	When ID of front LH tire transmitter is registered	DONE
	When ID of front LH tire transmitter is not registered	YET
D REGST FR1	When ID of front RH tire transmitter is registered	DONE
D NEGOI FRI	When ID of front RH tire transmitter is not registered	YET
ID DECST DD4	When ID of rear RH tire transmitter is registered	DONE
ID REGST RR1	When ID of rear RH tire transmitter is not registered	YET

#### < ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status
ID REGST RL1	When ID of rear LH tire transmitter is registered	DONE
ID NEGOT KET	When ID of rear LH tire transmitter is not registered	YET
WARNING LAMP	Tire pressure indicator OFF	OFF
WAINING LAWF	Tire pressure indicator ON	ON
BU77FR	Tire pressure warning alarm is not sounding	OFF
DUZZEN	Tire pressure warning alarm is sounding	ON

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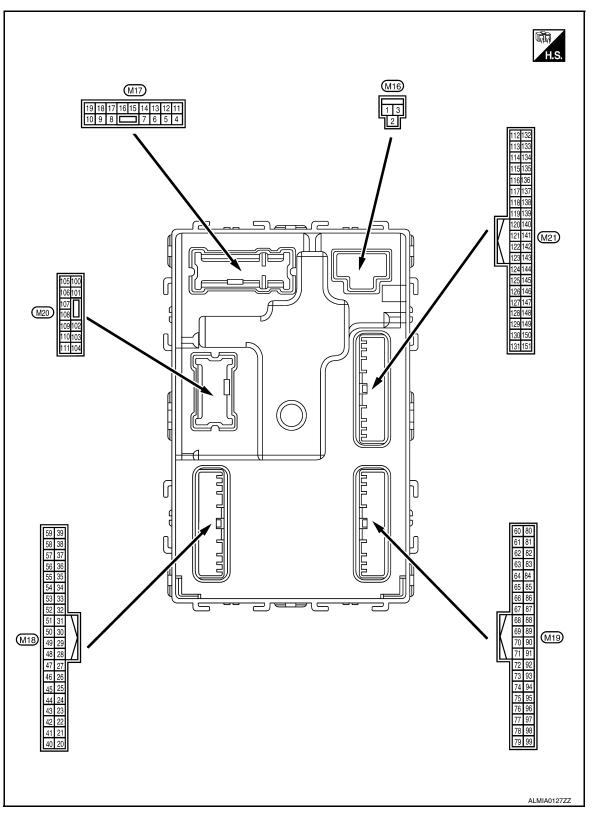
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Terminal Layout



Physical Values

Term	inal No.	Description				
	e color)	-	Input/		Condition	Value
(+)	(-)	Signal name	Output			(Approx.)
1 (W/B)	Ground	Battery power supply	Input	Ignition switch OF	F	Battery voltage
2 (R/Y)	Ground	Battery power supply output	Output	Ignition switch OF	F	Battery voltage
3 (L/W)	Ground	Ignition power supply output	Output	Ignition switch ON		Battery voltage
4	Ground	Interior room lamp	Output	After passing the ir er operation time	nterior room lamp battery sav-	0V
(P/W)	Giouria	power supply	Output	Any other time after lamp battery saver	er passing the interior room roperation time	Battery voltage
5	Ground	Front door RH UN-	Output	Front door RH	UNLOCK (actuator is activated)	Battery voltage
(G)	Orouna	LOCK	Output	TION GOOT KIT	Other than UNLOCK (actuator is not activated)	0V
7	Ground	Step lamp	Output	Step lamp	ON	0V
(R/W)	Ground	Step lamp	Output	Step lamp	OFF	Battery voltage
8	Ground	and All doors LOCK	Output	All doors	LOCK (actuator is activated)	Battery voltage
(V)	(V) Ground An		Output		Other than LOCK (actuator is not activated)	0V
9	Ground	Front door LH UN- LOCK	Output	out Front door LH	UNLOCK (actuator is activated)	Battery voltage
(L)	(L) Gloulid LC		Output	Tront door Err	Other than UNLOCK (actuator is not activated)	0V
10	Ground	Rear door RH and rear door LH UN-	Output Rear door RH	UNLOCK (actuator is activated)	Battery voltage	
(G)	Oround	LOCK	Output	and rear door LH	Other than UNLOCK (actuator is not activated)	0V
11 (Y/R)	Ground	Battery power supply	Input	Ignition switch OF	F	Battery voltage
13 (B)	Ground	Ground	_	Ignition switch ON		0V
14 (GR/ W)	Ground	Engine switch (push switch) illumination ground	Input	Tail lamp	OFF	NOTE: When the illumination brightening/dimming level is in the neutral position  (V)  10  0  JSNIA0010GB
15	Ground	ACC indicator lamp	Output	Ignition switch	OFF	Battery voltage
(Y/L)	Cround	, too maleator lamp	Carput	- iginii on ownton	ACC or ON	0V

#### < ECU DIAGNOSIS INFORMATION >

Terminal No. (Wire color)		Description				Value	
(Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)	
17 (G/B)	Ground	Turn signal (RH)	Output	Ignition switch ON	Turn signal switch OFF  Turn signal switch RH	(V) 15 10 5 0	
					Turn signal switch OFF	1 s PKID0926E 6.5 V	
18 (G/Y)	Ground	Turn signal (LH)	Output	Ignition switch ON	Turn signal switch LH	(V) 15 10 5 0 1 s PKID0926E 6.5 V	
19 (Y)	Ground	Room lamp timer control	Output	Interior room lamp	OFF ON	Battery voltage  0V	
21 (P/B)	Ground	Optical sensor signal	Input	Ignition switch	When outside of the vehicle is bright  When outside of the vehi-	Close to 5V	
					cle is dark	Close to 0V	
24 (R/W)	Ground	Stop lamp switch 1	Input		<del>_</del>	Battery voltage	
26 (O/L)	Ground	Stop lamp switch 2	Input	Stop lamp switch	OFF (brake pedal is released) ON (brake pedal is de-	0V  Battery voltage	
27 (O)	Ground	Front door lock as- sembly LH (unlock sensor)	Input	Front door LH	pressed)  LOCK status	(V) 15 10 10 ms  JPMIA0011GB 11.8V	
					UNLOCK status	0V	
29 (Y)	Ground	Key slot switch	Input	_	Cey is inserted into key slot	Battery voltage	
		Rear window defog-		When Intelligent K Rear window de-	ey is not inserted into key slot OFF	0V 0V	
31 (G)	Ground	ger feedback signal	Input	fogger switch	ON	Battery voltage	

#### < ECU DIAGNOSIS INFORMATION >

	inal No.	Description				Value	
	e color)	Signal name	Input/		Condition	Value (Approx.)	
(+)	(-)		Output				
32 (R/B)	Ground	Front door RH switch	Input	Front door RH switch	OFF (when front door RH closes)	(V) 15 10 5 0 10 ms JPMIA0011GB	
					ON (when front door RH opens)	0V	
37 (O)	Ground	Trunk lid opener can- cel switch	Input	Trunk lid opener cancel switch	CANCEL	(V) 15 10 5 0 10 ms JPMIA0012GB	
					ON	OV	
38 (GR/	Ground	Rear window defog-	Innut	Rear window de-	OFF	5V	
W)	Giouna	ger ON signal	Input	fogger switch	ON	0V	
40 (Y/G)	Ground	Power window serial link	Input/ Output	Ignition switch ON		(V) 15 10 5 0 10 ms  JPMIA0013GB 10.2V	
				Ignition switch OF	F or ACC	0V	
41		Engine switch (push		Engine switch	ON	5.5V	
(W)	Ground	switch) illumination	Output	(push switch) illu- mination	OFF	OV	
42	Ground	LOCK indicator lamp	Output	LOCK indicator	ON	0V	
(R)	2.34.14	-	Carpat	lamp	OFF	Battery voltage	
45 (P)	Ground	Receiver & sensor ground	Input	Ignition switch ON		ov	
46	Ground	Receiver & sensor	Output	Ignition switch	OFF	0V	
(V/W) Glound		power supply output	-		ACC or ON	5.0V	

#### < ECU DIAGNOSIS INFORMATION >

	inal No.	Description				Value	Α
(Wire (+)	e color) (-)	Signal name	Input/ Output		Condition	Value (Approx.)	Α
47		Tire pressure receiv-	Input/	Ignition switch	Standby state	(V) 6 4 2 0 + 0.2s	B C
(G/O)	Ground	er signal	Output	ŎN	When receiving the signal from the transmitter	(V) 6 4 2 0 ••• 0.2s	E F
48		Selector lever trans-			P or N position	12.0V	G
(R/G)	Ground	mission range switch signal	Input	Selector lever	Except P and N positions	0V	
					ON	0V	Н
49 (L/O)	Ground	Security indicator signal	Output	Security indicator	Blinking	(V) 15 10 5 0 1 s JPMIA0014GB	J
					OFF	11.3V  Battery voltage	K
					All switch OFF	0V	
					Lighting switch 1ST		
				Combination	Lighting switch high-beam	(V) 15	EX
50	Crawad	Combination switch	laaut	Combination switch	Lighting switch 2ND	10	
(LG/ B)	Ground	OUTPUT 5	Input	(Wiper intermit- tent dial 4)	Turn signal switch RH	2 ms JPMIA0031GB	M
					All switch OFF	10.7V	
					(Wiper intermittent dial 4)	0V	0
					Front wiper switch HI (Wiper intermittent dial 4)	(V)	O
51 (L/W)	Ground	Combination switch OUTPUT 1	Input	Combination switch	Any of the conditions below with all switch OFF  • Wiper intermittent dial 1  • Wiper intermittent dial 2  • Wiper intermittent dial 3  • Wiper intermittent dial 6  • Wiper intermittent dial 7	(V) 15 10 5 0 2 ms JPMIA0032GB	Ρ

#### < ECU DIAGNOSIS INFORMATION >

Term	inal No.	Description				.,.	
	e color)	Signal name	Input/		Condition	Value (Approx.)	
(+)	(-)	o.g.i.a. i.a.ii.o	Output		All a Mak OFF		
					All switch OFF (Wiper intermittent dial 4)	0V	
					Front washer switch ON (Wiper intermittent dial 4)	( <u>V</u> )	
52 (G/B)	Ground	Combination switch OUTPUT 2	Input	Combination switch	Any of the conditions below with all switch OFF  • Wiper intermittent dial 1  • Wiper intermittent dial 5  • Wiper intermittent dial 6	15 10 5 0 2 ms JPMIA0033GB	
					All switch OFF	0V	
					Front wiper switch INT		
				Combination	Front wiper switch LO	(V) 15	
53 (LG/ R)	Ground	Combination switch OUTPUT 3	Input	switch (Wiper intermit- tent dial 4)	Lighting switch AUTO	10 5 0 JPMIA0034GB 10.7V	
					All switch OFF	0V	
					Front fog lamp switch ON		
				Combination	Lighting switch 2ND	(V)	
54 (G/Y)	Ground	Combination switch OUTPUT 4	Input	switch (Wiper intermit-	Lighting switch flash-to- pass	10 5 0	
				tent dial 4)	Turn signal switch LH	2 ms JPMIA0035GB	
57 (W)	Ground	Tire pressure warn- ing check switch	Input		_	5V	
58 (SB)	Ground	Front door LH switch	Input	Front door LH switch	OFF (front door LH CLOSE)	(V) 15 10 5 0 10 ms JPMIA0011GB	
					ON (front door LH OPEN)	0V	
59	Ground	Rear window defog-	Output	Rear window de-	Active	Battery voltage	
(G/R)		ger relay	σαιραί	fogger	Not activated	0V	

#### < ECU DIAGNOSIS INFORMATION >

	inal No.	Description				Value
(Wire (+)	e color) (-)	Signal name	Input/ Output		Condition	(Approx.)
60	Cround	Front console anten-	Output	Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0062GB
(B/R)		Output	ÖFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0  JMKIA0063GB	
61	61 Ground Center console antenna 2 (+)		Ignition switch	When Intelligent Key is in the passenger compartment	(V) 15 10 5 0 1   S   S   S   S   S   S   S   S   S	
(W/R)		Output	OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0063GB	
				When the front	When Intelligent Key is in the antenna detection area	(V) 15 10 1 s  JMKIA0062GB
62 (V) Groun	Ground	ound Front outside handle RH antenna (-)	Output	door RH request switch is operat- ed with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s  JMKIA0063GB

#### < ECU DIAGNOSIS INFORMATION >

	ninal No. e color)	Description	1 1/		Condition	Value	
(+)	(-)	Signal name	Input/ Output		Condition	(Approx.)	
63	Crowd	Front outside handle	Output	When the front door RH request switch is operat-	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1   S   S   S   S   S   S   S   S   S	
(P) Ground RH antenna (+) Output switch is oper	switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB				
64	64 Garand Front outside handle		When the front door LH request	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1   S   S   S   S   S   S   S   S   S		
(V)	Ground	LH antenna (-)	Output	switch is operat- ed with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB	
65	65 Front outside handle	Output	When the front door LH request	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0062GB		
(P)	Ground	LH antenna (+)	Cuipui	switch is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB	

#### < ECU DIAGNOSIS INFORMATION >

	inal No. e color)	Description			Condition	Value
(+)	(-)	Signal name	Input/ Output		Condition	(Approx.)
68 (G/O)	Ground	NATS antenna amp (built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelligent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
69 (O)	Ground	NATS antenna amp (built in key slot)	Input/ Output	During waiting	Ignition switch is pressed while inserting the Intelligent Key into the key slot.	Just after pressing ignition switch. Pointer of tester should move.
70 (R/B)	Ground	Ignition relay-2 con- trol	Output	Ignition switch	OFF or ACC	0V Battery voltage
71		Pomoto kovilogo ontru	Input/	During waiting		(V) 15 10 5 0 1 ms JMKIA0064GB
/ I (L/O)	71 (L/O) Ground Remote keyless entry receiver signal	Output	When operating e	ither button on Intelligent Key	(V) 15 10 5 1 ms  JMKIA0085GB	
					All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB
75 (R/Y) Ground	Ground	Combination switch INPUT 5	Output	Combination switch	Front fog lamp switch ON (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0037GB 1.3V
					Any of the conditions below with all switch OFF  • Wiper intermittent dial 1  • Wiper intermittent dial 2  • Wiper intermittent dial 6  • Wiper intermittent dial 7	(V) 15 10 5 0 2 ms JPMIA0040GB 1.3V

#### < ECU DIAGNOSIS INFORMATION >

	inal No.	Description				Value	
(+)	e color)	Signal name	Input/ Output		Condition	(Approx.)	
			Output	Combination switch	All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0041GB	
76 (D(O)	76 Ground Con	Combination switch			Lighting switch high-beam (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0036GB 1.3V	
(R/G)		INPUT 3			Lighting switch 2ND (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms JPMIA0037GB	
					Any of the conditions below with all switch OFF  • Wiper intermittent dial 1  • Wiper intermittent dial 2  • Wiper intermittent dial 3	(V) 15 10 2 ms  JPMIA0040GB 1.3V	
78 (P)	Ground	CAN-L	Input/ Output		_	_	
79 (L)	Ground	CAN-H	Input/ Output		_	_	
80 (R/L)	Ground	Key slot illumination	Output	Key slot illumina- tion	OFF	Battery voltage  (V) 15 10 5 0  JPMIA0015GB 6.5V	
					ON OFF or ACC	0V 0V	
81 (LG)	Ground	ON indicator lamp	Output	Ignition switch	ON	Battery voltage	

#### < ECU DIAGNOSIS INFORMATION >

#### [HALOGEN TYPE]

	inal No.	Description				Value A
(+)	e color)	Signal name	Input/ Output		Condition	(Approx.)
83	Ground	ACC relay control	Output	Ignition switch	OFF	0V B
(L)	Ground	Acc relay control	Output	ignition switch	ACC or ON	Battery voltage
84 (Y/R)	Ground	CVT shift selector	Output		_	Battery voltage
87	Ground	Selector lever P posi-	Input	Selector lever	P position	OV
(G/B)	Cround	tion switch	mpat	CCICOTOI ICVCI	Any position other than P	Battery voltage
					ON (pressed)	0V D
88 (R)	Ground	Front door RH request switch	Input	Front door RH request switch	OFF (not pressed)	(V) 15 10 5 0 10 ms 10 ms 1.0V
					ON (pressed)	0V G
89 (R)	Ground	Front door LH request switch	Input	Front door LH request switch	OFF (not pressed)	(V) 15 10 5 0 10 ms JPMIA0016GB
90	Cround	Blower fan motor re-	Output	lanition owitch	OFF or ACC	ov J
(Y)	Ground	lay control	Output	Ignition switch	ON	Battery voltage
91 (L/R)	Ground	Remote keyless entry receiver power supply	Output	Ignition switch OFI	F	Battery voltage

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#### < ECU DIAGNOSIS INFORMATION >

	inal No.	Description	Description			Value
(Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)
	,,		•		All switch OFF	(V) 15 10 5 0 2 ms JPMIA0041GB
		Combination switch INPUT 1	Output	Combination switch (Wiper intermittent dial 4)	Turn signal switch LH	(V) 15 10 5 0 2 ms JPMIA0037GB
95 (R/W)	95 (R/W) Ground				Turn signal switch RH	(V) 15 10 5 0 2 ms JPMIA0036GB 1.3V
					Front wiper switch LO	(V) 15 10 5 0 2 ms JPMIA0038GB 1.3V
					Front washer switch ON	(V) 15 10 5 2 ms JPMIA0039GB 1.3V

#### < ECU DIAGNOSIS INFORMATION >

[HALOGEN TYPE]

	inal No. e color)	Description	T.			Value
(+)	(-)	Signal name	Input/ Output		Condition	(Approx.)
					All switch OFF (Wiper intermittent dial 4)	(V) 15 10 5 0  JPMIA0041GB 1.4V
					Lighting switch AUTO (Wiper intermittent dial 4)	(V) 15 10 5 0 2 ms
96 (P/B)	Ground	Combination switch INPUT 4	Output	Combination switch	Lighting switch 1ST (Wiper intermittent dial 4)	JPMIA0038GB 1.3V
					(wiper intermittent diai 4)	
					Any of the conditions below with all switch OFF  • Wiper intermittent dial 1  • Wiper intermittent dial 5  • Wiper intermittent dial 6	(V) 15 10 5 0 2 ms
						JРМIA0039GB 1.3V

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	inal No.	Description				V-L -
(Wire	e color) (-)	Signal name	Input/ Output		Condition	Value (Approx.)
					All switch OFF	(V) 15 10 5 0 2 ms  JPMIA0041GB 1.4V
					Lighting switch flash-to- pass	(V) 15 10 5 0 2 ms JPMIA0037GB
97 (R/B)	Ground	Combination switch INPUT 2	ch Output switch	(Wiper intermit-	Lighting switch 2ND	(V) 15 10 5 0 2 ms JPMIA0036GB
					Front wiper switch INT	(V) 15 10 2 ms JPMIA0038GB 1.3V
					Front wiper switch HI	(V) 15 10 5 0 2 ms JPMIA0040GB
					Pressed	0 V
98 (G/O)	Ground	Hazard switch	Input	Hazard switch	Not pressed	(V) 15 10 5 10 10 ms  JPMIA0012GB 1.1V

#### < ECU DIAGNOSIS INFORMATION >

[HALOGEN TYPE]

	inal No. e color)	Description		Condition		Value	
(+)	(-)	Signal name	Input/ Output		Condition	(Approx.)	
103	Ground	Trunk lid opening.	Output	Trunk lid	Open (trunk lid opener actuator is activated)	Battery voltage	
(V)	Giodila	Trunk ilu opening.	Output	Trunk iiu	Close (trunk lid opener actuator is not activated)	0V	
110 (V/W)	Ground	Trunk room lamp	Output	Trunk room lamp	ON OFF	0V Battery voltage	
114	Converd	Trunk room antenna	Outout	Ignition switch	When Intelligent Key is in the passenger compart- ment	(V) 15 10 5 0 JMKIA0062GB	
(B)	Ground	1 (-)	Output	out Ignition switch OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 JMKIA0063GB	
115	Ground	Trunk room antenna	Output	Ignition switch	When Intelligent Key is in the passenger compart- ment	(V) 15 10 5 0 JMKIA0062GB	
(W)	Giouna	1 (+)	Сифи	OFF	When Intelligent Key is not in the passenger compartment	(V) 15 10 5 0 1 s JMKIA0063GB	

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#### < ECU DIAGNOSIS INFORMATION >

	inal No. e color)	Description			0 1111	Value
(+)	e color)	Signal name	Input/ Output		Condition	(Approx.)
118	When the trunk Rear bumper anten-		When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 JMKIA0062GB		
(L/O)	Ground	na (-)	Output	is operated with ignition switch OFF	When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 JMKIA0063GB
119	Cround	Rear bumper anten-	Output	When the trunk lid request switch is operated with ignition switch OFF	When Intelligent Key is in the antenna detection area	(V) 15 10 5 0 1 s  JMKIA0062GB
(BR/ W)	Ground	na (+)	Output		When Intelligent Key is not in the antenna detection area	(V) 15 10 5 0 1 s JMKIA0063GB
127 (BR/ W)	Ground	Ignition relay (IPDM E/R) control	Output	Ignition switch	OFF or ACC	Battery voltage  0V
130 (W)	Ground	Trunk room lamp switch	Input	Trunk room lamp switch	OFF (trunk is closed)	(V) 15 10 5 0 10 ms  JPMIA0011GB 11.8V
					ON (trunk is open)	0V
132 (R)	Ground	Starter motor relay control	Output	ut Ignition switch	When selector lever is in P or N position and the brake is depressed  When selector lever is in P	Battery voltage
					or N position and the brake is not depressed	OV

#### < ECU DIAGNOSIS INFORMATION >

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	inal No. e color)	Description	las U		Condition	Value	
(+)	(-)	Signal name	Input/ Output		Condition	(Approx.)	
140	Ground	Engine switch (push	Input	Engine switch	Pressed	0V	
(BR)	Giodila	switch)	iliput	(push switch)	Not pressed	Battery voltage	
					ON (pressed)	0V	
141 (BR)	Ground	Trunk opener request switch	Input	Trunk opener request switch	OFF (not pressed)	(V) 15 10 5 0 10 ms JPMIA0016GB 1.0V	
144	01	Request switch buzz-	0 1: 1	Request switch	Sounding	0V	
(GR)	Ground	er	Output	buzzer	Not sounding	Battery voltage	
147		Input	Trunk lid opener	Pressed	0V		
(L/R)		Input	switch	Not pressed	Battery voltage		
148 (R/W)	Ground	Rear door RH switch	Input	Rear door RH switch	OFF (when rear door RH closes)	(V) 15 10 5 0 10 ms JPMIA0011GB	
					ON (when rear door RH opens)	ov	
149 (R/B)	Ground	Rear door LH switch	Input	Rear door LH switch	OFF (when rear door LH closes)	(V) 15 10 5 0 10 ms JPMIA0011GB 11.8V	
					ON (when rear door LH opens)	ov	

Fail Safe

Display contents of CONSULT	Fail-safe	Cancellation
B2190: NATS ANTENNA AMP	Inhibit engine cranking	Erase DTC
B2191: DIFFERENCE OF KEY	Inhibit engine cranking	Erase DTC
B2192: ID DISCORD BCM-ECM	Inhibit engine cranking	Erase DTC
B2193: CHAIN OF BCM-ECM	Inhibit engine cranking	Erase DTC
B2195: ANTI-SCANNING	Inhibit engine cranking	Erase DTC
B2560: STARTER CONT RELAY	Inhibit engine cranking	500 ms after the following CAN signal communication status has become consistent  • Starter control relay signal  • Starter relay status signal

#### < ECU DIAGNOSIS INFORMATION >

[HALOGEN TYPE]

Display contents of CONSULT	Fail-safe	Cancellation
B2562: LO VOLTAGE	Inhibit engine cranking	100 ms after the power supply voltage increases to more than 8.8 V
B2608: STARTER RELAY Inhibit engine cranking		500 ms after the following signal communication status becomes consistent  • Starter motor relay control signal  • Starter relay status signal (CAN)
B260A: IGNITION RELAY	Inhibit engine cranking	<ul> <li>500 ms after the following conditions are fulfilled</li> <li>IGN relay (IPDM E/R) control signal: OFF (Battery voltage)</li> <li>Ignition ON signal (CAN to IPDM E/R): OFF (Request signal)</li> <li>Ignition ON signal (CAN from IPDM E/R): OFF (Condition signal)</li> </ul>
B260F: ENG STATE SIG LOST	Maintains the power supply position attained at the time of DTC detection	When any of the following conditions is fulfilled Power position changes to ACC Receives engine status signal (CAN)
B2617: STARTER RELAY CIRC	Inhibit engine cranking	1 second after the starter motor relay control inside BCM becomes normal
B2618: BCM	Inhibit engine cranking	1 second after the ignition relay (IPDM E/R) control inside BCM becomes normal
B26E1: ENG STATE NO RECIV	Inhibit engine cranking	When any of the following conditions are fulfilled Power position changes to ACC Receives engine status signal (CAN)

#### DTC Inspection Priority Chart

INFOID:0000000010070062

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

Priority	DTC
1	B2562: LO VOLTAGE
2	U1000: CAN COMM CIRCUIT U1010: CONTROL UNIT (CAN)
3	B2190: NATS ANTENNA AMP B2191: DIFFERENCE OF KEY B2192: ID DISCORD BCM-ECM B2193: CHAIN OF BCM-ECM
4	<ul> <li>B2553: IGNITION RELAY</li> <li>B2555: STOP LAMP</li> <li>B2556: PUSH-BTN IGN SW</li> <li>B2557: VEHICLE SPEED</li> <li>B2560: STARTER CONT RELAY</li> <li>B2601: SHIFT POSITION</li> <li>B2602: SHIFT POSITION</li> <li>B2603: SHIFT POSI STATUS</li> <li>B2604: PNP SWITCH</li> <li>B2605: PNP SWITCH</li> <li>B2605: PNP SWITCH</li> <li>B2606: STARTER RELAY</li> <li>B2607: ENG STATE SIG LOST</li> <li>B2614: ACC RELAY CIRC</li> <li>B2615: BLOWER RELAY CIRC</li> <li>B2615: BLOWER RELAY CIRC</li> <li>B2616: IGN RELAY CIRC</li> <li>B2617: STARTER RELAY CIRC</li> <li>B2618: BCM</li> <li>B2614: PUSH-BTN IGN SW</li> <li>B2661: ENG STATE NO RECIV</li> <li>C1729: VHCL SPEED SIG ERR</li> <li>U0415: VEHICLE SPEED SIG</li> </ul>

#### < ECU DIAGNOSIS INFORMATION >

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Priority	DTC
5	C1704: LOW PRESSURE FL C1705: LOW PRESSURE FR C1706: LOW PRESSURE RR C1707: LOW PRESSURE RL C1708: [NO DATA] FL C1709: [NO DATA] FR C1710: [NO DATA] FR C1711: [NO DATA] RR C1711: [NO DATA] RR C1712: [CHECKSUM ERR] FL C1713: [CHECKSUM ERR] FR C1714: [CHECKSUM ERR] RR C1714: [CHECKSUM ERR] RR C1714: [PRESSDATA ERR] FR C1716: [PRESSDATA ERR] FR C1717: [PRESSDATA ERR] RR C1719: [PRESSDATA ERR] RR C1719: [PRESSDATA ERR] RR C1719: [CODE ERR] FR C1721: [CODE ERR] FR C1722: [CODE ERR] RR C1723: [CODE ERR] RR C1724: [BATT VOLT LOW] FR C1726: [BATT VOLT LOW] FR C1727: [BATT VOLT LOW] RR C1727: [BATT VOLT LOW] RR C1727: [BATT VOLT LOW] RL C1727: [BATT VOLT LOW] RL C1727: [BATT VOLT LOW] RL
6	B2622: INSIDE ANTENNA     B2623: INSIDE ANTENNA

DTC Index

#### NOTE:

Details of time display

- CRNT: Displays when there is a malfunction now or after returning to the normal condition until turning ignition switch OFF → ON again.
- 1 39: Displayed if any previous malfunction is present when current condition is normal. It increases 1 → 2
   → 3...38 → 39 after returning to the normal condition whenever ignition switch OFF → ON. The counter
   remains at 39 even if the number of cycles exceeds it. It is counted from 1 again when turning ignition switch
   OFF → ON after returning to the normal condition if the malfunction is detected again.

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
No DTC is detected. further testing may be required.	_	_	_	_
U1000: CAN COMM CIRCUIT	_	_	_	BCS-32
U1010: CONTROL UNIT (CAN)	_	_	_	BCS-33
U0415: VEHICLE SPEED SIG	_	_	_	BCS-34
B2190: NATS ANTENNA AMP	×	_	_	SEC-37
B2191: DIFFERENCE OF KEY	×	_	_	SEC-40
B2192: ID DISCORD BCM-ECM	×	_	_	SEC-41
B2193: CHAIN OF BCM-ECM	×	_	_	SEC-42
B2553: IGNITION RELAY	_	_	_	PCS-46
B2555: STOP LAMP	_	_	_	SEC-43
B2556: PUSH-BTN IGN SW	_	×	_	SEC-46
B2557: VEHICLE SPEED	×	×	_	SEC-48
B2560: STARTER CONT RELAY	×	×	_	SEC-49

Revision: August 2013 EXL-245 2014 Maxima NAM

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#### < ECU DIAGNOSIS INFORMATION >

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
B2562: LOW VOLTAGE	_	_	_	BCS-35
B2601: SHIFT POSITION	×	×	_	SEC-50
B2602: SHIFT POSITION	×	×	_	<u>SEC-53</u>
B2603: SHIFT POSI STATUS	×	×	_	SEC-56
B2604: PNP SWITCH	×	×	_	SEC-59
B2605: PNP SWITCH	×	×	_	<u>SEC-61</u>
B2608: STARTER RELAY	×	×	_	<u>SEC-63</u>
B260A: IGNITION RELAY	×	×	_	PCS-48
B260F: ENG STATE SIG LOST	×	×	_	<u>SEC-65</u>
B2614: ACC RELAY CIRC	_	×	_	PCS-50
B2615: BLOWER RELAY CIRC	_	×	_	PCS-53
B2616: IGN RELAY CIRC	_	×	_	PCS-56
B2617: STARTER RELAY CIRC	×	×	_	SEC-67
B2618: BCM	×	×	_	PCS-59
B261A: PUSH-BTN IGN SW	_	×	_	PCS-60
B2622: INSIDE ANTENNA	_	_	_	DLK-60
B2623: INSIDE ANTENNA	_	_	_	DLK-63
B26E1: ENG STATE NO RES	×	×	_	SEC-66
C1704: LOW PRESSURE FL	_	_	×	<u>WT-43</u>
C1705: LOW PRESSURE FR	_	_	×	<u>WT-43</u>
C1706: LOW PRESSURE RR	_	_	×	<u>WT-43</u>
C1707: LOW PRESSURE RL	_	_	×	<u>WT-43</u>
C1708: [NO DATA] FL	_	_	×	<u>WT-13</u>
C1709: [NO DATA] FR	_	_	×	<u>WT-13</u>
C1710: [NO DATA] RR	_	_	×	<u>WT-13</u>
C1711: [NO DATA] RL	_	_	×	<u>WT-13</u>
C1712: [CHECKSUM ERR] FL	_	_	×	<u>WT-15</u>
C1713: [CHECKSUM ERR] FR	_	_	×	<u>WT-15</u>
C1714: [CHECKSUM ERR] RR	_	_	×	<u>WT-15</u>
C1715: [CHECKSUM ERR] RL	_	_	×	<u>WT-15</u>
C1716: [PRESSDATA ERR] FL	_	_	×	<u>WT-17</u>
C1717: [PRESSDATA ERR] FR	_	_	×	<u>WT-17</u>
C1718: [PRESSDATA ERR] RR	_	_	×	<u>WT-17</u>
C1719: [PRESSDATA ERR] RL	_	_	×	<u>WT-17</u>
C1720: [CODE ERR] FL	_	_	×	<u>WT-15</u>
C1721: [CODE ERR] FR	_	_	×	<u>WT-15</u>
C1722: [CODE ERR] RR	_	_	×	<u>WT-15</u>
C1723: [CODE ERR] RL	_	_	×	<u>WT-15</u>
C1724: [BATT VOLT LOW] FL	_	_	×	<u>WT-15</u>
C1725: [BATT VOLT LOW] FR	_	_	×	<u>WT-15</u>
C1726: [BATT VOLT LOW] RR	_	_	×	<u>WT-15</u>
C1727: [BATT VOLT LOW] RL	_	_	×	<u>WT-15</u>

#### < ECU DIAGNOSIS INFORMATION >

[HALOGEN TYPE]

CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
C1729: VHCL SPEED SIG ERR	_	_	×	<u>WT-19</u>
C1734: CONTROL UNIT	_	_	×	WT-20

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## IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) < ECU DIAGNOSIS INFORMATION > [HALOGEN TYPE]

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

Reference Value

#### VALUES ON THE DIAGNOSIS TOOL

Monitor Item	C	Condition	Value/Status		
MOTOR FAN REQ	Engine idle speed	Changes depending on engine coolant temperature, air conditioner operation status, vehicle speed, etc.	1,2,3,4		
		A/C switch OFF	Off		
AC COMP REQ	Engine running	A/C switch ON (Compressor is operating)	On		
TAIL OOLD DEO	Lighting switch OFF		Off		
TAIL&CLR REQ	Lighting switch 1ST, 2ND, HI or A	AUTO (Light is illuminated)	On		
HL LO REQ	Lighting switch OFF		Off		
HE LO REQ	Lighting switch 2ND HI or AUTO	(Light is illuminated)	On		
UI UI DEO	Lighting switch OFF		Off		
HL HI REQ	Lighting switch HI		On		
		Front fog lamp switch OFF	Off		
FR FOG REQ	Lighting switch 2ND or AUTO (Light is illuminated)	<ul> <li>Front fog lamp switch ON</li> <li>Daytime running light activated (Only for Canada models)</li> </ul>	On		
		Front wiper switch OFF	STOP		
FR WIP REQ	Ignition switch ON	Front wiper switch INT	1LOW		
FR WIP REQ	ignition switch ON	Front wiper switch LO	Low		
		Front wiper switch HI	Hi		
		Front wiper stop position	STOP P		
WIP AUTO STOP	Ignition switch ON	Any position other than front wiper stop position	ACT P		
		Front wiper operates normally	Off		
WIP PROT	Ignition switch ON	Front wiper stops at fail-safe operation	BLOCK		
IGN RLY1 -REQ	Ignition switch OFF or ACC		Off		
IGN KLI I -KEQ	Ignition switch ON		On		
IGN RLY	Ignition switch OFF or ACC		Off		
IGN KLI	Ignition switch ON	On			
PUSH SW	Release the push-button ignition	switch	Off		
1 0011 000	Press the push-button ignition sv	Press the push-button ignition switch			
INTED/ND SW	Ignition switch ON	CVT selector lever in any position other than P or N	Off		
INTER/NP SW	Ignition switch ON	CVT selector lever in P or N position	On		
ST RLY CONT	Ignition switch ON	Off			
OT INET CONT	At engine cranking		On		
IHBT RLY -REQ	Ignition switch ON				
ייוטו ועבו -תבע	At engine cranking		On		

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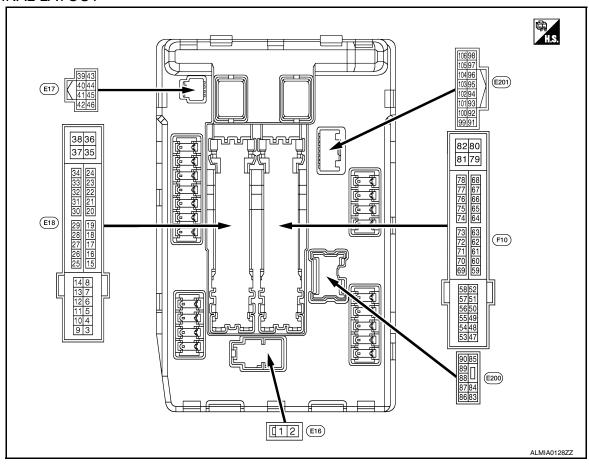
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< ECU DIAGNOSIS INFORMATION >

Monitor Item	Cor	Condition			
	Ignition switch ON		Off		
	At engine cranking		ST →INHI		
ST/INHI RLY		The status of starter relay or starter control relay cannot be recognized by the battery voltage malfunction, etc. when the starter relay is ON and the starter control relay is OFF			
DETENT SW	Ignition switch ON	Ignition switch ON  • Press the selector button with CVT selector lever in P position • CVT selector lever in any position other than P			
	Release the CVT selector button w	On			
DTDL DEO	DTRL ON	On			
DTRL -REQ	DTRL OFF	Off			
OII D CW	Ignition switch OFF, ACC or engine	running	Open		
OIL P SW	Ignition switch ON	Close			
	Not operated		Off		
THFT HRN REQ	<ul> <li>Panic alarm is activated</li> <li>Horn is activated with VEHICLE S</li> <li>TEM</li> </ul>	On			
HODN CHIPD	Not operated	Not operated			
HORN CHIRP	Door locking with Intelligent Key (he	On			

#### **TERMINAL LAYOUT**



PHYSICAL VALUES

**EXL-249** Revision: August 2013 2014 Maxima NAM

< ECU DIAGNOSIS INFORMATION >

	inal No.	Description				Value
+ (VVire	e color)	Signal name	Input/ Output	Condition		(Approx.)
1 (R)	Ground	Battery power supply	Input	Ignition switch OFF		Battery voltage
2 (L)	Ground	Battery power supply	Input	Ignition sw	itch OFF	Battery voltage
4	Ground	Front wiper LO	Output	Ignition	Front wiper switch OFF	0 V
(LG)				switch ON	Front wiper switch LO	Battery voltage
5 (Y)	Ground	Front wiper HI	Output	Ignition switch ON	Front wiper switch OFF Front wiper switch HI	0 V  Battery voltage
6 (L)	Ground	Daytime light relay power supply (Canada models only)	Output	Ignition swi	itch OFF	Battery voltage
7	0	Tail, license plate lamps &	0	Ignition	Lighting switch OFF	0 V
(GR)	Ground	interior lamps	Output	switch ON	Lighting switch 1ST	Battery voltage
10				Ignition swi (For a few s switch OFF	seconds after turning ignition	0 V
(BR)	Ground	ECM relay power supply	Output	<ul> <li>Ignition switch ON</li> <li>Ignition switch OFF         (More than a few seconds after turning ignition switch OFF)     </li> </ul>		Battery voltage
12 (B)	Ground	Ground	_	Ignition sw	itch ON	0 V
13				Approximately 1 second or more after turning the ignition switch ON		0 V
(SB)	Ground	Fuel pump power supply	Output		nately 1 second after turning on switch ON unning	Battery voltage
15	Ground	Ignition relay-1 power sup-	Output	Ignition sw	itch OFF	0 V
(W)	Ground	ply	Output	Ignition sw	itch ON	Battery voltage
16				Ignition	Front wiper stop position	0 V
(R)	Ground	Front wiper auto stop	Input	switch ON	Any position other than front wiper stop position	Battery voltage
19	Ground	Ignition relay-1 power sup-	Output	Ignition sw	itch OFF	0 V
(Y)	Ground	ply	Output	Ignition sw	itch ON	Battery voltage
20 (L)	Ground	Ambient sensor ground	_	Ignition sw	itch ON	0V
21 (LG)	Ground	Ambient sensor	_	Ignition switch ON		5V
22 (SB)	Ground	Refrigerant pressure sensor ground	_	Ignition switch ON		0V
23 (GR)	Ground	Refrigerant pressure sensor	_	Ignition switch ON (READY)     Both A/C switch and blower motor switch ON (electric compressor operates)		1.0 - 4.0V
24 (G)	Ground	Refrigerant pressure sensor power supply	_	Ignition switch ON		5V
25	Ground	Ignition relay-1 power sup-	Output	Ignition switch OFF		0 V
(GR)	2.323	ply		Ignition switch ON		Battery voltage

< ECU DIAGNOSIS INFORMATION >

Terminal No. Description (Wire color)					Value	
+	e color)	Signal name	Input/ Output		Condition	(Approx.)
27 (W)	Ground	Ignition relay monitor	Input	Ignition swi	itch OFF or ACC itch ON	Battery voltage 0 V
28 (SB)	Ground	Push-button ignition switch	Input		bush-button ignition switch e push-button ignition switch	0 V Battery voltage
30	Ground	Starter relay control	Input		or lever in any position other I (ignition switch ON)	0 V
(BR)				switch ON)		Battery voltage
34 (O)	Ground	Cooling fan relay-3 control	Input	Ignition swi	itch OFF or ACC itch ON	0 V 0.7 V
35 (P)	Ground	Cooling fan motor control	Output	Ignition swi	itch OFF or ACC	0 V 0.7 V
36 (G)	Ground	Battery power supply	Input	Ignition swi	itch OFF	Battery voltage
38 (GR)	Ground	Cooling fan motor control	Output	Ignition swi	itch OFF or ACC itch ON	0 V 0.7 V
39 (P)	_	CAN - L	Input/ Output		_	_
40 (L)	_	CAN - H	Input/ Output		_	_
41 (B)	Ground	Ground	_	Ignition swi		0 V
42 (SB)	Ground	Cooling fan relay-2 control	Input	Ignition swi	itch OFF or ACC itch ON	0 V 0.7 V
					Press the CVT selector button (CVT selector lever P)	Battery voltage
43 (Y)	Ground	CVT shift selector (Detention switch)	Input	Ignition switch ON	CVT selector lever in any position other than P     Release the CVT selector button (CVT selector lever P)	0 V
44 (W)	Ground	Horn relay control	Input	The horn is	s deactivated s activated	Battery voltage 0 V
45 (GR)	Ground	Anti theft horn relay control	Input	The horn is deactivated  The horn is activated		Battery voltage 0 V
46 (BR)	Ground	Starter relay control	Input	CVT selector lever in any position other than P or N (ignition switch ON)  CVT selector lever P or N (ignition		0 V  Battery voltage
48 (W)	Ground	A/C relay power supply	Output	switch ON) Engine running	A/C switch OFF  A/C switch ON (A/C compressor is operating)	0 V  Battery voltage

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< ECU DIAGNOSIS INFORMATION >

	Terminal No. (Wire color)					Value
+	e color)	Signal name	Input/ Output		Condition	(Approx.)
49				Ignition sw (For a few s switch OFF	seconds after turning ignition	0 V
(R/B)	Ground	ECM relay power supply	Output	Ignition s     (More the	switch ON switch OFF an a few seconds after turn- on switch OFF)	Battery voltage
51	Ground	Ignition relay power supply	Output	Ignition sw	tch OFF	0 V
(LG)		7, 11,	· .	Ignition sw		Battery voltage
52 (Y/G)	Ground	Ignition relay power supply	Output	Ignition sw		0 V
(1/G)				Ignition sw		Battery voltage
53				Ignition swi (For a few s switch OFF	seconds after turning ignition	o v
(R/W)	Ground	ECM relay power supply	Output	Ignition s     (More the	witch ON switch OFF an a few seconds after turn- on switch OFF)	Battery voltage
<b>5</b> 4		Threathly a sector of the sector of		Ignition switch OFF (For a few seconds after turning ignition switch OFF)		0 V
54 (G/W)	Ground	ound Throttle control motor re- lay power supply Outp		Ignition switch ON     Ignition switch OFF     (More than a few seconds after turning ignition switch OFF)		Battery voltage
55 (W/L)	Ground	ECM power supply	Output	Ignition sw	itch OFF	Battery voltage
56	Ground	Ignition relay power supply	Output	Ignition sw	tch OFF	0 V
(R/Y)	Cround	ignition roley power supply	Сигриг	Ignition sw	itch ON	Battery voltage
57	Ground	Ignition relay power supply	Output	Ignition sw	tch OFF	0 V
(O)		31 113	·	Ignition sw		Battery voltage
58 (Y)	Ground	Ignition relay power supply	Output	Ignition sw		0 V
(1)				Ignition sw		Battery voltage
69				Ignition sw (For a few s switch OFF	seconds after turning ignition	Battery voltage
(W/B)	Ground	ECM relay control	Output	Ignition switch ON     Ignition switch OFF     (More than a few seconds after turning ignition switch OFF)		0 - 1.5 V
		<b>-</b>	e control motor re- Ignition switch ON → OFF		itch ON VOEE	0 -1.0 V ↓ Battery voltage
70 (O)	Ground	Throttle control motor re- lay control	Output	igilidoli 3W	1011 ON -7 OI I	↓
				Ignition switch ON		0 V 0 - 1.0 V
					CVT selector lever in P or N position	Battery voltage
72 (R/B)	Ground	Transmission range switch signal	Input	Ignition switch ON  CVT selector lever in any position other than P or N position		0 V

< ECU DIAGNOSIS INFORMATION >

	inal No.	Description				Value
(Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)
75	0	01	11	Ignition	Engine stopped	0 V
(LG)	Ground	Oil pressure switch	Input	switch ON	Engine running	Battery voltage
				Ignition swi	itch ON	(V) 6 4 2 0 2 2 ms JPMIA0001GB 6.3 V
76 (SB)	Ground	Power generation command signal	Output		on "Active test", "ALTERNA- /" of "ENGINE"	(V) 6 4 2 0 2ms JPMIA0002GB 3.8 V
					on "Active test", "ALTERNA- " of "ENGINE"	(V) 6 4 2 0 2 2ms JPMIA0003GB 1.4 V
77 (GR)	Ground	Fuel pump relay control	Output	the ignition the three three transfer of the t		0 - 1.0 V
					tely 1 second or more after ignition switch ON	Battery voltage
80 (B)	Ground	Starter motor	Output	At engine of	cranking	Battery voltage
83				Ignition	Lighting switch OFF	0 V
(R/Y)	Ground	Headlamp LO (RH)	Output	switch ON	Lighting switch 2ND	Battery voltage
84	Ground	Headlamp LO (LH)	Output	Ignition	Lighting switch OFF	0 V
(L)	Cround		Juipui	switch ON	Lighting switch 2ND	Battery voltage
86 (W/R)	Ground	Front fog lamp (RH)	Output	Lighting switch 2ND	<ul> <li>Front fog lamp switch ON</li> <li>Daytime running light activated (Only for Can- ada models)</li> </ul>	Battery voltage
					Front fog lamp switch OFF	0 V
87 (L/Y)	Ground	Front fog lamp (LH)	Output	Lighting switch 2ND	Front fog lamp switch     ON     Daytime running light     activated (Only for Canada models)	Battery voltage
					Front fog lamp switch OFF	0 V

< ECU DIAGNOSIS INFORMATION >

	inal No.	Description				Value
+ (Wire	e color)	Signal name	Input/ Output		Condition	(Approx.)
88 (R/W)	Ground	Washer pump power supply	Output	Ignition swi	itch ON	Battery voltage
89 (L/W)	Ground	Headlamp HI (RH)	Output	Ignition switch ON	Lighting switch HI     Lighting switch PASS	Battery voltage
(L/VV)				SWILCH ON	Lighting switch OFF	0 V
90 (G)	Ground	Headlamp HI (LH)	Output	Ignition switch ON	Lighting switch HI     Lighting switch PASS	Battery voltage
(G)				SWILCH ON	Lighting switch OFF	0 V
91		Parking lamp (RH)		Ignition	Lighting switch 1ST	Battery voltage
(LG/ R)	Ground	Side marker lamp (RH)	Output	switch ON	Lighting switch OFF	0 V
92		Parking lamp (LH)		Ignition	Lighting switch 1ST	Battery voltage
(LG/ B)	Ground	Side marker lamp (LH)	Output	switch ON	Lighting switch OFF	0 V
99 (BR/ W)	Ground	Ambient sensor ground	_	Ignition switch ON		0V
100 (SB)	Ground	Ambient sensor	_	Ignition switch ON		5V
101 (W)	Ground	Refrigerant pressure sensor ground	_	Ignition switch ON		0V
102 (R)	Ground	Refrigerant pressure sensor	_	Both A/C	witch ON (READY) switch and blower motor N (electric compressor oper-	1.0 - 4.0V
103 (P)	Ground	Refrigerant pressure sensor power supply	_	Ignition swi	itch ON	5V
105	Ground	Daytime light relay control	Output	Ignition switch ON	Daytime light system active	Battery voltage
(V)	Giodila	(Only for Canada models)	Output	Ignition switch ON	Daytime light system inactive	0 V

Fail Safe INFOID:0000000010070065

## CAN COMMUNICATION CONTROL

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

If No CAN Communication Is Available With ECM

Control part	Fail-safe in operation
Cooling fan	<ul> <li>Signals cooling fans ON when the ignition switch is turned ON</li> <li>Signals cooling fans OFF when the ignition switch is turned OFF</li> </ul>
A/C compressor	A/C relay OFF
Generator	Outputs the power generation command signal (PWM signal) 0%

If No CAN Communication Is Available With BCM

< ECU DIAGNOSIS INFORMATION >

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

## IGNITION RELAY MALFUNCTION DETECTION FUNCTION

- IPDM E/R monitors the voltage at the contact circuit and excitation coil circuit of the ignition relay-1 inside it.
- IPDM E/R judges the ignition relay-1 error if the voltage differs between the contact circuit and the excitation coil circuit.
- If the ignition relay-1 cannot turn OFF due to contact seizure, it activates the tail lamp relay for 10 minutes to alert the user to the ignition relay-1 malfunction when the ignition switch is turned OFF.

DTC	Ignition switch	Ignition relay-1	Tail lamp relay
_	ON	ON	_
_	OFF	OFF	_
B2098: IGN RELAY ON	OFF	ON	ON (10 minutes)
B2099: IGN RELAY OFF	ON	OFF	_

## NOTE:

The tail lamp turns OFF when the ignition switch is turned ON.

## FRONT WIPER CONTROL

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

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

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

## NOTE:

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

### STARTER MOTOR PROTECTION FUNCTION

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

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< ECU DIAGNOSIS INFORMATION >

DTC Index INFOID:0000000010070066

CONSULT display	Fail-safe	TIME	NOTE	Refer to
No DTC is detected. further testing may be required.	_	_	_	_
U1000: CAN COMM CIRCUIT	×	CRNT	1 – 39	PCS-15
B2098: IGN RELAY ON	×	CRNT	1 – 39	PCS-16
B2099: IGN RELAY OFF	_	CRNT	1 – 39	PCS-17
B210B: START CONT RLY ON	_	CRNT	1 – 39	<u>SEC-69</u>
B210C: START CONT RLY OFF	_	CRNT	1 – 39	<u>SEC-72</u>
B210D: STARTER RELAY ON	_	CRNT	1 – 39	<u>SEC-72</u>
B210E: STARTER RELAY OFF	_	CRNT	1 – 39	<u>SEC-74</u>
B210F: INTRLCK/PNP SW ON	_	CRNT	1 – 39	<u>SEC-76</u>
B2110: INTRLCK/PNP SW OFF	_	CRNT	1 – 39	<u>SEC-78</u>

## NOTE:

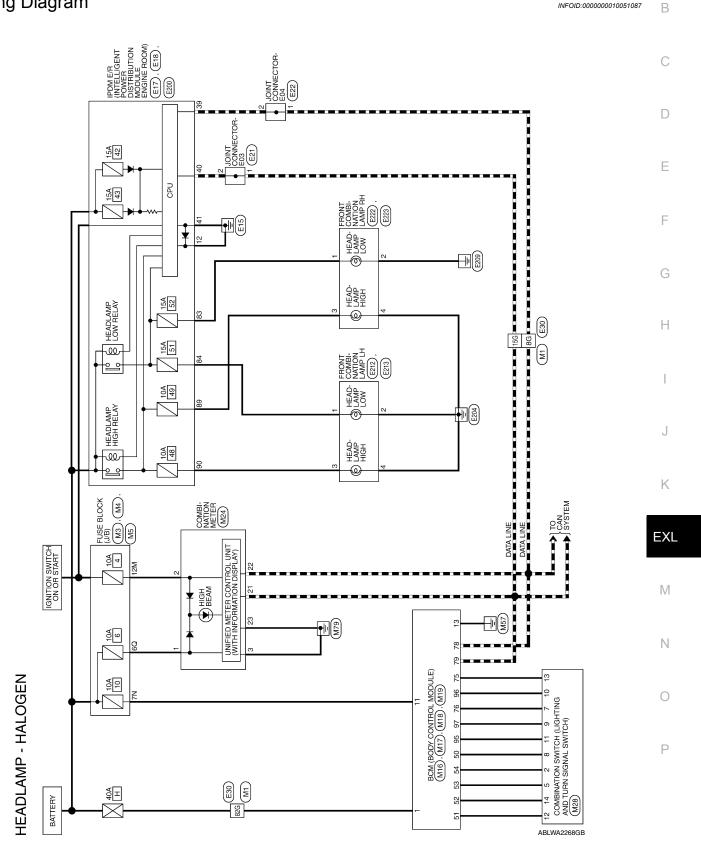
The details of TIME display are as follows.

- CRNT: The malfunctions that are detected now
- 1 39: The number is indicated when it is normal at present and a malfunction was detected in the past. It increases like  $0 \rightarrow 1 \rightarrow 2 \cdots 38 \rightarrow 39$  after returning to the normal condition whenever IGN OFF  $\rightarrow$  ON. It is fixed to 39 until the self-diagnosis results are erased if it is over 39. It returns to 0 when a malfunction is detected again in the process.

INFOID:0000000010051087

# WIRING DIAGRAM

# **HEADLAMP**



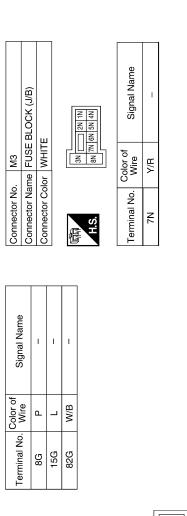
# **HEADLAMP CONNECTORS - HALOGEN**

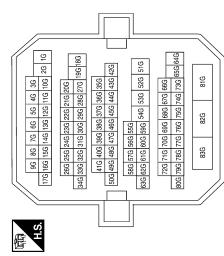
Connector Name | WIRE TO WIRE

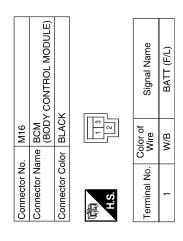
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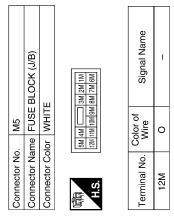
Connector No.

Connector Color WHITE









Connector Name		
	e FUSE	FUSE BLOCK (J/B)
Connector Color   WHITE	MHIT	111
H.S.	100 90 80 70	70 60 50
Terminal No.	Color of Wire	Signal Name
09	Y/R	1

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				61 60 81 80								
	BCM (BODY CONTROL MODULE)	<b>\</b>		69 68 67 66 65 64 63 62 89 88 87 86 85 84 83 82	Signal Name	OUTPUT 5	OUTPUT 3	CAN-L	CAN-H	OUTPUT 1	OUTPUT 4	OUTPUT 2
M19		r BLACK		73 72 71	Color of Wire	R/Υ	R/G	Ь	_	B/W	P/B	B/B
Connector No.	Connector Name	Connector Color	原 R.S.	79     78     77     76     75     74       99     98     97     96     95     94	Terminal No.	75	92	78	62	95	96	26
				21 20 41 40								
	Connector Name   BCM   (BODY CONTROL MODULE)	7		36 55 54 53 52 51 50 49 48 47 46 45 44 43 42 41 40	Signal Name	INPUT 5	INPUT 1	INPUT 2	INPUT 3	INPUT 4		
M18	BCM (BODY	GREEN		33 32 31 3	Color of Wire	LG/B	<u>~</u>	G/B	LG/R	G/Y		
Connector No.	Connector Name	Connector Color GREEN	原 H.S.	39 38 37 36 35 34 59 58 57 56 55 54	Terminal No.	50	51	52	53	54		
						1	I	1				
	BCM (BODY CONTROL MODULE)	111	7		Signal Name	BAT BCM FUSE	GND1					
M17	ne BCM (BODY	Color WHITE	5 6 7 1 12 13 14 15		Color of Wire	Y/R	В					
Š.	. Name	Colc	4 1		Š.							

Signal Name	BAT	NSI	GND (POWER)	CAN-H	CAN-L	GND (CIRCUIT)
Color of Wire	Y/R	0	В	Т	Ь	В
Terminal No.	-	2	3	21	22	23

Connector Name COMBINATION METER  Connector Color WHITE  H.S.  1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 12 12 22 23 24 55 26 57 28 29 30 13 12 23 39 45 36 57 38 39 40 1	Connector No.	p	9		2	M24	_											
11 12 13 14 15 16 17 18 19 19 19 19 19 19 19 19 19 19 19 19 19	Connec	tor	Nai	me	O	Ö	Æ	Ξ	A	2	z	₹	E	Œ.				
16 17 18 19 36 39 39	Connec	tor	Col	or	>	¥	Ë	111										
16 17 18 19 36 37 38 39	4																	
16 17 18 19 36 37 38 39	匮																	
16 17 18 19 36 37 38 39	SH																	
16 17 18 19 36 37 38 39						片	$\  \cdot \ $	IN.	IV.	ІГ	Ш							
36 37 38 39				9	7			9	Ξ	12	13	14	15	16	17	18		8
	21 22 23	24	25	56	27	88	59	30	31	32	33	34	35	36		38	39	40

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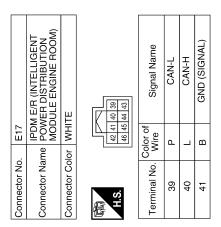
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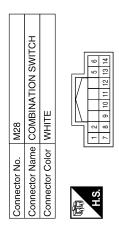
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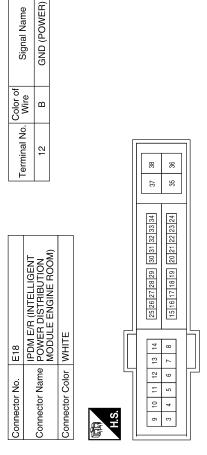
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				l .						
Signal Name	ı	ı	I	ı	1	1	-	1	ı	_
Color of Wire	G/Y	LG/R	B/G	LG/B	R/B	P/B	B/W	N/	R/Υ	G/B
Terminal No.	2	5	7	8	6	10	11	12	13	14



Connector No.	). E21	
Connector Name	ame JOII	JOINT CONNECTOR-E03
Connector Color WHITE	olor WHI	ПЕ
H.S.	4 3 2 1	2 1 0
Terminal No.	Color of Wire	Signal Name
1	٦	1
2	٦	1



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Connector Name	IOI.	IOINT CONNECTOR-F04	Connector Name		WIRE TO WIRE		. Wire	Olyman Manne
Connoctor Color		TE	Connector Color		!	86	۵	1
5		-		_		15G	_	1
	1 4 3	3 2 1 🗍	E	98	46 56 66 76 86 96	82G	P	ı
ā				16 26 106 1	12G 13G 14G 15G			
Terminal No.	Color of Wire	Signal Name		206 2	20G 21G 22G 23G 24G 25G 26G			
-	۵	1		79/2 \	28G 29G 30G 31G 32G 33G 34G			
0	۵	1		42G 43G 44 151G 52G 530	35C 35C 37C 38C 38C 40C 41C 42C 43C 44C 45C 46C 47C 48C 48C 58C 55C 58C 57C 58C 1G 52C 53C 58C 57C 58C			
				64G 65G 73G	84G 65G 73G 74G 75G 77G 77G 77G 77G 77G 77G 77G 77G 77			
oN rotoed	E200		oly retreated	N		Onnortor No	од 61913	
ופטוסו ואר							1	
Connector Name Connector Color		IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) WHITE	Connector Name	4	FRONT COMBINATION LAMP LH (WITHOUT XENON HEADLAMP SYSTEM) BLACK	Connector Name		FRONT COMBINATION LAMP LH BLACK
			Ą	[ -			4	4
Ξ.S.	88 88 88 88	88 87 86	H.S.			H.S.	"]	4
Terminal No.	Color of Wire	Signal Name	Terminal No	No. Wire	Signal Name	Terminal No.	Color of Wire	Signal Name
83	Ρ/A	HEADLAMP LO RH	-	_	ı	ო	ŋ	I
84	٦	HEADLAMP LO LH	2	В	ı	4	В	ı
89	Ŋ	HEADLAMP HI RH						
6	(							

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Connector No.	E223
Connector Name	Connector Name LAMP RH (WITHOUT XENON HEADLAMP SYSTEM)
Connector Color BLACK	BLACK







Sonnector No. E222	Connector Name   FRONT COMBINATION   Connector Name   LAMP RH (WITHOUT   DAYTIME LIGHT SYSTEM)	Connector Color BLACK	
Conne	Conne	Conn	



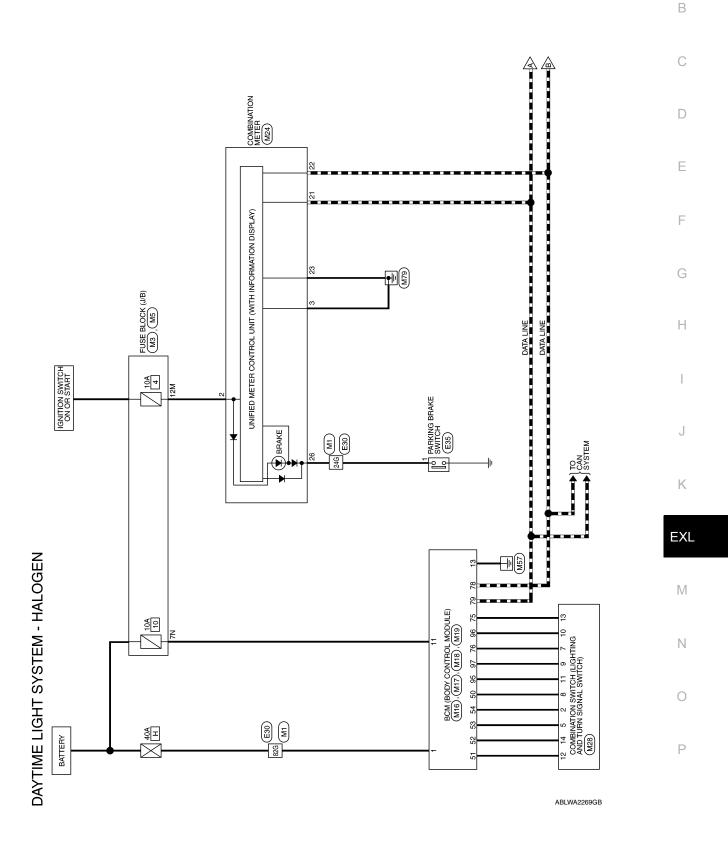


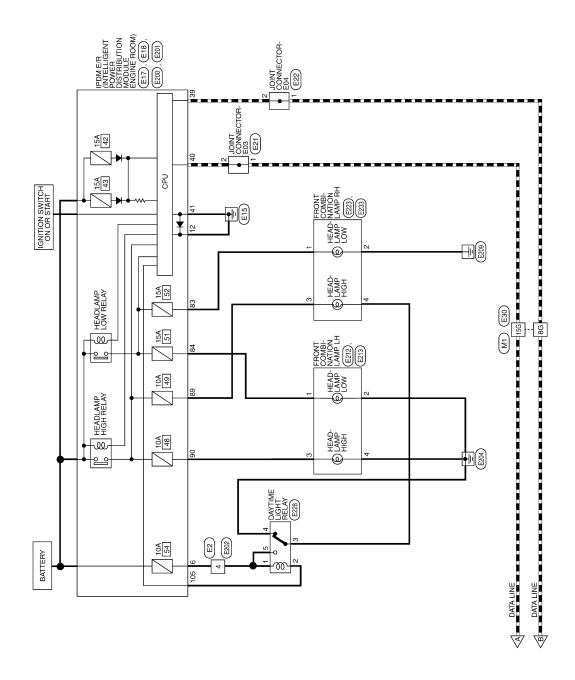


Terminal No.         Color of Wire         Signa           3         L/W           4         B
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# DAYTIME RUNNING LIGHT SYSTEM

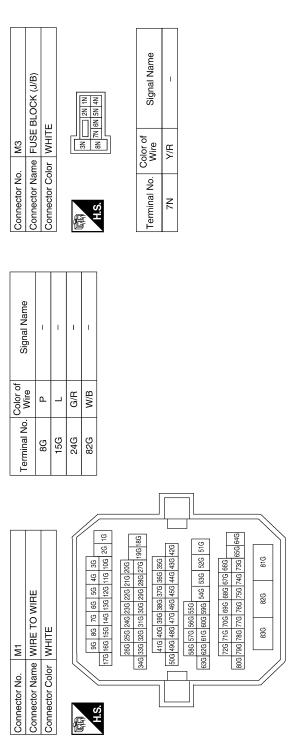




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# DAYTIME LIGHT SYSTEM CONNECTORS - HALOGEN

Revision: August 2013



onnector No. M5	ıo	Connector No.	, M16		Connector No.	M17	
tor Name Ft	Connector Name FUSE BLOCK (J/B)	Connector Name BCM	me BCM		Connector Name BCM	ne BCM	
Connector Color WHITE	ш		(BODY	(BODY CONTROL MODULE)		(BODY	(BODY CONTROL MODULE)
	1	Connector Color BLACK	lor BLACK		Connector Color WHITE	or WHITE	
5M 4M [	10M   9M   8M   7M   6M	S I	1 3		A E	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	8 9 10 16 17 18 19
Terminal No. Wire	of Signal Name	Terminal No. Wire	Color of Wire	Signal Name	Terminal No. Wire	Color of Wire	Signal Name
12M O	1	-	M/B	BATT (F/L)	=	Y/R	BAT BCM FUSE
			-		4.0	α	FOND4

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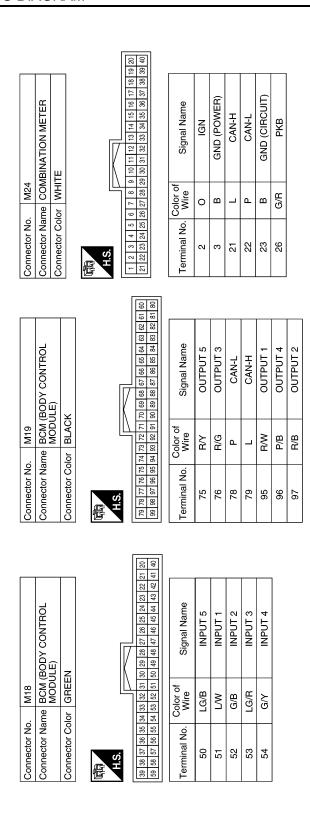
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Connector No. E2  Connector Name WIRE TO WIRE  Connector Color WHITE  H.S. Table 1		Г		l		
Connector Name WIH Connector Color WHI  H.S.  Terminal No. Wire  A L		IE TO WIRE	<u></u>			-
Connector No. Connector Collector Co		me WIF	or WH	2 5	Color of Wire	٦
	Connector No.	Connector Na	Connector Col	「南南 H.S.	Terminal No.	4

Signal Name	ı	1	ı	1	1	ı
Color of Wire	R/B	P/B	R/W	L/W	R/Y	G/B
Terminal No.	6	10	11	12	13	14

M28	COMBINATION SWITCH	표표		2 8 9 10 11 12 13 14	of Signal Name	ı	ı	ı	ı
		lor		1 7	Color of Wire	Ğ	LG/R	R/G	LG/B
Connector No.	Connector Name	Connector Color WHITE	E	H.S.	Terminal No.	2	2	7	8

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lame SICER WER)		АВ
Signal Name DTRL/DEICER GND (POWER)		С
O Color of B L B		D
Terminal No.		Е
2 23 28 4		F
(INTELLIGENT STRIBUTION ENGINE ROOM)  2826272829 3031323334 15161771819 2021222324	Signal Name	G
		Н
	Connector No. E22 Connector Name JOINT Connector Color WHITE Terminal No. Wire  1 P 2 P	I
Connector No. Connector Name Connector Color  9 10 11 12 9 10 11 12	Connector No. Connector Cold Connector Cold Terminal No.	J
		K
POWER DISTRIBUTION MODULE ENGINE ROOM) WHITE  At 44 40 33  CAN-L  CAN-L  CAN-H  CAN-H	Connector No. E21 Connector Name JOINT CONNECTOR-E03 Connector Color WHITE  Terminal No. Wire Signal Name  1 L - 2 L - 2 L -	EXL
	0. E21 ame JOINT CON olor WHITE Color of Wire L L	N
Connector No. Connector Name Connector Color H.S. 40 40 41		0
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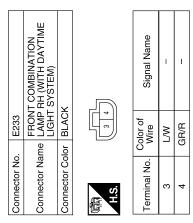
Connector Name PARKING BRAKE SWITCH Connector Color BLACK  Terminal No. Wire Signal Name	Connector No. E202 Connector Name WIRE TO WIRE Connector Color WHITE  ##S.  Color of Signal Name  4 SB
Signal Name	i PDM E/R (INTELLIGENT MODULE ENGINE ROOM)  lor WHITE  WHITE  Color of Signal Name  V DTRL RLY
RG 8G 15G 24G 82G 82G	Connector No.  Connector Name Connector Color H.S. H.S.  105 V. 105
Connector Name WIRE TO WIRE  Connector Color WHITE  Connector Color WHITE  Connector Color WHITE  Connector Color WHITE  206 46 56 66 70 86 96  16 26 106 116 126 136 146 156 166 176  206 216 226 236 246 256 266  186 196 276 286 236 336 346 416  356 386 376 386 336 406 416  426 436 446 456 466 476 486 496 506  516 526 536 546 556 576 586  516 526 536 546 566 576 586  516 526 536 546 566 576 586  816 826 586 586 776 776 776 776 776 776 776 776 776 7	Connector No.         E200           Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM)           Connector Color WHITE           Terminal No. Wire         Signal Name           83         R/Y         HEADLAMP LO LH           89         L/W         HEADLAMP HI RH           90         G         HEADLAMP HI LH

ctor Name FRONT COMBINATION  LAMP LH  ctor Color BLACK  Connector Color BLACK  Connector Color BLACK	ctor No. E213	E213	Connector No. E223	E223
	tor Name	FRONT COMBINATION LAMP LH	Connector Name	FRONT COMBINATION LAMP RH (WITHOUT XENON
	tor Color	BLACK		HEADLAIMP STSTEIM)
			Connector Color	BLACK

Signal Name	ı	-
Color of Wire	R/Y	В
Terminal No.	1	2

FRONT COMBINATION LAMP LH BLACK  3 4  Signal Name G G	LAMPI IN BLACK  Solor of Wire  G	Connector Name Connector Color H.S. H.S. 3
I	σ	ဇ
Signal Name	Color of Wire	erminal No.
<u></u>		H.S.
>		onnector Colc
T COMBINATION LH	he FRON'	onnector Nam

Connector No.	. E212	
Connector Name		FRONT COMBINATION LAMP LH (WITHOUT XENON HEADLAMP SYSTEM)
Connector Color	lor BLACK	~
师 H.S.		Į.
Terminal No.	Color of Wire	Signal Name
1	٦	_
2	В	1



œ	Connector Name DAYTIME LIGHT RELAY	BLACK	8 9 1	Signal Name	ı	1	_	_	_
E228	ne DA	-		Color of Wire	SB	>	GR/R	В	SB
Connector No.	Connector Nan	Connector Color	向 H.S.	Terminal No.	F	2	ε	4	5

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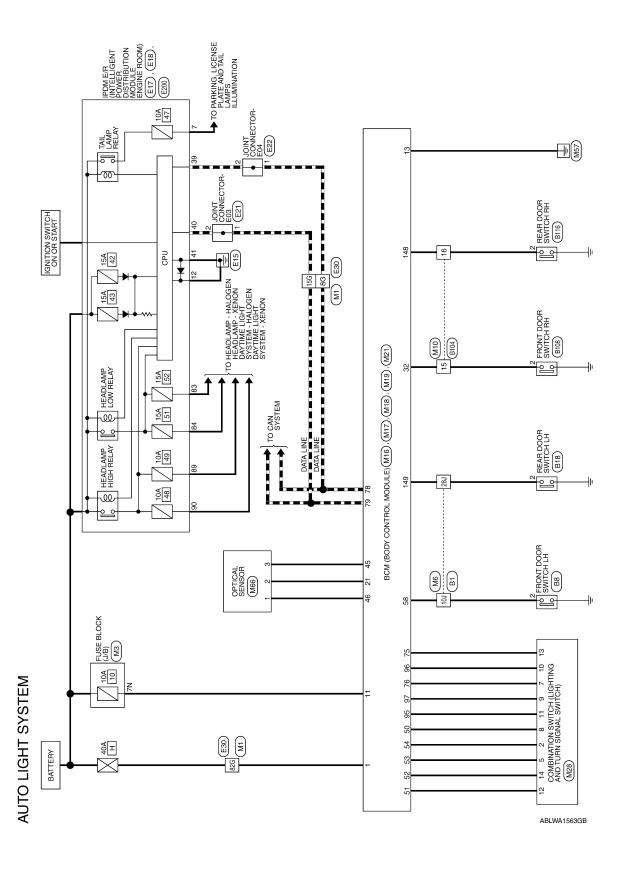
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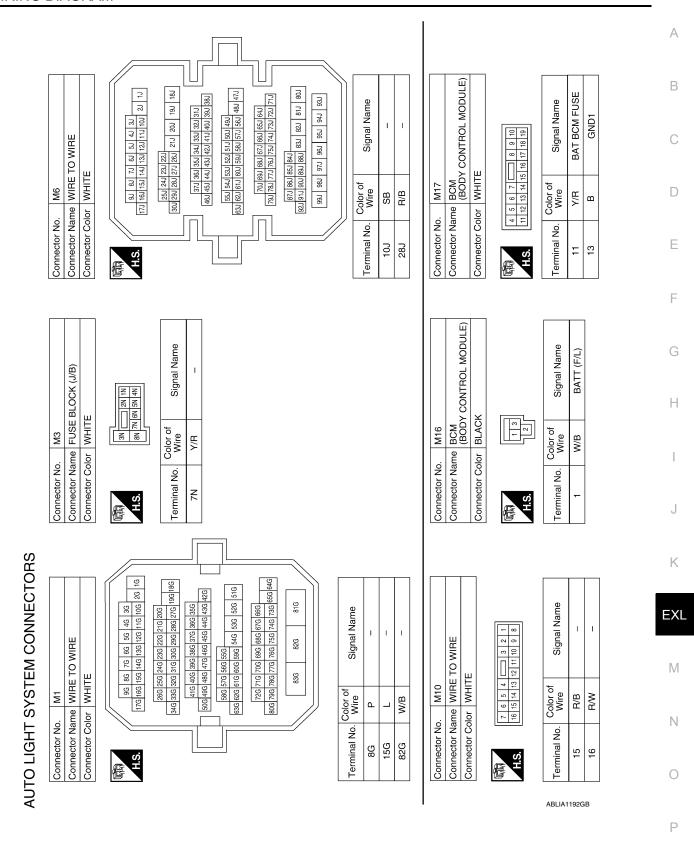
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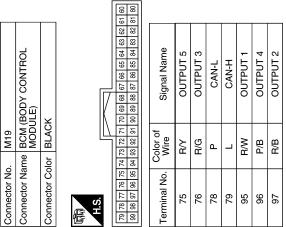
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# **AUTO LIGHT SYSTEM**

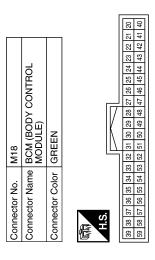




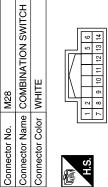


Olginal Ivanie	OUTPUT 5	OUTPUT 3	CAN-L	CAN-H	OUTPUT 1	OUTPUT 4	OUTPUT 2		Signal Name	ı	ı	ı	1	
Wire	R/Y	R/G	۵	_	₽/W	P/B	B/B		Color of Wire	G/Y	LG/R	R/G	LG/B	
ellillal NO.	75	9/	78	79	95	96	6		Terminal No.	2	5	7	8	•
				•			•			•	•			

				>							
Signal Name	A/L SIGNAL TYPE 1	AS DOOR SW 1	GND RF2 A/L	A/L POWER SUPPLY 5V	INPUT 5	INPUT 1	INPUT 2	INPUT 3	INPUT 4	DR DOOR SW	
Color of Wire	P/B	B/B	Ь	W/N	LG/B	L/W	G/B	LG/R	G/Y	SB	
Terminal No.	21	32	45	46	20	51	52	53	54	58	



	Signal Name	-	1	-	1	ı	-	=	ı	1	_
Color of	Wire	G/Y	LG/R	R/G	LG/B	R/B	P/B	R/W	M	R/Υ	G/B
	Terminal No.	2	5	7	8	6	10	11	12	13	14





Connector No.	M21		
Connector Name	me MOI	BCM (BODY CONTROL MODULE)	
Connector Color	lor GRAY	Ι.Υ	
雨 H.S.			
131 130 129 128 127 128 125 124 123 122 121 120 151 150 149 148 147 146 145 144 143 142 141 140	126 125 124 12 146 145 144 14	119 118 117 116 115 114 139 138 137 136 135 134	113 112 133 132
Terminal No.	Color of Wire	Signal Name	
148	B/W	RR DOOR SW	
149	B/B	RL DOOR SW	

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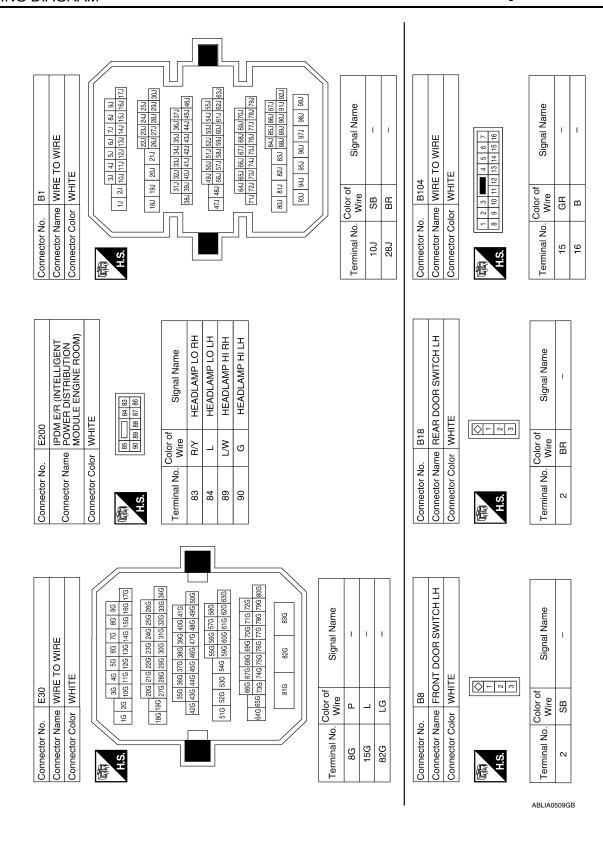
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Connector No. E18  Connector Name   PDM E/R (INTELLIGENT   MODULE ENGINE ROOM)    Connector Color   WHITE   MODULE ENGINE ROOM)    H.S.	Terminal No. Wire Signal Name 7 GR TAIL/ILLUMI 12 B GND (POWER)		
PDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) WHITE	Color of Signal Name Wire P CAN-L CAN-H B GND (SIGNAL)	SOUNT CONNECTOR-E04 WHITE	Wire Signal Name P P
Connector No. Connector Color	Color	Connector Name Connector Color H.S.	Terminal No. 00
Connector No. M66 Connector Name OPTICAL SENSOR Connector Color WHITE  H.S.	Terminal No. Wire Signal Name  1 V/W –  2 P/B –  3 P –	Connector No. E21 Connector Name JOINT CONNECTOR-E03 Connector Color WHITE  A.S.  Connector Color   MITE	Terminal No. Odd of Wire Signal Name

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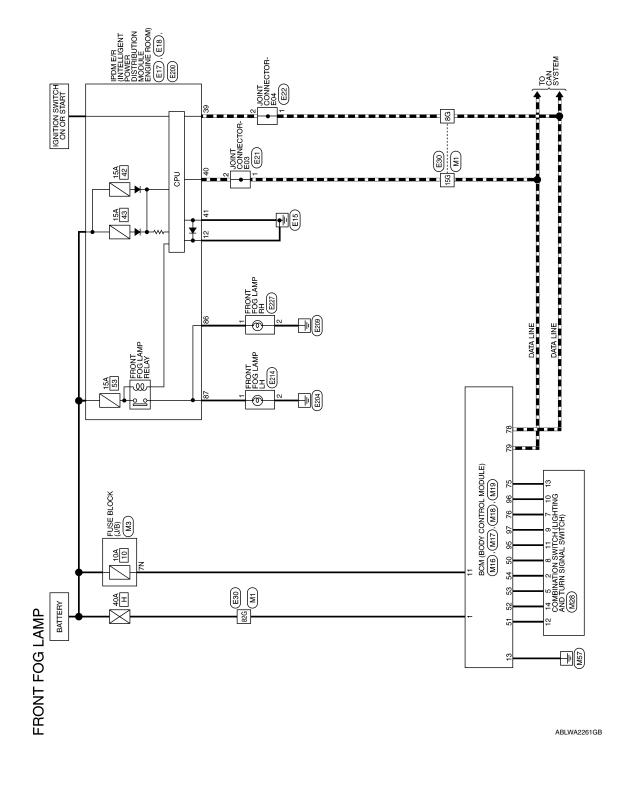
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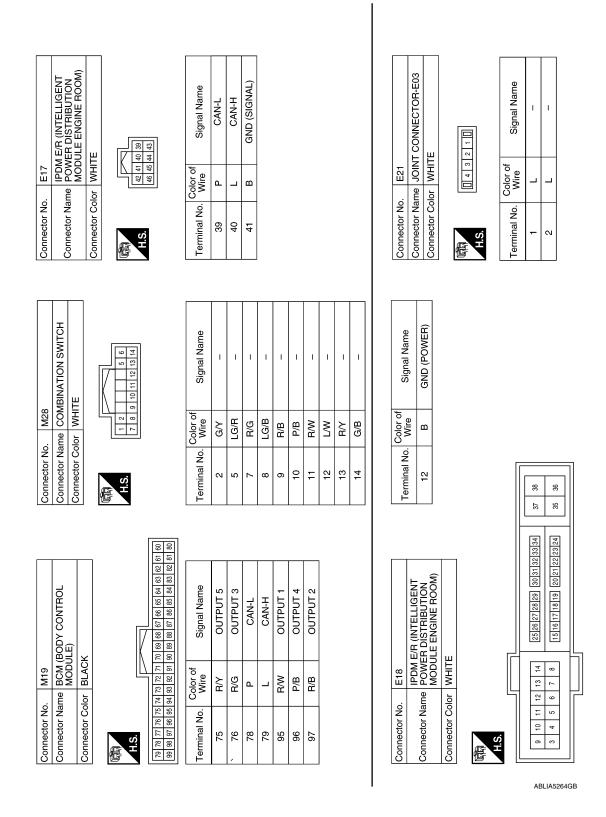
Connector No.	). B116	9	
Connector Na	me RE,	Connector Name   REAR DOOR SWITCH RH	
Connector Color WHITE	olor WH	ITE	
(利)			
Terminal No.	Color of Wire	Signal Name	
2	В	1	

Connector No.		B108
Connector Name		FRONT DOOR SWITCH RH
Connector Color WHITE	lor	HITE
(京) H.S.		
Terminal No.	Color of Wire	of Signal Name
2	GR	ı

# FRONT FOG LAMP SYSTEM



							T							Ē				22 21 20	42 41 40								A B
		FUSE BLOCK (J/B)			8N 7N 6N 5N 4N	Signal Name	5	1						BCM (BODY CONTROL MODULE)			[7	39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20	49 48 47 46 45 44 43	Signal Name	INPUT 5	INPUT 1	INPUT 2	INPUT 3	INPUT 4		С
					8 N N N N N N N N N N N N N N N N N N N	Color of	A Vie	ב										34 33 32 31 30	54 53 52 51 50	Color of	R/B/	L/W	G/B	LG/R	G/Y	I	D
	Connector No.	Connector Name			H.S.	Terminal No		2					Connector No.	Connector Name	Connector Color	管	H.S.	39 38 37 36 35	59 88 57 56 55	Terminal No	50	51	52	53	54	I	Е
																			_		1						F
	Signal Name	1	1	1										BCM (BODY CONTROL MODULE)		0 10	2 17 18 19	Signal Name	TO IT WOOD IN	GND1							G H
	Color of Wire	۵	_	M/B									M17		1 1	7	11 12 13 14 15 16 17	Color of	wire civ	r a							ı
	Terminal No.	98	15G	82G									Connector No.	Connector Name	Connector Color		ωį	Terminal No	_	- 61							J
S.			7	//							<u></u>			<u> </u>												ı	K
VECTORS					5G 4G 3G 12G 11G 10G 2G 1G	21G 20G	28G 27G 19G 18G	3 36G 35G 3 44G 43G 42G	53G 52G 51G	726 716 706 696 686 676 666	746 736 656 640	200		Connector Name BCM (BODY CONTROL MODULE)					olginal Ivaline	BATT (F/L)						Е	XL
P CON		WIRE 10 WIRE			96 86 76 66 56 46 176 166 156 146 136 126 116	26G 25G 24G 23G 22G 21G 20G	346 336 326 316 306 296 286 27	41G 40G 39G 37G 36G 35G 50G 49G 48G 47G 46G 45G 44G 43G 42G	58G 57G 56G 55G 63G 62G 61G 60G 59G 54G 53G	71G 70G 69G 68G	786 776 766 756		9	M ODY CONTR	BLACK		2 3			BA						ľ	VI
JG LAM	r No. M1	Connector Name WIRE 10 WIRE			96	266.2	346 336 3	50G 49G	586 5	726 7	806 796 7		r No. M16	r Name BCI	r Color BL/			Color of	-	M/B						ı	N
FRONT FOG LAMP CONNEC	Connector No.	Connector Name		E	H.S.								Connector No.	Connecto	Connector Color		H.S.	H		-						(	0
芷																							ABLIA	<b>A263</b> 1	1GB	ı	P



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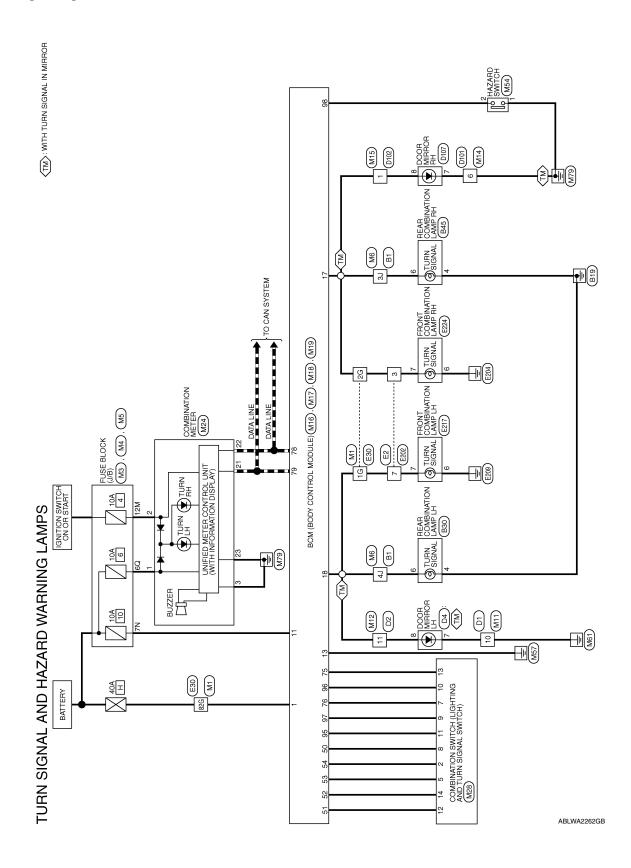
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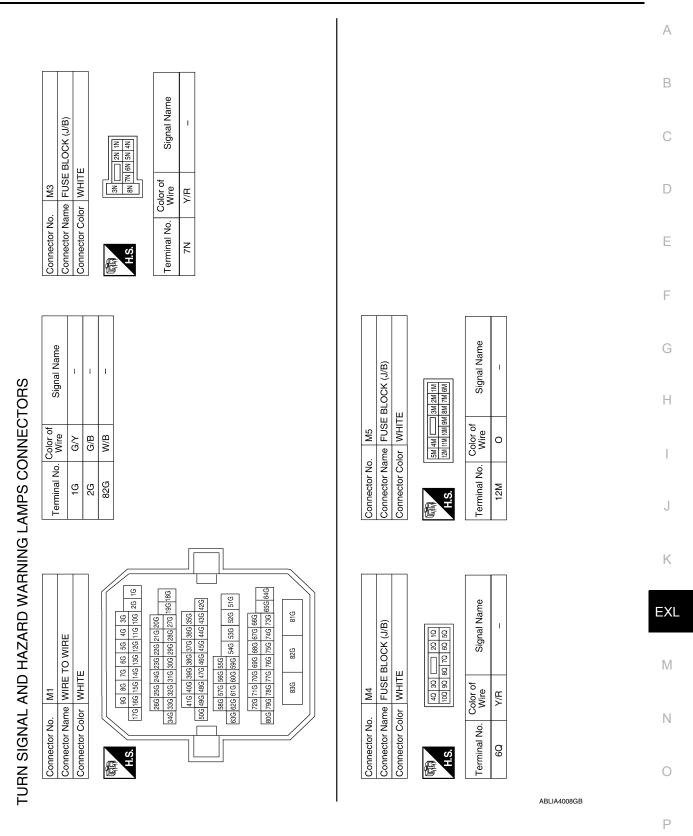
Signal Name	1	1	ı									FRONT FOG LAMP RH BLACK			Signal Name	ı	1
Color of Wire	Ь	_	P.								E227				Color of Wire	W/R	ш
Terminal No.	86	15G	82G								Connector No.	Connector Name	9	E.S.	Terminal No.	-	2
Connector No. E30	Competition Name White 10 White			H.S. 16 20 106 116 126 136 146 156 186 176	206 216 226 236 246 256 286   186 18	Dec   Dec	35G 36G 37G 38G 39G 40G 41G 42G 43G 44G 45G 46G 47G 48G 49G 50G	516   526   539   549   596   606   616   626   636	66G   67G   66G   69G   70G   71G   72G   76G   77G   77G   79G   79G	816 826 836	Connector No. E214	or Je		H.S.	Terminal No. Wire Signal Name		2 B
CONNECTOR				2 1 11	Signal Name	1	1					IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODI II E ENGINE POOM		84 83 87 86	Signal Name	FR FOG LAMP RH	FR FOG LAMP LH
E22		_		1 4 3	Color of Wire	Ь	۵				E200		-	88 88 88	Color of Wire	W/R	S
Connector No. E22	Connector Name			H.S.	Terminal No.	-	2				Connector No.	Connector Name	Connector Color	南 H.S.	Terminal No.	86	87

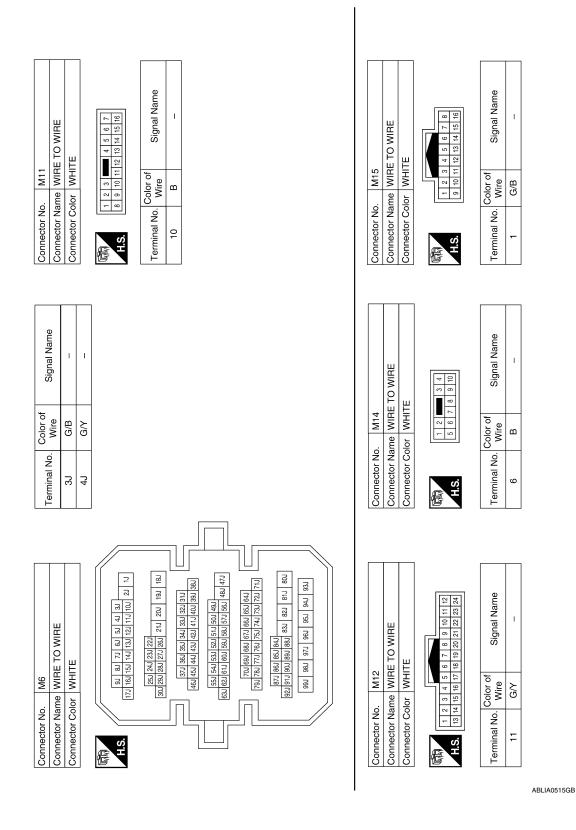
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# < WIRING DIAGRAM > [HALOGEN TYPE]





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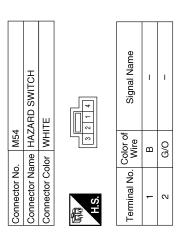
Compositor No M16	oly very constant of the const	7447			oly votocano	0410		
ne BCM	Connector Name			Col	Connector Name			
(BODY CONTROL MODULE)			(BODY CONTROL MODULE)				(BODY CONTROL MODULE)	্রা
Connector Color BLACK	Connector Color	olor WHITE		Conn	Connector Color	GREEN		
	_ _		- 11	Ą.				
	S S E	4     5     6     7     7       11     12     13     14     15     16     1	8 9 10 16 17 18 19	SI SI				
Terminal No.   Color of   Signal Name	Terminal No.	Color of Wire	Signal Name	39 38	39 38 37 36 35 34 3 59 58 57 56 55 54 5	35     34     33     32     31     30       55     54     53     52     51     50	31 30 29 28 27 26 25 24 23 22 21 20 51 50 49 48 47 46 45 44 43 42 41 40	21 20
1 W/B BATT (F/L)	11	Y/R	BAT BCM FUSE			, , , ,		
	13	<u>a</u>	GND1	Term	Terminal No.	Wire	Signal Name	
	17	G/B	FR FLASHER		20 1	LG/B	INPUT 5	T
	18	G/Y	FL FLASHER			~ ~	INPUT 1	
						G/B	INPUT 2	
					53 L	LG/R	INPUT 3	
					54	G/Y	INPUT 4	
Connector No. M19	Terminal No.	Color of Wire	Signal Name	Conn	Connector No.			
Connector Name   BCIM   (BODY CONTROL MODULE)	75	R/Y	OUTPUT 5	Conn Conn	Connector Name		COMBINATION METER WHITE	
Connector Color BLACK	9/	R/G	OUTPUT 3	50	בכוסו כסוסו			
	78	۵	CAN-L	£				
管	79	7	CAN-H	ATION				
HS	95	B/W	OUTPUT 1	N H	ó			
70 00 00 00 00 00 00 00 00 00 00 00 00 0	96	P/B	OUTPUT 4	1 2	3 4 5 6	7 8 9 10	11 12 13	3 19 20
79 78 77 76 75 74 73 72 71 70 69 68 67 66 65 64 63 62 61 60 99 98 97 96 95 94 93 92 91 90 89 88 87 86 85 84 83 82 81 80	6	B/B	OUTPUT 2	21 22	23	24 25 26 27 28 29 30	31 32	3 39 40
	86	0/5	HAZARD SW			olo, of		Г
				Term	Terminal No.	Wire	Signal Name	
					1	Y/R	BAT	
					2	0	IGN	
					3	В	GND (POWER)	
					21	_	CAN-H	
					22	Ь	CAN-L	
					23	В	GND (CIRCUIT)	
EX M	J	I	G	F	E	D	С	A

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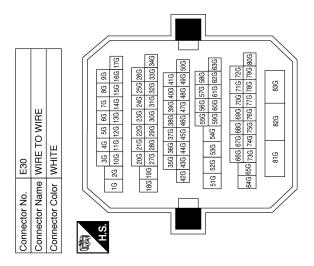
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Signal Name	ı	ı	1	ı	I	1	1	ı	1	1
Color of Wire	G/Y	LG/R	R/G	LG/B	B/B	P/B	B/W	L/W	R/Y	G/B
Terminal No. Wire	2	5	7	8	6	10	1	12	13	14

Connector No.		M28	ω,				
Connector Name COMBINATION SWITCH	ame	$\frac{1}{2}$	ME	N N N	AT	9	N SWITCH
Connector Color WHITE	olor	W	¥	В			
			[	/			
	1		П	П	т	2	<u></u>
Ģ.	7 8	6	8 9 10 11 12 13 14	11	12	13 1	4

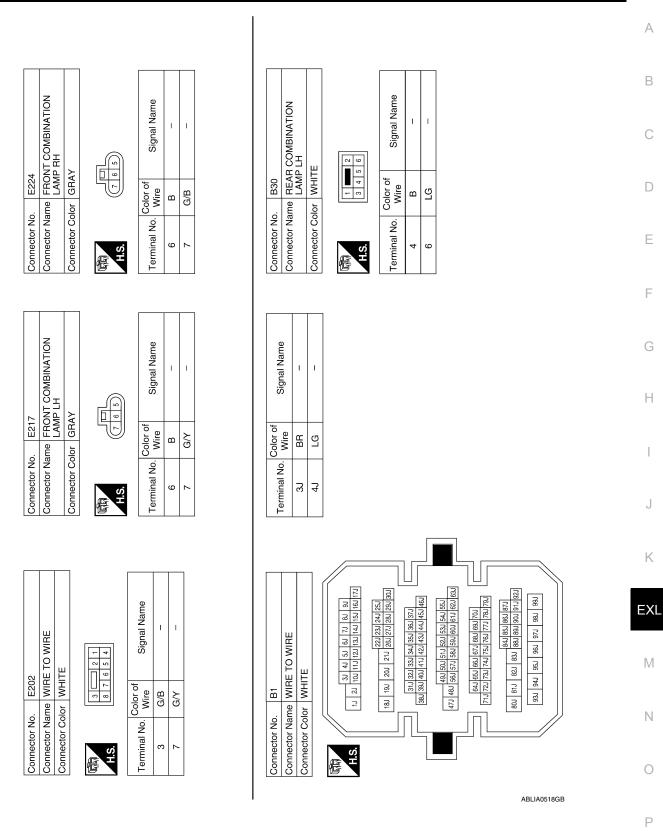
Signal Name	ı	1	I
Color of Wire	>	SB	ГG
Terminal No.	16	2G	82G



	WIRE TO WIRE	ш	8 3 2	Signal Name	1	1
E2	ne WIRE	or WHII	2 S S	Color of Wire	SB	>
Connector No.	Connector Name	Connector Color WHITE	H.S.	Terminal No. Wire	က	7

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< WIRING DIAGRAM > [HALOGEN TYPE]



Connector Name WIRE TO WIRE Connector Color WHITE

Connector Name WIRE TO WIRE

Connector Name | DOOR MIRROR LH

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Connector No.

Connector Color WHITE

D101

Connector No.

Connector Color WHITE

D102

Connector No.

Signal Name

Color of Wire

Terminal No.

Signal Name

Color of Wire B

Terminal No.

Signal Name

Color of Wire

Terminal No.

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			7							
	E TO WIRE	1		12 11 10 9 8 7 6 5 4 3 2 1 24 23 22 21 20 19 18 17 16 15 14 13		Signal Name	ı			
do.	Vame WIRI	Solor WHI		24 23 22 21 20 9 8		Color of Wire	GR			
Connector No.	Connector Name WIRE TO WIRE	Connector Color   WHITE		H.S.		Terminal No. Wire	11			
			7							
	E TO WIRE	TE	!	3 12 11 10 9 8		Signal Name	1			
.0	me WIR	lor WHI		7 6 5 4 16 15 14 13		Color of Wire	В			
Connector No.	Connector Name WIRE TO WIRE	Connector Color   WHITE		哥 H.S.		Terminal No.	10			
				ı						
	REAR COMBINATION	T.		\(\alpha\)		Signal Name	ı	1		
o. B45	ame REAR	LAMP	olor WHITE	- w	11	Color of Wire	В	BB		

Terminal No.

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Connector Name

Connector No.

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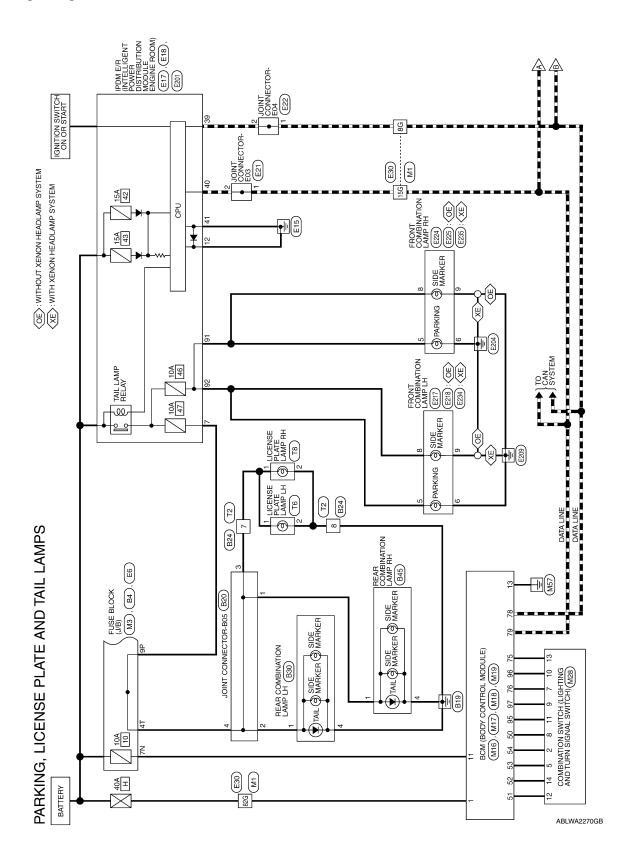
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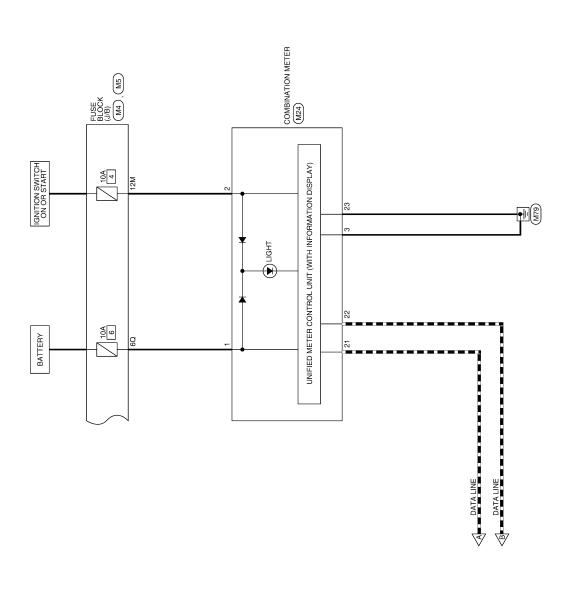
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D107	Connector Name DOOR MIRROR RH	НІТЕ	2 3 4 5 6 7 8 10 11 12 13 14 15 16	of Signal Name	1	
	me D	o.	1 6 10	Color Wire	В	
Connector No.	Connector Na	Connector Color WHITE	H.S.	Terminal No. Wire	7	,

# PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM





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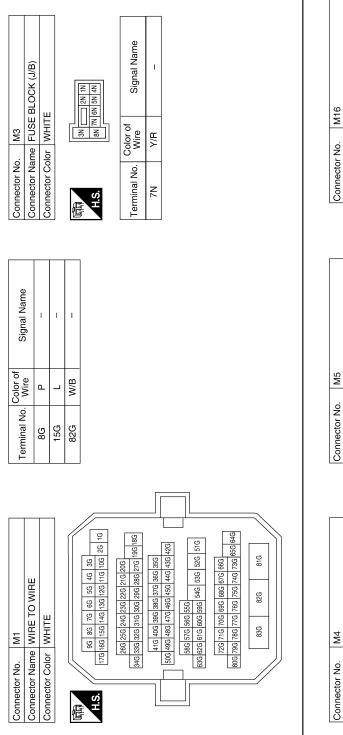
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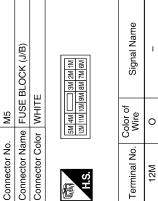


Connector Name BCM
Connector Color BLACK

Connector Color BLACK

Terminal No. Wire Signal Name

1 W/B BATT (F/L)



Connector Name FUSE BLOCK (J/B)

Connector Color WHITE

Signal Name	1	
Color of Wire	Y/R	
Terminal No.	60	

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# PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

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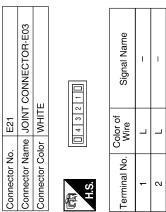
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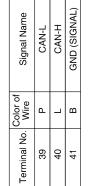
MODULE) BLACK		70 69 68 67 66 65 64 63 62 61 60 90 89 88 87 86 85 84 83 82 81 80	Signal Name	OUTPUT 5	OUTPUT 3	CAN-L	CAN-H	OUTPUT 1	OUTPUT 4	OUTPUT 2	Signal Name	1	1	1	1	1	1							
		74 73 72 71 94 93 92 91	Color of Wire	R/Y	R/G	۵	L	B/W	P/B	R/B	Color of Wire	B/B	P/B	B/W	M	Ρ/Υ	G/B							
Connector Color	H.S.	79 78 77 76 75 99 98 97 96 95	Terminal No.	75	92	78	79	92	96	97	Terminal No.	6	10	2 =	12	13	14							
		22 21 20 42 41 40																						
MODULE) GREEN	[	29 28 27 26 25 24 23 0 49 48 47 46 45 44 43	Signal Name	INPUT 5	INPUT 1	INPUT 2	INPUT 3	INPUT 4				Connector Name COMBINATION SWITCH			2 6	12 13		Signal Name	1	ı	ı	1		
		34 33 32 31 30 29 54 53 52 51 50 49	Color of Wire	LG/B	L/W	G/B	LG/R	G/Y			M28	me COMBI	or WHITE		1 5	7 8 9 10 11		Color of Wire	G/Y	LG/R	B/G	LG/B		
Connector Color	用.S.	39 38 37 36 35 59 58 57 56 55	Terminal No.	20	51	52	53	54			Connector No.	Connector Na	Connector Color WHITE	Ą		H.S.		Terminal No.	2	2	7	8		
						Ī											19 20 39 40							
MODULE) WHITE	8 9 10		Signal Name	BAT BCM FUSE	GND1							Connector Name   COMBINATION METER					10     11     12     13     14     15     16     17     18       30     31     32     33     34     35     36     37     38	Signal Name	BAT	IGN	GND (POWER)	CAN-H	CAN-L	GND (CIRCUIT)
-	4 5 6 7 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19		Color of Wire	Y/R	В						M24	TE COMBIL	or WHIIE				6 7 8 9 10 26 27 28 29 30	Color of Wire	Y/R	0	8	Т	Ь	В
Connector Color	4 =		Terminal No.	11	13						Connector No.	nector Nar	Connector Color	•		Ņ.	2 3 4 5 22 23 24 25 2	Terminal No.	-	2	က	21	22	23

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	E21	JOINT CONNECTO	WHITE	4 3 2 1
	Connector No.	Connector Name	Connector Color	

Connector No.	E17
Connector Name	Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color WHITE	WHITE
高 A.S.	42 41 40 39 46 43 43 43 43 43 43 43 43 43 43 43 43 43

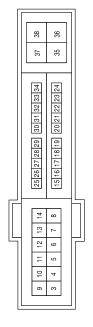


	Connector Name   FUSE BLOCK (J/B)	ITE	16P 15P 14P 17P 14P 14P 18P 18P 18P 18P 18P 18P 18P 18P 18P 18	Signal Name	_
_	me FU	lor WH	7P 6P 5P 4P [	Color of Wire	GR
	Connector Na	Connector Color WHITE	H.S.	Terminal No.	д6

Connector No.

Signal Name	TAIL/ILLUMI	GND (POWER)	
Color of Wire	GR	В	
Terminal No.	7	12	

Connector No.	E18
Connector Name	Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color WHITE	WHITE



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# PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< WIRING DIAGRAM > [HALOGEN TYPE]

		А
Signal Name	E218 FRONT COMBINATION LAMP LH (WITHOUT XENON HEADLAMP SYSTEM) GRAY  GRAY  GRAY  GRAY  GRAY  GRAY  GRAY  BR  - BB  - BB	В
Wire LG LG	<del>                                   </del>	D
Terminal No.   8G   15G   82G   82G	Connector No. Connector Color Terminal No. 8 L 9 L	Е
		F
E30   WHRE TO WIRE	FRONT COMBINATION GRAY GRAY  or of Signal Name	G
E30   WHITE TO WHITE   WHITE	1 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	I
Connector No. Connector Color H.S. H.S.  16  646  646	Connector No. Connector Color Connector Color H.S. 6 Connector Color Connector Color Connector Color Connector Color Connector No. V V 6	J
		K
E22   JOINT CONNECTOR-E04	E201 IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) WHITE  Signal Name Signal Name Signal CLEARANCE RH Signal CLEARANCE LH Signal CLEARANCE LH	EX
Connector No. Connector Color HS. Terminal No. Vo.	Connector No.  Connector Color  Connector Color  Terminal No.  91  192  L 192	N 0
	ABLIA4005GB	

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Connector Name LAMP LH (WITH XENON HEADLAMP SYSTEM) Connector Color GRAY	Connector No.	E234
Connector Color GRAY	Connector Name	FRONT COMBINATION LAMP LH (WITH XENON HEADLAMP SYSTEM)
	Connector Color	GRAY

FRONT COMBINATION LAMP RH (WITHOUT XENON HEADLAMP SYSTEM)

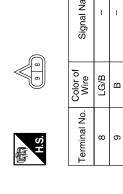
Connector Name Connector Color

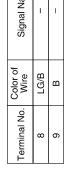
E225

Connector No.

GRAY

וויים וויישראויו			Signal Name	-	_
ב ב	lor GRAY	60	Color of Wire	LG/B	В
	nnector Color GRAY	S. H.S.	rminal No.	8	6



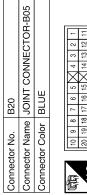






Signal	'	'	
Color of Wire	LG/R	В	
Terminal No.	8	6	

	FRONT COMBINATION LAMP RH			Signal Name	1	1
E224		r GRAY	7 6 5	Color of Wire	LG/R	В
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	5	9

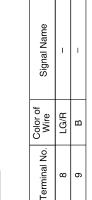


Connector Name John Connect Or-B  Connector Color BLUE    10   9   7   6   5   4   3   2   1     20   19   18   17   16   15   14   13   12   11     Terminal No. Wire Signal Name  2	COININECTOR-B	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Signal Name	_	-	_	
Connector Connec	lor BLUE	9 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Color of Wire	Τ	٦	٦	
	Connector Co	Ø;	Terminal No.	1	2	3	

Connector No. B4 Connector Name FUSE BLOCK (J/B) Connector Color BROWN
4T
Connector Color BROWN
Connector Name FUSE BLOCK (J/B)

NWO	31 2T 1T 8T	Signal Name	1
lor BRC	T11 101	Color of Wire	_
Connector Color BROWN	H.S.	Terminal No.	4T

E235	FRONT COMBINATION LAMP RH (WITH XENON HEADLAMP SYSTEM)	GRAY	
Connector No.	Connector Name	Connector Color GRAY	



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# PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< WIRING DIAGRAM > [HALOGEN TYPE]

		Α
IBINATION Signal Name -	Connector No. T8 Connector Name LICENSE PLATE LAMP RH Connector Color BROWN  Terminal No. Wire Signal Name  1 L 2 B	В
S C C C C C C C C C C C C C C C C C C C	LICENSE PL. BROWN lor of Si Wire Si	С
No. B45 Name LAMI Color of WHII  Color of L  B  B	No. T8 No. Color of Wire B B B B Color of Wire B B B Color of Colo	D
Connector No. Connector Color H.S.  Terminal No.  4	Connector No. Connector Color Terminal No. Co	Е
		F
B30  LAMP LH WHITE  WHORE  I   I   I   I   I   I   I   I   I   I	Connector No. T6 Connector Name LICENSE PLATE LAMP LH Connector Color BROWN  Terminal No. Wire Signal Name  1 L 2 B	G
B30 I AMP LH  or WHITE    S 4   5   6     Wrice   B	or T6  Or BROWN  Color of Wire  B  B	Н
8>	Connector No. Connector Name Connector Color H.S.  Terminal No.  2	I
Connector Nan Connector Cold H.S. Terminal No.	Connector No. Connector Nan Connector Colc H.S. Terminal No.	J
		K
O WIRE	TO WIRE  Signal Name	EXL
Connector No. B24 Connector Name WIRE TO WIRE Connector Color WHITE  A.S. A.S. B. A.S. B.	Connector No. T2 Connector Name WIRE TO WIRE Connector Color WHITE  Terminal No. Wire Signs 7 L 8 B	
Connector No. Connector Color Terminal No.  8	Connector No. Connector Nam Connector Colo Terminal No. 7 7 8	N
Conne Conne Termii	Conne Conne Termin 7 7	0

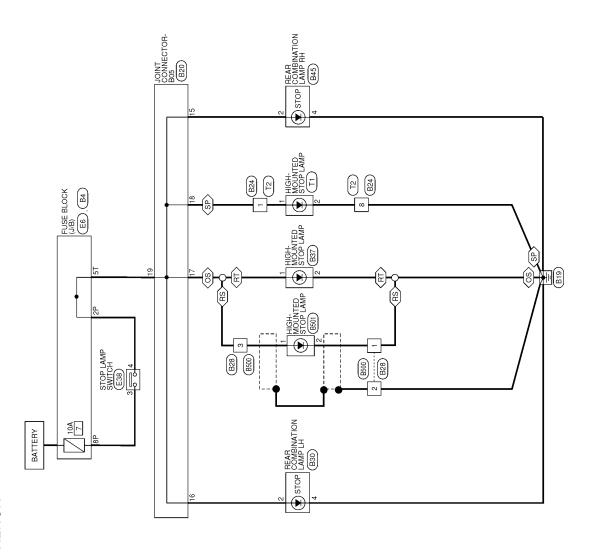
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Revision: August 2013 EXL-295 2014 Maxima NAM

# STOP LAMP

Wiring Diagram

(GS): WITHOUT REAR SPOILER
(RS): WITH REAR SUNSHADE
(RT): WITHOUT REAR SUNSHADE
(SP): WITH REAR SPOILER



STOP LAMP - XENON

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Connector Name | FUSE BLOCK (J/B)

B4

Connector No.

Connector Color BROWN

# STOP LAMP CONNECTORS

	Connector Name STOP LAMP SWITCH	TE	2 4	Signal Name	ı	1
E38	ne STO	or WHI	E -	Color of Wire	œ	<u>C</u>
Connector No.	Connector Nar	Connector Color WHITE	(南) H.S.	Terminal No. Wire	3	4
	Connector Name FUSE BLOCK (J/B)	TE	70 (50 (50 (40 (50 (40 (50 (40 (50 (40 (50 (40 (50 (50 (50 (50 (50 (50 (50 (50 (50 (5	Signal Name	ı	ı
. E6	me FUS	or WH	7P 6P 5P 4P 6P 13P 13P	Color of Wire	LG	<u>a</u>
Connector No.	Connector Na	Connector Color WHITE	H.S.	Terminal No. Wire	2P	8P

Signal Name

Color of Wire

Terminal No.

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

Connector No.	No. B20		Connector No.	o. B24		Conne	Connector No.	B28	
onnector	Name JOIN	Connector Name JOINT CONNECTOR-805	Connector Name WIRE TO WIRE	ame WIR	IE TO WIRE	Conne	ector Name	Connector Name WIRE TO WIRE	) WIRE
onnector	Connector Color BLUE		Connector Color WHITE	olor WHI	ITE	Conne	Connector Color WHITE	WHITE	
	10 9 8 7 6	5 X 4 3 2 1	E	6	C C		ı		
رن ن	20 19 18 17 16	15 12 11	H.S.		6 7 8	H.S.	6	3 2	
Terminal No.	Color of Wire	Signal Name	Terminal No. Wire	Color of Wire	Signal Name	Termi	Terminal No.	Color of Wire	Signal Name
15	0	ı	1	0	-		-	В	ı
16	0	ı	8	В	-		2	В	ı
17	0	ı					3	0	ı
18	0	ı							
19	0	ı							
	-								

**EXL-297** Revision: August 2013 2014 Maxima NAM

REAR COMBINATION LAMP RH WHITE  1	of Signal Name	HIGH-MOUNTED STOP LAMP (WITH REAR SPOILER) BROWN	of Signal Name
Connector Name RE Connector Name RE Connector Color WI A.S.	Terminal No. Color of Wire 2 O 4 B	Connector No. T1 Connector Name HI(W Connector Color BH HS.	Terminal No. Wife 1 0
HIGH-MOUNTED STOP LAMP (WITHOUT REAR SUNSHADE) WHITE	Signal Name	B501 HIGH-MOUNTED STOP LAMP (WITH REAR SUNSHADE) GRAY	Signal Name
ctor Name	Terminal No. Wire 1 0 2 B	ctor No.	Terminal No. Wire Wire 2 B
Conne	Termin 2	Conne	Termin 1
BB30 REAR COMBINATION LAMP LH WHITE	Signal Name	TO WIRE	Signal Name
me REAR OWHITE	Color of Wire O O B	Me WIRE T	Color of Wire B
Connector Name Connector Color H.S.	Terminal No.	Connector No. B500 Connector Name WIRE TO WIRE Connector Color WHITE H.S.	Terminal No.

**STOP LAMP** 

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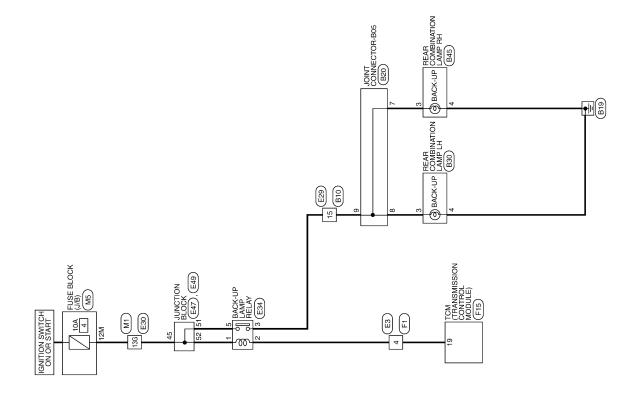
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Connector No. T2	Connector Name   WIRE TO WIRE	Connector Color WHITE	
Connecto	Connecto	Connecto	

2 2 4 1	Signal Name	1	-
8 7 6	Color of Wire	0	В
师 H.S.	Terminal No.	-	80

# **BACK-UP LAMP**

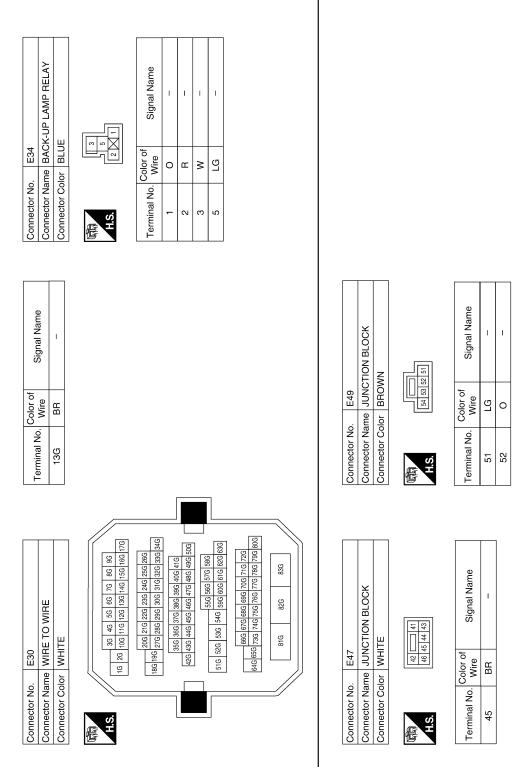
Wiring Diagram



BACK-UP LAMP

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												А
					me							В
		BLOCK (J/B)		3M 2M 1M 8M 7M 6M	Signal Name	1						С
	M5	me FUSE	or WHITE	5M 4M	Color of Wire	0						D
	Connector No.	Connector Name FUSE BLOCK (J/B)	Connector Color WHITE	H.S.	Terminal No.	12M						Е
			7									F
	Signal Name	Olyman I						WIRE	3 2 1 1	Signal Name		G
	Color of	Wire O						Connector No. E29 Connector Name WIRE TO WIRE Connector Color WHITE	5 4 14 13 12 11	Color of Wire W		П
	Torminal No	_	3					Connector No. Connector Name Connector Color	16	Terminal No. 15		I
	L L	<u> </u>						Conne	是 H.S.	Termi		J
												K
BACK-UP LAMP CONNECTORS		WIRE		6G 5G 4G 3G 13G 12G 11G 10G 2G 1G	266 256 246 236 226 216 206	346   326   316   306   236   226   276   196   186		WIRE	14 15 6 7 1 16 1 16 1 16 1 16 1 16 1 16 1	Signal Name		EXL
P CON	M 1	WIRE TO	WHITE	96 86 76 66 56 46	26G 25G 24G	346   336   326   316   306   236		E3 WIRE TC	1 2 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Color of Wire R		M
JP LAM	Connector No.	Connector Name WIRE TO WIRE	Connector Color   WHITE			X		Connector No. E3 Connector Name WIRE TO WIRE Connector Color WHITE		Terminal No. Co		N
SACK-U	Conne	Conne	Conne	H.S.				Conne	H.S.	Termi		0
ш							'				ABLIA0529GB	D



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		А
VIRE	ABINATION Signal Name	В
10 IME TO WIRE IHITE II 12 13 14 15 6 7 II 12 13 14 15 16 6	B45 REAR COMB LAMP RH WHITE    Or of   Signature   Sig	С
B10   B10   Color of   Wire   Wire	Vo. B45  Volor of Wire  V V B45  B45  Color of Wire	D
Connector No. B10  Connector Name WIRE TO WIRE  Connector Color WHITE  M.S. R 9 10 11 12 13 14 15 16 17 14 15 16 17 14 15 16 17 14 15 16 17 14 15 16 17 14 15 16 17 14 15 16 17 14 15 16 17 17 14 15 16 17 17 17 17 17 17 17 17 17 17 17 17 17	Connector No. B45 Connector Name REAR COMBINATION LAMP RH Connector Color   WHITE  Terminal No. Wire Signal Nam 3 V - 4 B -	Е
		F
ANSMISSION  OL MODULE)  (S 77 88 99 40 47 48 46 17 18 19 20 43 44 16 17 18 19 20 43 44 16 17 18 19 20 43 44 16 17 18 19 20 43 14 14 2 16 17 18 19 20 43 14 14 2 16 17 18 19 20 43 14 14 2 16 17 18 19 20 43 14 14 2 16 17 18 19 10 41 42 16 17 18 19 10 41 42 16 17 18 19 10 41 42 16 17 18 19 10 41 42 16 17 18 19 10 41 42 18 18 18 18 18 18 18 18 18 18 18 18 18	Signal Name	G
		Н
		I
Connector No. Connector Color  Connector Color  A.S.  A.S.  2112 212 212 212 211 111 111 111 111	Connector No. Connector Name Connector Color H.S. 3 3 4	J
		K
WIRE  10 9 8 8  Signal Name	Connector No.   B20   Connector Name   JOINT CONNECTOR-B05   Connector Color   BLUE     State   Stat	EXL
F1	B20	M
e   <sup>2</sup>     <u>  e   z  </u>     <u>  \( \sigma \)     \( \sigma \)   \( \sigma \)   \( \sigma \)   \( \sigma \)   \( \sigma \)   \( \sigma \)   \( \sigma \)   \( \sigma \)   \( \sigma \)   \( \sigma \)   \( \sigma \)   \( \sigma \)   \( \sigma \)   \( \sigma \)   \( \sigma \)   \( \sigma \)   \( \sigma \)     \( \sigma \)   \( \sigma \)   \( \sigma \)   \( \sigma \)     \( \sigma \)     \( \sigma \)     \( \sigma \)     \( \sigma \)     \( \sigma \)     \( \sigma \)     \( \sigma \)       \( \sigma \)       \( \sigma \)       \( \sigma \)       \( \sigma \)       \( \sigma \)         \( \sigma \)           \( \sigma \)                                     </u>	Connector No.  Connector Name Connector Color  Terminal No.  Residual Service	Ν
Connector No. Connector Cole Connector Cole LS. H.S.	Connector No. Connector Cold Connector Cold Connector Cold Connector Cold Connector No. Terminal No. 7 7 9 9	0
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Revision: August 2013 EXL-303 2014 Maxima NAM

# **EXTERIOR LIGHTING SYSTEM SYMPTOMS**

< SYMPTOM DIAGNOSIS >

[HALOGEN TYPE]

# SYMPTOM DIAGNOSIS

# **EXTERIOR LIGHTING SYSTEM SYMPTOMS**

Symptom Table

# **CAUTION:**

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

Symptom		Possible cause	Inspection item
Headlamp does not switch to the high beam.	One side	Fuse     Harness between IPDM E/R and the front combination lamp     Front combination lamp (High beam relay)     IPDM E/R	Headlamp (HI) circuit. Refer to EXL-201.
	Both sides	Symptom diagnosis "BOTH SIDE HEADLAMPS DO NOT SWITCH TO HIGH BEAM" Refer to EXL-307.	
High beam indicator lamp (Headlamp switches to the		Combination meter     BCM	Combination meter.     Data monitor "HI-BEAM IND".     BCM (HEAD LAMP).     Active test "HEADLAMP".
	One side	Front combination lamp (Low beam relay)	_
Headlamp does not switch to the low beam.	Both sides	Combination switch (lighting and turn signal switch)     Harness between the combination switch (lighting and turn signal switch) and BCM     BCM	Combination switch (lighting and turn signal switch). Refer to EXL-186.
		High beam request signal BCM IPDM E/R	IPDM E/R. Data monitor "HL HI REQ".
		IPDM E/R	_
Headlamp does not turn ON.	One side	<ul> <li>Fuse</li> <li>Bulb</li> <li>Harness between IPDM E/R and the front combination lamp</li> <li>Front combination lamp</li> <li>IPDM E/R</li> </ul>	Headlamp (LO) circuit. Refer to <u>EXL-205</u> .
	Both sides	Symptom diagnosis "BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON" Refer to EXL-308.	
Headlamp does not turn	When the ignition switch is turned ON	BCM     Combination switch (lighting and turn signal switch)	Combination switch (lighting and turn signal switch). Refer to EXL-186.
OFF.	The ignition switch is turned OFF (After activating the battery saver).	IPDM E/R	_

# **EXTERIOR LIGHTING SYSTEM SYMPTOMS**

< SYMPTOM DIAGNOSIS >

[HALOGEN TYPE]

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Symp	otom	Possible cause	Inspection item
Headlamp is not turned ON/OFF with the lighting switch AUTO.		Combination switch (lighting and turn signal switch) Harness between the combination switch (lighting and turn signal switch) and BCM BCM	Combination switch (lighting and turn signal switch). Refer to <u>EXL-186</u> .
		<ul><li> Optical sensor</li><li> Harness between the optical sensor and BCM</li><li> BCM</li></ul>	Optical sensor. Refer to <u>EXL-217</u> .
Daytime light system does not activate.		<ul> <li>Either high beam bulb</li> <li>Parking brake switch</li> <li>Combination switch (lighting and turn signal switch)</li> <li>BCM</li> <li>IPDM E/R</li> <li>Daytime light relay</li> <li>Harness between IPDM E/R and daytime light relay.</li> </ul>	Daytime light system description. Refer to EXL-176, "System Description".
Front fog lamp is not turned ON.	One side	<ul> <li>Front fog lamp bulb</li> <li>Harness between IPDM E/R and the front combination lamp</li> <li>Front combination lamp</li> <li>IPDM E/R</li> </ul>	Front fog lamp circuit. Refer to EXL-207.
	Both side	Symptom diagnosis "BOTH SIDE FRONT FOG LAMPS Refer to EXL-310.	S ARE NOT TURNED ON"
Parking lamp is not turned ON.	One side	<ul> <li>Fuse</li> <li>Parking lamp bulb</li> <li>Harness between IPDM E/R and the front/rear combination lamp</li> <li>Front/rear combination lamp</li> <li>IPDM E/R</li> </ul>	Parking lamp circuit. Refer to EXL-209.
	Both sides	Symptom diagnosis "PARKING, LICENSE PLATE AND ON". Refer to EXL-309.	TAIL LAMPS ARE NOT TURNED
Turn signal lamp does not blink.	Indicator lamp is normal. (The applicable side performs the high flasher activation).	<ul> <li>Harness between BCM and each turn signal lamp</li> <li>Turn signal lamp bulb</li> <li>Door mirror (if equipped with turn signals in the door mirrors)</li> </ul>	Turn signal lamp circuit. Refer to EXL-213.
	One side	Combination meter	_
Turn signal indicator lamp does not blink.	Both sides (Always)	<ul> <li>Turn signal indicator lamp signal</li> <li>Combination meter</li> <li>BCM</li> </ul>	<ul> <li>Combination meter. Data monitor "TURN IND".</li> <li>BCM (FLASHER). Active test "FLASHER".</li> </ul>
	Both sides (Does blink when activating the hazard warning lamp with the ignition switch OFF)	The combination meter power supply and the ground circuit Combination meter	Combination meter. Power supply and the ground circui Refer to EXL-186.
<ul> <li>Hazard warning lamp does not activate.</li> <li>Hazard warning lamp continues activating. (Turn signal is normal)</li> </ul>		<ul><li>Hazard switch</li><li>Harness between the hazard switch and BCM</li><li>BCM</li></ul>	Hazard switch Refer to EXL-220.

Revision: August 2013 EXL-305 2014 Maxima NAM

# NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[HALOGEN TYPE]

# NORMAL OPERATING CONDITION

Description INFOID:000000010051096

# **AUTO LIGHT SYSTEM**

The auto light system may not turn the headlamp ON/OFF immediately after passing a dark area or a bright area (short tunnel, sky bridge, shadowed area etc.). This is normal.

# BOTH SIDE HEADLAMPS DO NOT SWITCH TO HIGH BEAM

< SYMPTOM DIAGNOSIS >

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# BOTH SIDE HEADLAMPS DO NOT SWITCH TO HIGH BEAM

Description INFOID:000000010051097

The headlamps (both sides) do not switch to high beam when the lighting switch is in the HI or PASS setting.

Diagnosis Procedure

1. COMBINATION SWITCH (LIGHTING AND TURN SIGNAL SWITCH) INSPECTION

Check the combination switch (lighting and turn signal switch). Refer to EXL-186, "System Description". Is the combination switch (lighting and turn signal 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. While operating the lighting switch, check the monitor status.

Monitor item	Condition		Monitor status
HL HI REQ	Lighting switch	HI or PASS	ON
TETTINEQ	(2ND)	Except for HI or PASS	OFF

# Is the item status normal?

YES >> GO TO 3.

NO >> Replace BCM. Refer to BCS-79, "Removal and Installation".

3. HEADLAMP (HI) CIRCUIT INSPECTION

Check the headlamp (HI) circuit. Refer to EXL-201, "Diagnosis Procedure".

Is the headlamp (HI) circuit normal?

YES >> Replace IPDM E/R. Refer to PCS-35, "Removal and Installation".

NO >> Repair or replace the malfunctioning part.

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

< SYMPTOM DIAGNOSIS >

# BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

Description INFOID:00000001005109S

The headlamps (both sides) do not turn ON in any lighting switch setting.

# Diagnosis Procedure

INFOID:0000000010051100

[HALOGEN TYPE]

# 1. CHECK COMBINATION SWITCH (LIGHTING AND TURN SIGNAL SWITCH)

Check the combination switch (lighting and turn signal switch). Refer to <u>EXL-186</u>, "System Description". Is the combination switch (lighting and turn signal 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. While operating the lighting switch, check the monitor status.

Monitor item	Condition		Monitor status
HL LO REQ	Lighting switch	2ND	ON
TIL LO IVLQ	Lighting Switch	OFF	OFF

# Is the item status normal?

YES >> GO TO 3.

NO >> Replace BCM. Refer to BCS-79, "Removal and Installation".

3.HEADLAMP (LO) CIRCUIT INSPECTION

Check the headlamp (LO) circuit. Refer to <a>EXL-205</a>, "Diagnosis Procedure"</a>.

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

YES >> Replace IPDM E/R. Refer to PCS-35, "Removal and Installation".

NO >> Repair or replace the malfunctioning part.

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

< SYMPTOM DIAGNOSIS >

[HALOGEN TYPE]

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

Description

The parking, license plate and tail lamps do not turn ON in with any lighting switch setting.

# Diagnosis Procedure

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# 1.combination switch (lighting and turn signal switch) inspection

Check the combination switch (lighting and turn signal switch). Refer to <u>EXL-186, "System Description"</u>. Is the combination switch (lighting and turn signal switch) normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

# 2.CHECK TAIL LAMP RELAY REQUEST SIGNAL INPUT

# (P)CONSULT DATA MONITOR

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

Monitor item	Condition		Monitor status
TAIL & CLR REQ	Lighting switch	1ST	ON
TAIL & CLININEQ	Lighting Switch	OFF	OFF

# Is the item status normal?

YES >> GO TO 3.

NO >> Replace BCM. Refer to <u>BCS-79</u>, "Removal and Installation".

# 3.PARK LAMP CIRCUIT INSPECTION

Check the parking lamp circuit. Refer to EXL-209, "Diagnosis Procedure".

# Is the tail lamp circuit normal?

YES >> Replace IPDM E/R. Refer to PCS-35, "Removal and Installation".

NO >> Repair or replace the malfunctioning part.

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Revision: August 2013 EXL-309 2014 Maxima NAM

# **BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON**

< SYMPTOM DIAGNOSIS > [HALOGEN TYPE]

# BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

Description INFOID:000000010051103

The front fog lamps do not turn ON in any setting.

# Diagnosis Procedure

INFOID:0000000010051104

# 1.combination switch (Lighting and turn signal switch) inspection

Check the combination switch (lighting and turn signal switch). Refer to <u>EXL-186</u>, "System Description". Is the combination switch (lighting and turn signal switch) normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

2.CHECK FRONT FOG LAMP REQUEST SIGNAL INPUT

# (P)CONSULT DATA MONITOR

- 1. Select "FR FOG REQ" of IPDM E/R DATA MONITOR item.
- 2. While operating the front fog lamp switch, check the monitor status.

Monitor item	Condition		Monitor status
FR FOG REQ	Front fog lamp switch	ON	ON
TINTOGINEQ	(Lighting switch 2ND)	OFF	OFF

# Is the item status normal?

YES >> GO TO 3.

NO >> Replace BCM. Refer to BCS-79, "Removal and Installation".

# 3.FRONT FOG LAMP CIRCUIT INSPECTION

Check the front fog lamp circuit. Refer to EXL-207, "Diagnosis Procedure".

# Is the front fog lamp circuit normal?

YES >> Replace IPDM E/R. Refer to PCS-35, "Removal and Installation".

NO >> Repair or replace the malfunctioning part.

[HALOGEN TYPE] < PRECAUTION >

# **PRECAUTION**

# **PRECAUTIONS**

Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRF-TFNSIONER"

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 SR and SB section of this Service Manual.

#### **WARNING:**

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which 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 the SR section.
- Do not 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:**

- When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT 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
- 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.

# General precautions for service operations

Turn the lighting switch OFF before disconnecting and connecting the connector.

- When checking the headlamp on/off operation, check it on vehicle and with the power connected to the vehicle-side connector.
- Leaving the bulb removed from the headlamp housing for a long period of time can deteriorate the performance of the lens and reflector (dirt, clouding). Always prepare a new bulb and have it on hand when replacing the bulb.
- When adjusting the headlamp aiming, turn the aiming adjustment screw only in the tightening direction. (If it is necessary to loosen the screw, first fully loosen the screw, and then turn it in the tightening direction.)

# Precaution for Work

- When removing or disassembling each component, be careful not to damage or deform it. If a component may be subject to interference, be sure to protect it with a shop cloth.
- When removing (disengaging) components with a screwdriver or similar tool, be sure to wrap the component with a shop cloth or vinyl tape to protect it.
- Protect the removed parts with a shop cloth and prevent them from being dropped.
- Replace a deformed or damaged clip.
- If a part is specified as a non-reusable part, always replace it with a new one.
- Be sure to tighten bolts and nuts securely to the specified torque.
- After installation is complete, be sure to check that each part works properly.
- Follow the steps below to clean components:
- Water soluble dirt:
- Dip a soft cloth into lukewarm water, wring the water out of the cloth and wipe the dirty area.
- Then rub with a soft, dry cloth.
- Oily dirt:

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**EXL-311** 2014 Maxima NAM Revision: August 2013

# **PRECAUTIONS**

< PRECAUTION > [HALOGEN TYPE]

- Dip a soft cloth into lukewarm water with mild detergent (concentration: within 2 to 3%) and wipe the dirty area.
- Then dip a cloth into fresh water, wring the water out of the cloth and wipe the detergent off.
- Then rub with a soft, dry cloth.
- Do not use organic solvent such as thinner, benzene, alcohol or gasoline.
- For genuine leather seats, use a genuine leather seat cleaner.

# **PREPARATION**

< PREPARATION > [HALOGEN TYPE]

PREPARATION

# PREPARATION

Special Service Tool

The actual shapes of the tools may differ from those illustrated here.

Tool number (TechMate No.) Tool name		Description
(J-46534) Trim Tool Set	AWJIA0483ZZ	Removing trim components

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# PERIODIC MAINTENANCE

# HEADLAMP AIMING ADJUSTMENT

Description INFOID:0000000094653883

#### PREPARATION BEFORE ADJUSTING

#### **CAUTION:**

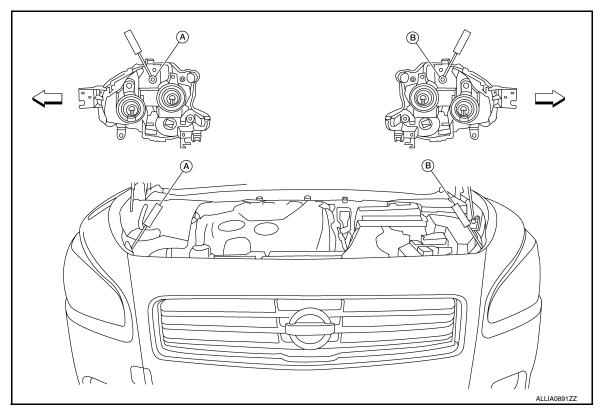
# Do not use organic solvent (thinner, gasoline etc.) NOTE:

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

- Keep all tires inflated to correct pressure.
- · Place vehicle on level ground.
- See that the vehicle is unloaded (except for full levels of coolant, engine oil and fuel, and spare tire, jack, and tools). Have the driver or equivalent weight placed in drivers seat.

#### 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
	Headlamp RH (UP/DOWN)	Clockwise	DOWN
A Headlamp RH (UP/DOWN)		Counterclockwise	UP
В	Headlemp I H (UD/DOWN)	Clockwise	DOWN
B Headlamp LH (UP/DOWN)		Counterclockwise	UP

# Aiming Adjustment Procedure

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#### NOTE:

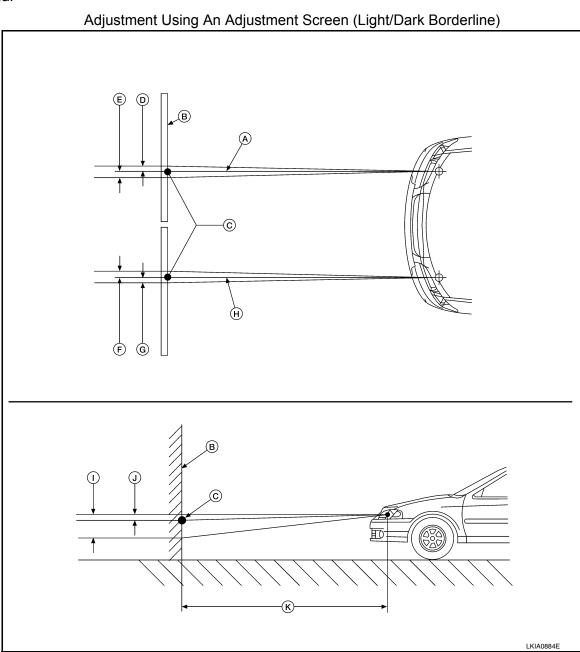
Set the screen so that it is perpendicular to the road.

- 1. Position the screen.
- Make the distance between the headlamp center and the screen 7.62 m (25 ft.).
- Start the engine and illuminate the headlamp (LO). CAUTION:

# Do not cover the lens surface with tape, etc. because it is made of plastic. NOTE:

Block the light from the headlamp that is not being adjusted with a thick fabric or similar object, so that it does not reach the screen.

4. Use the adjustment screw to adjust the low beams on the screen, so that it is within the aiming adjustment area.



- A. Headlamp beam (RH)
- D. 66.5 mm (2.6 in)
- B. Screen
- E. 66.5 mm (2.6 in)
- C. Horizontal/Vertical center point of headlamp
- F. 66.5 mm (2.6 in)

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# **HEADLAMP AIMING ADJUSTMENT**

# < PERIODIC MAINTENANCE >

[HALOGEN TYPE]

G. 66.5 mm (2.6 in)

H. Headlamp beam (LH)

I. 53.2 mm (2.1 in)

J. 13.3 mm (0.5 in)

K. 7.62 m (25 ft)

# FRONT FOG LAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

[HALOGEN TYPE]

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# FRONT FOG LAMP AIMING ADJUSTMENT

Description

# PREPARATION BEFORE ADJUSTING

#### **CAUTION:**

Do not use organic solvent (thinner, gasoline etc.).

#### NOTE:

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

Before performing aiming adjustment, check the following.

- Keep all tires inflated to correct pressure.
- Place vehicle on level ground.
- See that the vehicle is unloaded (except for full levels of coolant, engine oil and fuel, and spare tire, jack, and tools). Have the driver or equivalent weight placed in drivers seat.

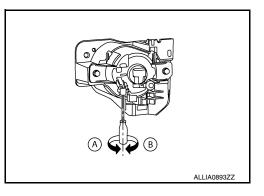
#### AIMING ADJUSTMENT SCREW

• Turn the aiming adjusting screw for adjustment as shown.

#### NOTE:

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

- A: Up
- · B: Down



# Aiming Adjustment Procedure

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#### NOTE:

Set the screen so that it is perpendicular to the road.

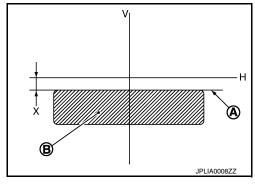
- Position the screen.
- 2. Make the distance between the headlamp center and the screen 7.62 m (25 ft.).
- 3. Start the engine and illuminate the fog lamp ON.

#### **CAUTION:**

Do not cover the lens surface with tape, etc. because it is made of plastic. NOTE:

Block the light from the headlamp that is not being adjusted with a thick fabric or similar object, so that it does not reach the 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 100 mm (4.0 in).
  - Front fog lamp light distribution on the screen is as shown.
  - A: Cutoff line
  - B: High illuminance area
  - · H: Horizontal center line of front fog lamp
  - V: Vertical center line of front fog lamp
  - X: Cutoff line height



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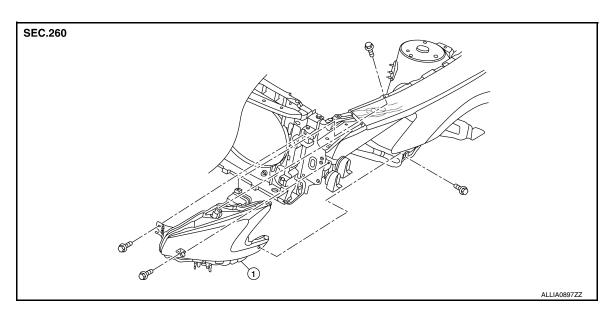
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# REMOVAL AND INSTALLATION

# FRONT COMBINATION LAMP

Exploded View



1. Front combination lamp

# Removal and Installation

INFOID:0000000009465388

# FRONT COMBINATION LAMP

#### Removal

- Remove the front bumper fascia. Refer to EXT-16, "Removal and Installation".
- 2. Remove the front combination lamp bolts.
- Remove the harness clips from the front combination lamp assembly.
- 4. Pull out the front combination lamp toward the front of vehicle.
- Disconnect the harness connectors from the front combination lamp and remove.

#### Installation

Installation is in the reverse order of removal.

#### NOTE:

After installation, perform headlamp aiming adjustment. Refer to EXL-315, "Aiming Adjustment Procedure".

# HALOGEN BULB (LOW BEAM)

# Removal

# **WARNING:**

Do not touch bulb with your hand while it is on or right after being turned off, a burn injury may result. CAUTION:

- After installing the bulb, install the plastic cover and the bulb socket securely for watertightness.
- Do not touch bulb glass with your hand or keep other grease and oily substances away from bulb glass.
- Do not 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.
- Remove the front combination lamp. Refer to <u>EXL-318</u>, "Removal and Installation".
- Rotate the bulb socket counterclockwise and unlock from the front combination lamp.
- Remove the bulb from the bulb socket

#### Installation

# FRONT COMBINATION LAMP [HALOGEN TYPE] < REMOVAL AND INSTALLATION > Installation is in the reverse order of removal. Α HALOGEN BULB (HIGH BEAM) Removal Remove the front combination lamp. Refer to <u>EXL-318</u>, "Removal and Installation". В 2. Rotate the bulb socket counterclockwise and unlock from the front combination lamp. Remove the bulb from the bulb socket. Installation Installation is in the reverse order of removal. FRONT TURN SIGNAL LAMP BULB D Removal Remove the front combination lamp. Refer to <u>EXL-318</u>, "Removal and Installation". Е 2. Rotate the bulb socket counterclockwise and unlock from the front combination lamp. Remove the bulb from the bulb socket. Installation F Installation is in the reverse order of removal. FRONT SIDE MARKER LAMP BULB Removal Remove the front combination lamp. Refer to <u>EXL-318</u>, "Removal and Installation". 2. Rotate the bulb socket counterclockwise and unlock from the front combination lamp. Н Remove the bulb from the bulb socket. Installation Installation is in the reverse order of removal. K

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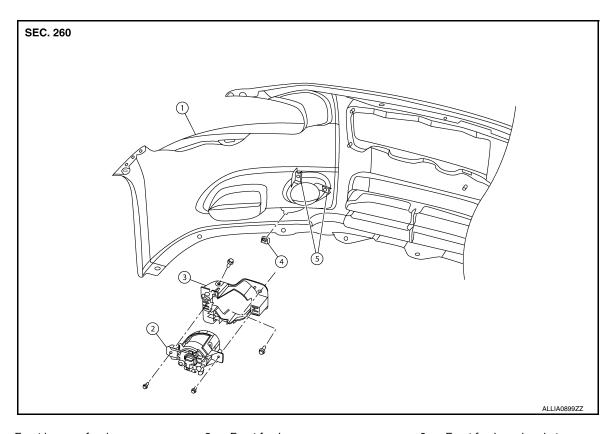
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# FRONT FOG LAMP

Exploded View



- 1. Front bumper fascia
- 2. Front fog lamp

4. Clip

Spring nuts

3. Front fog lamp bracket

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# Removal and Installation

# FRONT FOG LAMP

#### Removal

- Remove the front bumper fascia. Refer to EXT-16, "Removal and Installation".
- 2. Disconnect the harness connector from the fog lamp.
- Remove the front fog lamp bolts.
- Remove the front fog lamp.

# Installation

Installation is in the reverse order of removal.

# NOTE:

After installation, perform front fog lamp aiming adjustment. Refer to EXL-317, "Aiming Adjustment Procedure".

# FRONT FOG LAMP BULB

#### Removal

# **WARNING:**

Do not touch bulb with your hand while it is on or right after being turned off, a burn injury may result. CAUTION:

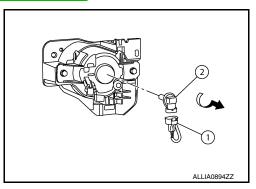
- Do not touch bulb glass with your hand or keep other grease and oily substances away from bulb glass.
- Do not leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.

# **FRONT FOG LAMP**

# < REMOVAL AND INSTALLATION >

[HALOGEN TYPE]

- 1. Remove the front fender protector. Refer to EXT-24, "Removal and Installation".
- 2. Disconnect the harness connector (1) from the front fog lamp.
- 3. Rotate the bulb (2) counterclockwise and unlock it.



Installation

Installation is in the reverse order of removal.

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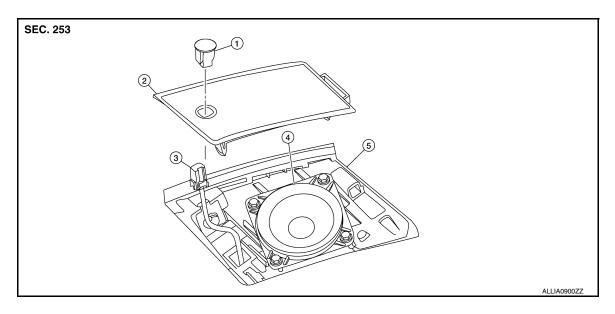
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# **OPTICAL SENSOR**

Exploded View



1. Optical sensor

- 2. LH front tweeter speaker grille
- 4. LH front tweeter speaker
- 5. Instrument panel
- 3. Optical sensor harness connector

# Removal and Installation

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#### **CAUTION:**

Whenever a suitable tool is used, always wrap a cloth around the end of the tool to protect components from damage.

# **REMOVAL**

- 1. Carefully remove the LH front tweeter speaker grille using a suitable tool.
- Insert a suitable tool between the optical sensor and the LH front tweeter speaker grille. Lift the optical sensor upward.
- 3. Disconnect the harness connector from the optical sensor and remove.

#### INSTALLATION

Installation is in the reverse order of removal.

# DOOR MIRROR TURN SIGNAL LAMP

< REMOVAL AND INSTALLATION >

[HALOGEN TYPE]

# DOOR MIRROR TURN SIGNAL LAMP

# Removal and Installation

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The door mirror turn signal lamp is an integral part of the door mirror and must be replaced as an assembly. Refer to MIR-19, "Removal and Installation".

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# **LIGHTING & TURN SIGNAL SWITCH**

< REMOVAL AND INSTALLATION >

[HALOGEN TYPE]

# LIGHTING & TURN SIGNAL SWITCH

# Removal and Installation

INFOID:0000000009465394

#### NOTE

The lighting and turn signal switch is integral with the combination switch assembly.

# **REMOVAL**

1. Unlock steering wheel.

## **CAUTION:**

- · Before servicing, disconnect both battery terminals and wait at least three minutes
- Do not use air tools or electric tools for servicing.
- After the work is completed, make sure no system malfunction is detected by air bag warning lamp.
- In case a malfunction is detected by the air bag warning lamp, reset with the self-diagnosis function and delete the memory with CONSULT.
- If a malfunction is still detected after the above operation, perform self-diagnosis to repair malfunctions. Refer to <a href="SRC-12">SRC-12</a>, "SRS Operation Check".
- 2. Remove steering column covers. Refer to <a href="IP-13">IP-13</a>. "Removal and Installation".
- 3. Rotate steering wheel clockwise to access first combination switch bolt, then remove bolt.
- 4. Rotate steering wheel counter-clockwise to access second combination switch bolt, then remove bolt.
- 5. Disconnect the harness connectors from the lighting and turn signal switch and remove.

#### INSTALLATION

Installation is in the reverse order of removal.

# [HALOGEN TYPE]

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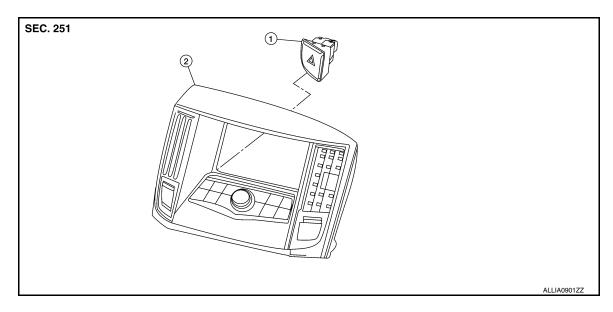
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# **HAZARD SWITCH**

**Exploded View** INFOID:0000000009465395



1. Hazard switch Cluster lid D

# Removal and Installation

**REMOVAL** 

1. Remove cluster lid D. Refer to IP-18, "Removal and Installation".

- 2. Disconnect the harness connector from the hazard switch.
- 3. Remove the hazard switch.

# **INSTALLATION**

Installation is in the reverse order of removal.

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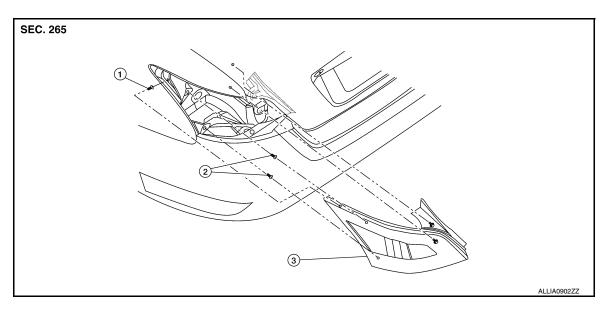
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# REAR COMBINATION LAMP

Exploded View



1. Slide clip 2. Grommets 3. Rear combination lamp

# Removal and Installation

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#### REAR COMBINATION LAMP

# Removal

- Remove the trunk side finisher. Refer to <u>INT-36, "Exploded View"</u>.
- Remove the rear combination lamp nuts.
- Pull the rear combination lamp toward the rear of the vehicle to remove it.
- 4. Disconnect the harness connector from the rear combination lamp.

# Installation

Installation is in the reverse order of removal.

#### **WARNING:**

Do not touch bulb with your hand while it is on or right after being turned off, a burn injury may result. **CAUTION**:

- Do not touch bulb glass with your hand or keep other grease and oily substances away from bulb glass.
- Do not 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 is integral with rear combination lamp. Refer to EXL-326, "Exploded View".

#### REAR SIDE MARKER LAMP BULB

## Removal

- 1. Remove the rear combination lamp. Refer to <a>EXL-326</a>, "Exploded View"</a>.
- Rotate the rear side marker lamp socket counterclockwise and unlock from rear combination lamp.
- 3. Remove the bulb from the rear side marker lamp socket.

#### Installation

Installation is in the reverse order of removal.

#### REAR TURN SIGNAL LAMP BULB

# **REAR COMBINATION LAMP**

# < REMOVAL AND INSTALLATION >

[HALOGEN TYPE]

#### Removal

- 1. Remove the rear combination lamp. Refer to <a>EXL-326</a>, "Exploded View"</a>.
- 2. Rotate the rear turn signal lamp socket counterclockwise and unlock from rear combination lamp.
- 3. Remove the bulb from the rear turn signal lamp socket.

#### Installation

Installation is in the reverse order of removal.

# **BACK-UP LAMP BULB**

#### Removal

- 1. Remove the rear combination lamp. Refer to EXL-326, "Exploded View".
- 2. Rotate the back-up lamp socket counterclockwise and unlock from rear combination lamp.
- 3. Remove the bulb from the back-up lamp socket.

#### Installation

Installation is in the reverse order of removal.

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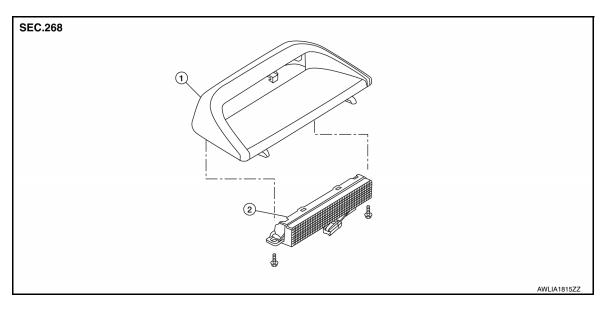
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# **HIGH-MOUNTED STOP LAMP**

Exploded View



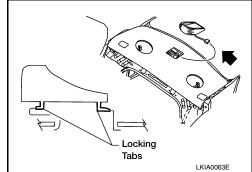
- 1. High-mounted stop lamp cover
- 2. High-mounted stop lamp bulb

# Removal and Installation

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# **REMOVAL**

- 1. Slide the high-mounted stop lamp rearward on the parcel shelf to give clearance to the front locking tabs.
- 2. Lift the front of the high-mounted stop lamp up and slide it forward to give clearance to the rear locking tabs.
- 3. Disconnect the harness connector from the high-mounted stop lamp and remove.



# INSTALLATION

Installation is in the reverse order of removal.

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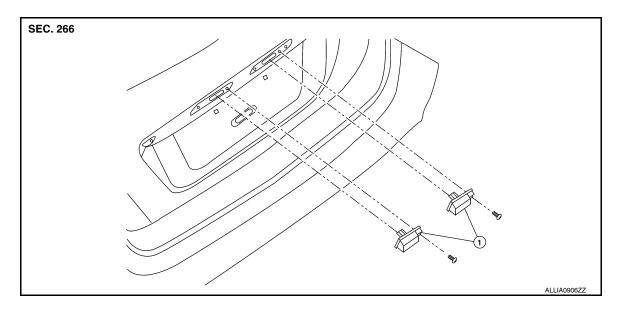
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# LICENSE PLATE LAMP

Exploded View



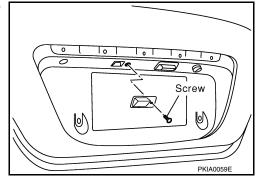
1. License plate lamp

# Removal and Installation

# LICENSE PLATE LAMP

# Removal

- 1. Remove the license lamp finisher. Refer to EXT-31, "Removal and Installation".
- Position trunk lid finisher aside. Refer to <u>INT-36, "Exploded View"</u>.
- 3. Remove the license plate lamp screw and remove the license plate lamp.



Installation

Installation is in the reverse order of removal.

# LICENSE PLATE LAMP BULB

# Removal

#### **WARNING:**

Do not touch bulb with your hand while it is on or right after being turned off, a burn injury may result. **CAUTION**:

- Do not touch bulb glass with your hand or keep other grease and oily substances away from bulb glass.
- Do not 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.
- 1. Position trunk lid finisher aside. Refer to <a href="INT-36">INT-36</a>, "Exploded View".

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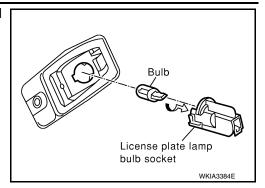
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# LICENSE PLATE LAMP

# < REMOVAL AND INSTALLATION >

[HALOGEN TYPE]

- 2. Turn the license plate lamp bulb socket counterclockwise and unlock it.
- 3. Remove the bulb from the license plate lamp bulb socket.



Installation

Installation is in the reverse order of removal.

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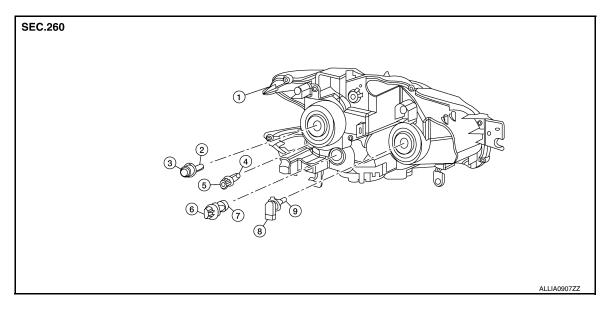
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# UNIT DISASSEMBLY AND ASSEMBLY

# FRONT COMBINATION LAMP

# Disassembly and Assembly

**EXPLODED VIEW** 



- 1. Front combination lamp
- 4. Side marker lamp bulb
- 7. Front turn signal lamp bulb
- 2. Halogen bulb (low beam)
- 5. Side marker lamp socket
- 8. Halogen bulb socket (high beam)
- 3. Halogen bulb socket (low beam)
- 6. Front turn signal lamp socket
- 9. Halogen bulb (high beam)

#### DISASSEMBLY

- 1. Rotate the halogen bulb socket (low beam) counterclockwise and unlock it.
- 2. Remove the bulb from halogen bulb socket (low beam).
- 3. Rotate the halogen bulb socket (high beam) counterclockwise and unlock it.
- Remove the bulb from halogen bulb socket (high beam).
- 5. Rotate the front turn signal lamp socket counterclockwise and unlock it.
- 6. Remove the bulb from front turn signal lamp socket.
- 7. Rotate the front side marker lamp socket counterclockwise and unlock it.
- 8. Remove the bulb from front side marker lamp socket.

# **ASSEMBLY**

Assembly is in the reverse order of disassembly.

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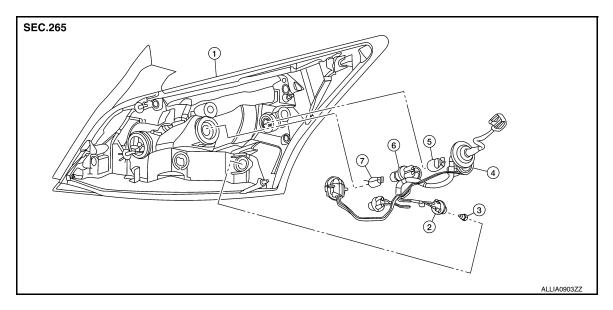
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# REAR COMBINATION LAMP

# Disassembly and Assembly

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- 1. Rear combination lamp
- 4. Rear turn signal lamp socket
- 7. Back-up lamp bulb
- 2. Rear side marker lamp socket
- 5. Rear turn signal lamp bulb
- 3. Rear side marker lamp bulb
- 6. Back-up lamp socket

# DISASSEMBLY

- 1. Rotate the rear side marker lamp socket counterclockwise and unlock it.
- 2. Remove the bulb from rear side marker lamp socket.
- 3. Rotate the rear turn signal lamp socket counterclockwise and unlock it.
- 4. Remove the bulb from rear turn signal lamp socket.
- 5. Rotate the back-up lamp socket counterclockwise and unlock it.
- 6. Remove the bulb from back up lamp socket.

# **ASSEMBLY**

Assembly is in the reverse order of disassembly.

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

< SERVICE DATA AND SPECIFICATIONS (SDS)

[HALOGEN TYPE]

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# SERVICE DATA AND SPECIFICATIONS (SDS)

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**Bulb Specifications** 

Item		Wattage (W)*
	Headlamp (Halogen low beam)	55
Front combination laws	Headlamp (Halogen high beam)	65
Front combination lamp	Park/Turn lamp	28/8
	Front side marker lamp	5
Front fog lamp		55
Door mirror turn signal lamp		_
	Stop lamp	_
	Tail lamp	_
Rear combination lamp	Rear turn signal lamp	21
	Rear side marker lamp	5
	Back-up lamp	18
License plate lamp		5
High required star larger	Without rear spoiler	_
High-mounted stop lamp	With rear spoiler	_

<sup>\*:</sup> Always check with the Parts Department for the latest parts information.

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