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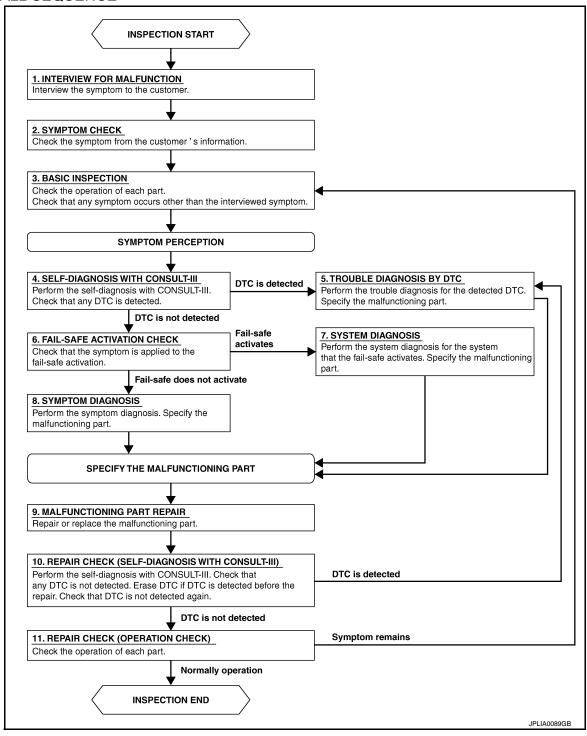
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BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

OVERALL SEQUENCE



DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION > **DETAILED FLOW** Α 1.INTERVIEW FOR MALFUNCTION Find out what the customer's concerns are. В >> GO TO 2 2.SYMPTOM CHECK Verify the symptom from the customer's information. D >> GO TO 3 3.BASIC INSPECTION Check the operation of each part. Check that any concerns occur other than those mentioned in the customer interview. >> GO TO 4 F f 4 .SELF-DIAGNOSIS WITH CONSULT-III Perform the self diagnosis with CONSULT-III. Check that any DTC is detected. Is any DTC detected? YES >> GO TO 5 NO >> GO TO 6 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? K YES >> GO TO 7 NO >> GO TO 8 **1.**SYSTEM DIAGNOSIS **EXL** Perform the system diagnosis for the system in which the fail-safe activates. Specify the malfunctioning part. M >> 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. Р >> GO TO 11 10. REPAIR CHECK (SELF-DIAGNOSIS WITH CONSULT-III) Perform the self diagnosis with CONSULT-III. Verfied that no DTCs are detected. Erase all DTCs detected prior to the repair. Verify that DTC is not detected again.

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Is any DTC detected?

DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

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

11. REPAIR CHECK (OPERATION CHECK)

Check the operation of each part.

Does it operate normally?

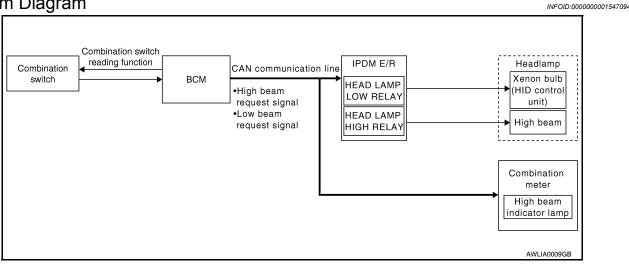
YES >> INSPECTION END

NO >> GO TO 3

FUNCTION DIAGNOSIS

HEADLAMP

System Diagram



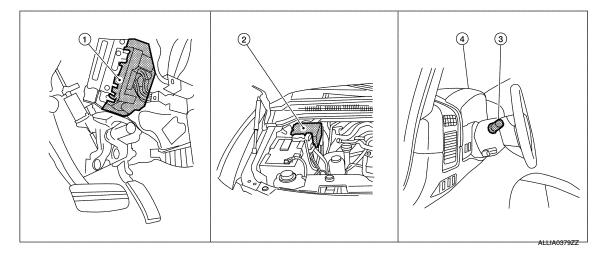
System Description

INFOID:0000000001547095

Control of the headlamp system operation is dependent upon the position of the lighting switch (combination 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) via 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:0000000001547096



- BCM M18, M20 (view with instrument 2. IPDM E/R E122, E123, E124 panel removed)
- Combination switch M28

Combination meter M23, M24

Component Description

INFOID:0000000001547097

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

EXL-7 2008 QX56 Revision: March 2010

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HEADLAMP

< FUNCTION DIAGNOSIS >

mixtureof xenon (an inert gas) and certain other metal halides. In addition to added lighting power, electronic controlof 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 via 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) via the CAN communication lines and turns the high beam indicator lamp ON.

COMBINATION SWITCH READING FUNCTION

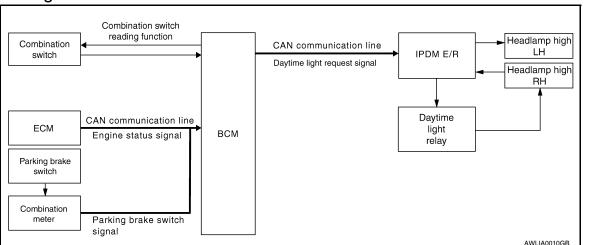
Refer to BCS-7, "System Description".

AUTO LIGHT OPERATION

Refer to EXL-11, "System Description".

DAYTIME LIGHT SYSTEM

System Diagram



System Description

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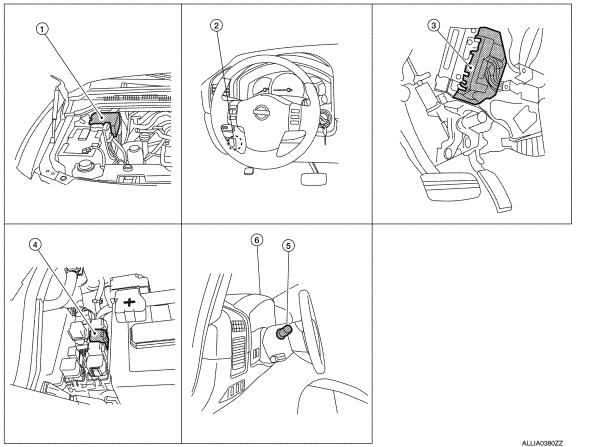
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The headlamp system for Canada vehicles is equipped with a daytime light control unit that activates the high beam headlamps at approximately half illumination whenever the engine is operating. If the parking brake is applied before the engine is started 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 applied.

Component Parts Location

INFOID:0000000001547100



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DAYTIME LIGHT SYSTEM

< FUNCTION DIAGNOSIS >

- 1. IPDM E/R E119, E122, E123, E124
- Parking brake switch M11
- BCM M18, M20 (view with instrument panel removed)

- 4. Daytime running light relay E103
- Combination switch M28
- 6. Combination meter M24

Component Description

INFOID:0000000001547101

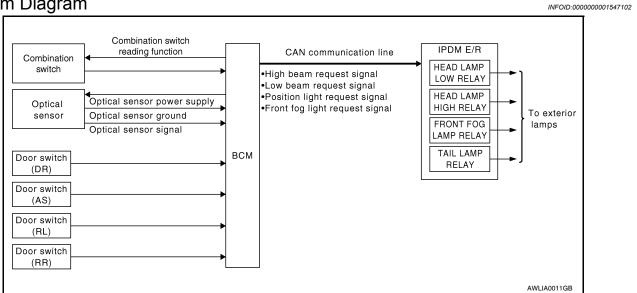
After starting the engine with the parking brake released and the lighting switch in the OFF or 1ST position, the headlamp high beam automatically turns on at a reduced intensity. With the lighting switch in the 2nd position or with autolamps ON, the headlamps function the same as conventional light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

OPERATION

The BCM monitors inputs from the parking brake switch and the combination switch 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 LH high beam lamp. Power flows backward through the LH high beam lamp to the IPDM E/R, through the high beam fuses, through the RH high beam lamp circuit to the RH high beam lamp and on to ground. The high beam lamps are wired in series which causes them to illuminate at a reduced intensity.

AUTO LIGHT SYSTEM

System Diagram



System Description

INFOID:000000001547103

- 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 and headlamps according to CAN communication signals from BCM.
- Optical sensor detects ambient brightness and converts light (lux) to voltage, 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 and headlamps in accordance with the ambient light. Sensitivity can be adjusted in four steps. For the details of the setting, Refer to EXL-23, "EXTERNAL LAMP: CONSULT-III Function".

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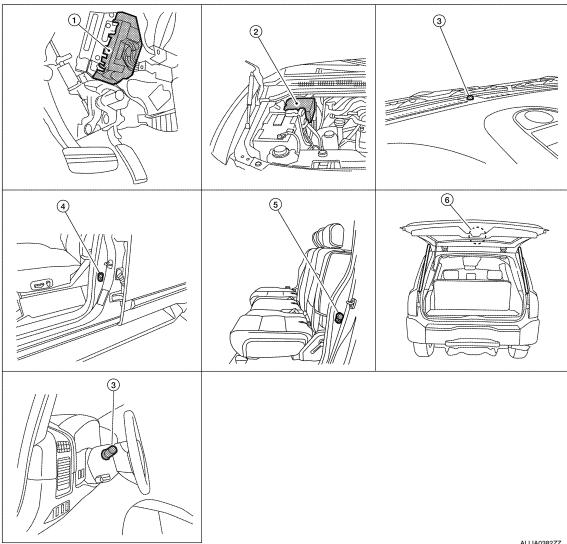
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Component Parts Location

INFOID:0000000001547104



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- BCM M18, M19, M20 (view with instru- 2. ment panel removed)
- Front door switch LH B8 **RH B108**
- Combination switch M28
- IPDM E/R E122, E123, E124
- Rear door switch LH B18 **RH B116**

- Optical sensor M302
- Back door switch D502

Component Description

INFOID:0000000001547105

AUTO LIGHT OPERATION

The auto light system operates the low beam and high beam headlamps, parking lamps, tail lamps and license plate lamps. The BCM monitors the lighting switch (combination switch) position as a part of the BCM combination switch reading function. When the lighting switch is in the AUTO position, the BCM automatically turns the lamps ON/OFF according to ambient light brightness.

Timing for when lamps turn ON/OFF can be changed by the function setting of CONSULT-III. Refer to EXL-23. "EXTERNAL LAMP: CONSULT-III Function".

COMBINATION SWITCH READING FUNCTION

Refer to BCS-7, "System Description".

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AUTO LIGHT SYSTEM

< FUNCTION DIAGNOSIS >

PARKING, LICENSE PLATE AND TAIL LAMPS OPERATION Refer to <u>EXL-18</u>, "System <u>Description"</u>.

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HEADLAMP AIMING SYSTEM (MANUAL)

IPDM E/R

Headlamp ON signal

< FUNCTION DIAGNOSIS >

BCM

Combination

switch

HEADLAMP AIMING SYSTEM (MANUAL)

Combination switch reading function

CAN communication line

Headlamp request signal

System Diagram

INFOID:0000000001806201

AWLIA1629GB

aiming

Front combination

lamp RH (headlamp

aiming motor)

Front combination

lamp LH (headlamp

aiming motor)



INFOID:0000000001806202

The headlamp aiming system (manual) controls the headlamp light axis height according to input from the headlamp aiming switch. The variable internal resistance of the headlamp aiming switch controls the signal ground of the headlamp aiming motors located on the front combination lamp LH and RH.

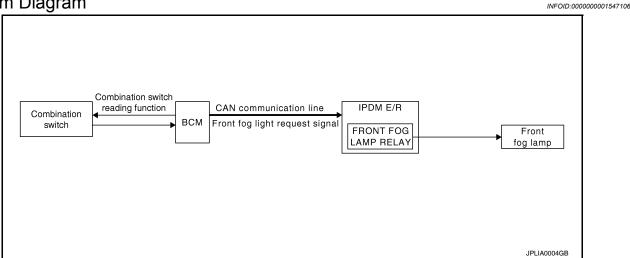
Component Description

INFOID:0000000001806204

Part	Description
Headlamp aiming motor	Moves the headlamp up/down based on input from the headlamp aiming switch.
Headlamp aiming switch	Controls variable ground to the headlamp aiming motor signal to move the headlamp aiming motor up/down.

FRONT FOG LAMP

System Diagram



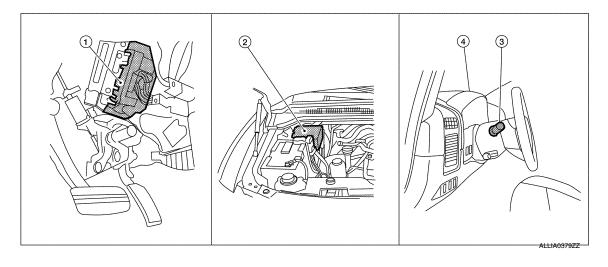
System Description

INFOID:0000000001547107

The front fog lamps are activated with the lighting switch (combination switch). The lighting switch signal to the BCM is monitored with the BCM combination switch reading function. When the fog lamps are turned ON with the lighting switch, the BCM sends a front fog lamp request signal via CAN communication lines to the IPDM E/R grounds the front fog lamp relay coil to activate the front fog lamps.

Component Parts Location

INFOID:0000000001547108



BCM M18, M20 (view with instrument 2. IPDM E/R E122, E123, E124 panel removed)

3. Combination switch M28

Component Description

INFOID:0000000001547109

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 via 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.

COMBINATION SWITCH READING FUNCTION

Refer to BCS-7, "System Description".

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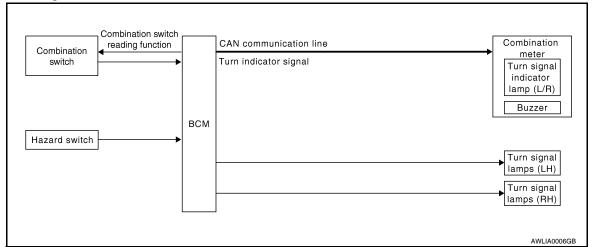
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TURN SIGNAL AND HAZARD WARNING LAMPS

TURN SIGNAL AND HAZARD WARNING LAMPS

System Diagram

INFOID:0000000001547110



System Description

INFOID:000000001547111

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 signal to the respective turn signal lamp. The BCM also sends a turn indicator signal ON request via 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 signal (right and left). The BCM sends a hazard indicator signal ON request via 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 a hazard request signal to the BCM, then BCM controls hazard lamps.

Refer to <u>SEC-9</u>, "System Description".

COMBINATION SWITCH READING FUNCTION

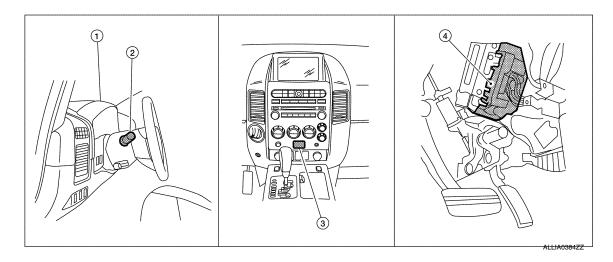
Refer to BCS-7, "System Description".

TURN SIGNAL AND HAZARD WARNING LAMPS

< FUNCTION DIAGNOSIS >

Component Parts Location

INFOID:0000000001547112



- 1. Combination meter M24
- 4. BCM M18, M20 (view with instrument panel removed)
- 2. Combination switch M28
- 3. Hazard switch M55

Component Description

INFOID:0000000001547113

Part name	Description
BCM	Controls turn signal and hazard flasher operation.
Combination switch	Lighting and turn signal switch requests are output to the BCM.
Hazard switch	Hazard flasher request signal is output to the BCM.
Combination meter	Outputs turn and hazard indicator as requested by the BCM.

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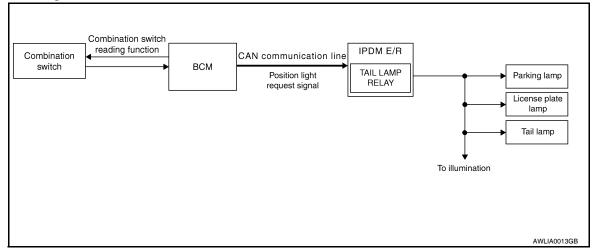
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PARKING, LICENSE PLATE AND TAIL LAMPS

System Diagram

INFOID:0000000001547114



System Description

INFOID:000000001547115

PARKING. LICENCE 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 via 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 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.

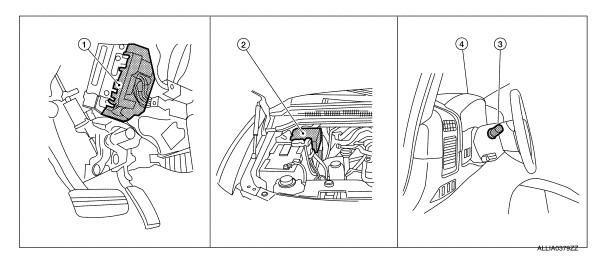
This setting can be changed by CONSULT-III. Refer to EXL-23, "EXTERNAL LAMP: CONSULT-III Function".

COMBINATION SWITCH READING FUNCTION

Refer to BCS-7, "System Description".

Component Parts Location

INFOID:0000000001547116



 BCM M18, M20 (view with instrument 2. IPDM E/R E122, E124 panel removed) Combination switch M28

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PARKING, LICENSE PLATE AND TAIL LAMPS

< FUNCTION DIAGNOSIS >

Component Description

INFOID:0000000001547117

Part name	Description
BCM	 Recieves lighting switch requests via BCM combination switch reading function. Sends parking light request signal to the IPDM E/R.
IPDM E/R	Activates the tail lamp relay upon request of the BCM.
Combination switch (lighting switch)	Outputs lighting requests to the BCM.

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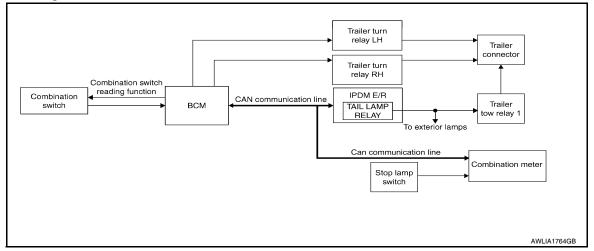
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TRAILER TOW

System Diagram

INFOID:0000000006095108



System Description

INFOID:0000000006095109

TRAILER TAIL LAMP OPERATION

The trailer tail lamps are controlled by the trailer tow relay 1 located behind the left side of the instrument panel (IP). With the combination switch in the 1st position, the BCM detects the LIGHTING SWITCH 1ST POSITION ON. The BCM sends a parking light ON request via the CAN communication lines to the IPDM E/R. The IPDM E/R then activates the tail lamp relay which activates the trailer tow relay 1 and sends power to the trailer connector.

TRAILER TURN SIGNAL LAMP OPERATION

The trailer turn signal lamps are controlled by the BCM. When the turn signal switch is in the LH or RH position with the ignition switch ON, the combination switch sends a signal to the BCM. The BCM detects the TURN RH or TURN LH ON request. The BCM sends a control signal to the respective trailer turn relay which sends power to the trailer connector.

TRAILER HAZARD LAMP OPERATION

The trailer hazard lamps are controlled by the BCM. When the hazard switch is pressed, the BCM detects the the hazard ON request. The BCM then sends a control signal to both trailer turn relays which sends power to the trailer connector.

TRAILER BRAKE LAMP OPERATION

The trailer brake lamps are controlled by the BCM. When the brake pedal is depressed, the combination meter receives a stop lamp switch signal from the stop lamp switch. The combination meter then sends the brake signal to the BCM via the CAN communication lines. The BCM then sends a control signal to both trailer turn relays which sends power to the trailer connector.

Component Parts Location

INFOID:0000000006095110

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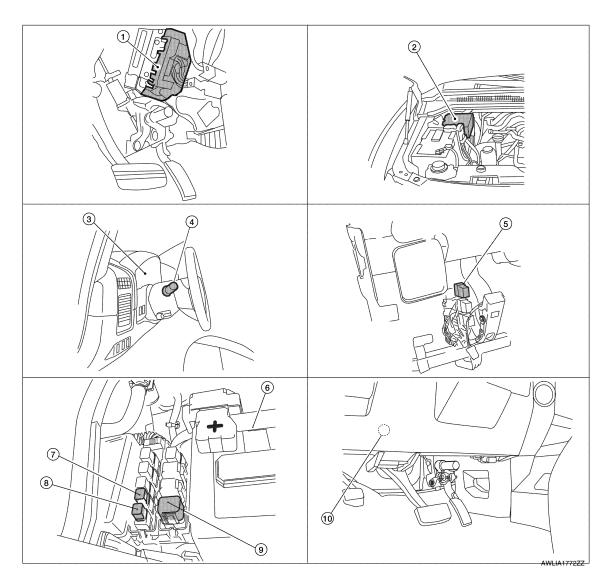
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- 1. BCM M18, M19, M20 (view with instru- 2. ment panel removed)
- 4. Combination switch M28
- 7. Trailer turn relay LH E156
- 10. Stop lamp switch E38

- IPDM E/R E119, E122, E123, E124
- 5. Trailer tow relay 1 M51 (view with steering member removed)
- 8. Trailer turn relay RH E157
- 3. Combination meter M23, M24
- 6. Battery
- 9. Trailer tow relay 2 E140

Component Description

INFOID:0000000006095111

Part name	Description
BCM	 Receives lighting and turn signal requests from combination switch. Receives stop lamp signal requests from combination meter via CAN communication. Sends lighting signal request to the IPDM E/R to control the tail lamp relay via CAN communication. Sends turn/hazard/brake control signal to the trailer turn relays.
IPDM E/R	Activates the tail lamp relay upon request from the BCM via CAN communication.

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TRAILER TOW

< FUNCTION DIAGNOSIS >

Combination meter	 Receives stop lamp switch signal from stop lamp switch. Sends stop lamp signal request to the BCM via CAN communication.
Combination switch	Outputs lighting and turn signal requests to the BCM.

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

COMMON ITEM: Diagnosis Description

INFOID:0000000001547118

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BCM CONSULT-III FUNCTION

CONSULT-III performs the following functions via CAN communication with BCM.

Diagnosis mode	Function Description			
WORK SUPPORT	Changes the setting for each system function.			
SELF-DIAG RESULTS	Displays the diagnosis results judged by BCM.			
CAN DIAG SUPPORT MNTR	Monitors the reception status of CAN communication viewed from BCM.			
DATA MONITOR	The BCM input/output signals are displayed.			
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.			
ECU IDENTIFICATION	The BCM part number is displayed.			
CONFIGURATION	This function is not used even though it is displayed.			

COMMON ITEM: CONSULT-III Function

INFOID:0000000001547119

ECU IDENTIFICATION

Displays the BCM part No.

SELF-DIAG RESULT

Refer to BCS-50, "DTC Index".

EXTERNAL LAMP

EXTERNAL LAMP: CONSULT-III Function

INFOID:0000000001547120

WORK SUPPORT

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

^{1 :} Initial setting

DATA MONITOR

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DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

 Monitor item [Unit]	Description		
IGN ON SW [ON/OFF]	The switch status input from ignition switch		
ACC ON SW [ON/OFF]	The switch status input from ignition switch		
TURN SIGNAL R [ON/OFF]			
TURN SIGNAL L [ON/OFF]			
HI BEAM SW [ON/OFF]			
HEAD LAMP SW1 [ON/OFF]			
HEAD LAMP SW2 [ON/OFF]	Face quitable status that DOM indeed from the combination quitable reading function		
LIGHT SW 1ST [ON/OFF]	Each switch status that BCM judges from the combination switch reading function		
AUTO LIGHT SW [ON/OFF]			
PASSING SW [ON/OFF]			
FR FOG SW [ON/OFF]			
CARGO LAMP SW [ON/OFF]			
RR FOG SW ¹ [ON/OFF]	_		
DOOR SW-DR [ON/OFF]	The switch status input from front door switch LH		
DOOR SW-AS [ON/OFF]	The switch status input from front door switch RH		
DOOR SW-RR [ON/OFF]	The switch status input from rear door switch RH		
DOOR SW- RL [ON/OFF]	The switch status input from rear door switch LH		
DOOR SW-BK [ON/OFF]	The switch status input from the back door switch		
OPTICAL SENSOR [V]	The value of exterior brightness voltage input from the optical sensor		

^{1:} The item is indicated, not monitored

ACTIVE TEST

Test item	Operation	Description	
TAIL LAMP	ON	Transmits the position light request signal to IPDM E/R via CAN communication to turn the tail lamp ON.	
	OFF	Stops the tail lamp request signal transmission.	
	HI	Transmits the high beam request signal via CAN communication to turn the headlamp (HI)	
HEAD LAMP	LO	Transmits the low beam request signal via CAN communication to turn the headlamp (LO).	
	OFF	Stops the high & low beam request signal transmission.	

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

Test item	Operation	Description
FR FOG LAMP	ON	Transmits the front fog lamp light request signal to IPDM E/R via CAN communication to turn the front fog lamp ON.
	OFF	Stops the front fog lamp request signal transmission.
CORNERING LAMP ¹	RH	
	LH	<u> </u>
	OFF	
CARGO LAMP	ON	Tramsmits the cargo lamp request signal to the IPDM E/R via CAN communication to turn on the cargo lamp.
	OFF	Stops the cargo lamp request signal transmission.

^{1:} The item is indicated, not monitored.

FLASHER

FLASHER: CONSULT-III Function (BCM - FLASHER)

INFOID:0000000001547121

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DATA MONITOR

Monitor item [Unit]	Description
IGN ON SW [ON/OFF]	The switch status input from the ignition switch
HAZARD SW [ON/OFF]	The switch status input from the hazard warning switch
TURN SIGNAL R [ON/OFF]	Each switch condition that BCM judges from the combination switch reading function
TURN SIGNAL L [ON/OFF]	Each switch condition that Bow judges from the combination switch reading function
BRAKE SW [ON/OFF]	The switch status input from the brake switch

ACTIVE TEST

Test item Operation		Description
	RH	Blinks right turn signal lamp.
FLASHER	LH	Blinks left turn signal lamp.
	OFF	Turns turn signal lamps (right and left) OFF.

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Revision: March 2010 EXL-25 2008 QX56

DIAGNOSIS SYSTEM (IPDM E/R)

< FUNCTION DIAGNOSIS >

DIAGNOSIS SYSTEM (IPDM E/R)

CONSULT - III Function (IPDM E/R)

INFOID:0000000001547122

APPLICATION ITEM

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

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

DATA MONITOR

Monitor item

Monitor Item [Unit]	MAIN SIG- NALS	Description	
TAIL & CLR REQ [Off/On]	×	Displays the status of the tail and clearance lamp request signal received from BCM via CAN communication.	
HL LO REQ [Off/On]	×	Displays the status of the low beam request signal received from BCM via CAN communication.	
HL HI REQ [Off/On]	×	Displays the status of the high beam request signal received from BCM via CAN communication.	
FR FOG REQ [Off/On]	×	Displays the status of the front fog light request signal received from BCM via CAN communication.	
IGN RLY [Off/On]	×	Displays the status of the ignition relay judged by the IPDM E/R	
DTRL REQ [Off]	×	Displays the status of the daytime light request signal received from the BCM via CAN communication.	

ACTIVE TEST

Test item

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

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS > **COMPONENT DIAGNOSIS** Α POWER SUPPLY AND GROUND CIRCUIT **BCM (BODY CONTROL MODULE)** В BCM (BODY CONTROL MODULE): Diagnosis Procedure INFOID:0000000001547123 For BCM power supply and ground circuit information, refer to BCS-32, "Diagnosis Procedure". IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM): Di-D agnosis Procedure INFOID:0000000001547124 For IPDM E/R power supply and ground circuit information, refer to PCS-18, "Diagnosis Procedure". Е F

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Revision: March 2010 EXL-27 2008 QX56

HEADLAMP (HI) CIRCUIT

< COMPONENT DIAGNOSIS >

HEADLAMP (HI) CIRCUIT

Description INFOID:000000001547125

The IPDM E/R (intelligent power distribution module engine room) controls the headlamp high relay based on inputs from the BCM via the CAN communication lines. When the headlamp high relay is energized, power flows through fuses 34 and 35, located in the IPDM E/R. Power then flows to the front combination lamps to the headlamp high beam.

Component Function Check

INFOID:0000000001547126

1. CHECK HEADLAMP (HI) OPERATION

WITHOUT CONTULT-III

- 1. Start IPDM E/R auto active test. Refer to PCS-12, "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.

PCONSULT-III

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

HI: Headlamp switches to the high beam.

OFF : Headlamp OFF

Does the headlamp switch to high beam?

YES >> Headlamp (HI) circuit is normal.

NO >> Refer to EXL-28, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000001547127

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	34	10A
Headlamp HI (RH)	IPDM E/R	35	10A

Is the fuse open?

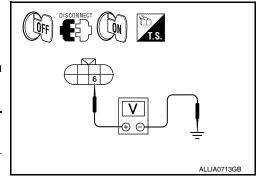
YES >> Repair the harness and replace the fuse.

NO >> GO TO 2

2.CHECK HEADLAMP (HI) OUTPUT VOLTAGE

- Turn the ignition switch OFF.
- 2. Disconnect the front combination lamp connector E11 or E107.
- Turn the ignition switch ON.
- Turn the high beam headlamps ON.
- 5. With the high beam headlamps ON, check the voltage between the combination lamp connector and ground.

(+)			(-)	Voltage
Connector Terminal		(-)	voltage	
LH	E11	6	Ground	Battery voltage
RH	E107	6	Glound	Battery Voltage



Are the voltage readings as specified?

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

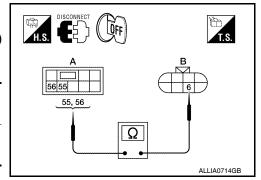
HEADLAMP (HI) CIRCUIT

< COMPONENT DIAGNOSIS >

3.CHECK HEADLAMP (HI) CIRCUIT FOR OPEN

- 1. Turn the ignition switch OFF.
- 2. Disconnect IPDM E/R connector E123.
- 3. Check continuity between the IPDM E/R harness connector (A) and the front combination lamp harness connector (B).

A		В	Continuity		
Conr	nector	Terminal	Connector	Terminal	Continuity
LH	E123	55	E11	6	Yes
RH	E123	56	E107	6	165



Does continuity exist?

YES >> GO TO 4

NO >> Repair the harnesses or connectors.

4. CHECK FRONT COMBINATION LAMP (HI) GROUND CIRCUIT

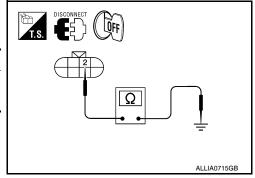
Check continuity between the front combination lamp harness connector terminal and ground.

Connector		Terminal	_	Continuity
LH	E11	2	Ground	Yes
RH	E107	2	Ground	

Does continuity exist?

YES >> Inspect the headlamp bulb.

NO >> Repair the harness.



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Revision: March 2010 **EXL-29** 2008 QX56

HEADLAMP (LO) CIRCUIT

< COMPONENT DIAGNOSIS >

HEADLAMP (LO) CIRCUIT

Description INFOID:000000001547128

The IPDM E/R (intelligent power distribution module engine room) controls the headlamp low relay based on inputs from the BCM via the CAN communication lines. When the headlamp low relay is energized, power flows through fuses 40 and 41, located in the IPDM E/R. Power then flows to the front combination lamps to the headlamp low beam.

Component Function Check

INFOID:0000000001547129

1.CHECK HEADLAMP (LO) OPERATION

WITHOUT CONSULT-III

- 1. Start IPDM E/R auto active test. Refer to PCS-12, "Diagnosis Description".
- Check that the headlamp is turned ON.

NOTE:

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

PCONSULT-III

- Select "EXTERNAL LAMP" of IPDM E/R active test item.
- With the test items operating, 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 EXL-30, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000001547130

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	40	15A
Headlamp LO (RH)	IPDM E/R	41	15A

Is the fuse open?

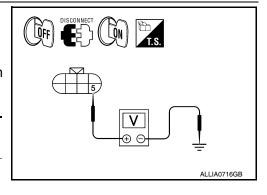
YES >> Repair the harness and replace the fuse.

NO >> GO TO 2

2.CHECK HEADLAMP (LO) OUTPUT VOLTAGE

- Turn the ignition switch OFF.
- 2. Disconnect the front combination lamp connector.
- 3. Turn the ignition switch ON.
- 4. Turn the low beam headlamps ON.
- 5. With the low beam headlamps ON, check the voltage between the combination lamp connector and ground.

(+)			(-)	Voltage	
Connector Terminal		(-)	voltage		
LH	E11	5	Ground	Battery voltage	
RH	E107	5	Ground	Battery Voltage	



Is voltage reading as specified?

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

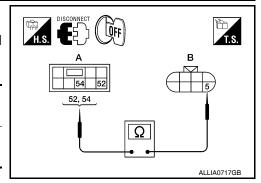
HEADLAMP (LO) CIRCUIT

< COMPONENT DIAGNOSIS >

3.CHECK HEADLAMP (LO) CIRCUIT FOR OPEN

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

	Α		В		Continuity
Conr	nector	Terminal	Connector	Terminal	Continuity
LH	E123	52	E11	5	Yes
RH	L123	54	E107	5	165



Does continuity exist?

YES >> GO TO 4

NO >> Repair the harnesses or connectors.

4. CHECK FRONT COMBINATION LAMP (LO) GROUND CIRCUIT

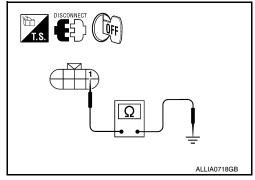
Check continuity between the front combination lamp harness connector terminal and ground.

Conr	nector	Terminal	_	Continuity
LH	E11	1	Ground	Yes
RH	E107	1	Ground	163

Does continuity exist?

YES >> Inspect the headlamp bulb.

NO >> Repair the harness.



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FRONT FOG LAMP CIRCUIT

< COMPONENT DIAGNOSIS >

FRONT FOG LAMP CIRCUIT

Description INFOID:000000001547131

The IPDM E/R (intelligent power distribution module engine room) controls the front fog lamp relay based on inputs from the BCM via 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

INFOID:0000000001547132

1. CHECK FRONT FOG LAMP OPERATION

NWITHOUT CONSULT-III

- Activate IPDM E/R auto active test. Refer to PCS-12, "Diagnosis Description".
- 2. Check that the front fog lamp is turned ON.

(P)CONSULT-III

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

FOG : Front fog lamp ON
OFF : Front fog lamp OFF

Is the front fog lamp turned ON?

YES >> Front fog lamp circuit is normal.

NO >> Refer to EXL-32, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000001547133

1. CHECK FRONT FOG LAMP FUSE

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

Unit	Location	Fuse No.	Capacity
Front fog lamp	IPDM E/R	56	20A

Is the fuse open?

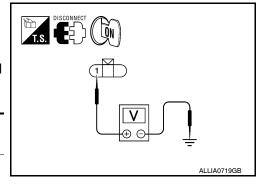
YES >> Repair the harness and replace the fuse.

NO >> GO TO 2

2.CHECK FRONT FOG LAMP OUTPUT VOLTAGE

- 1. Turn the ignition switch OFF.
- 2. Disconnect the front fog/turn lamp connector.
- Turn the ignition switch ON.
- 4. Turn the front fog lamps ON.
- 5. Check the voltage between the fog/turn lamp connector and ground.

(+)		(-)	Voltage	
Со	nnector	Terminal	(-)	Voltage
LH	E101	1	Ground	Battery voltage
RH	E102	1	Glound	Battery Voltage



Are the voltage readings as specified?

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

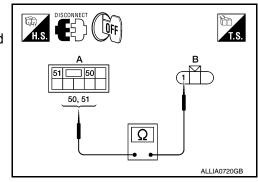
3. CHECK FRONT FOG LAMP OPEN CIRCUIT

FRONT FOG LAMP CIRCUIT

< COMPONENT DIAGNOSIS >

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

А		В	Continuity		
Conr	Connector Terminal Connector Term		Terminal	Continuity	
LH	E123	50	E101	1	Yes
RH	L123	51	E102	1	163



Does continuity exist?

YES >> GO TO 4

NO >> Repair the harnesses or connectors.

4. CHECK FRONT FOG LAMP GROUND CIRCUIT

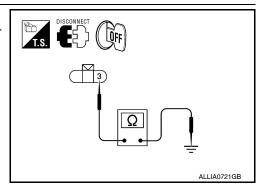
- Disconnect the front fog lamp connector.
- 2. Check continuity between the front fog/turn lamp harness connector terminal and ground.

Connector		Terminal	_	Continuity
LH	E101	3	Ground	Yes
RH	E102	3	Glound	163

Does continuity exist?

YES >> Inspect the fog lamp bulb.

NO >> Repair the harness.



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Revision: March 2010 EXL-33 2008 QX56

PARKING LAMP CIRCUIT

< COMPONENT DIAGNOSIS >

PARKING LAMP CIRCUIT

Description INFOID:000000001547134

The IPDM E/R (intelligent power distribution module engine room) controls the tail lamp relay based on inputs from the BCM via the CAN communication lines. When the tail lamp relay is energized, power flows through fuse 37, located in the IPDM E/R. Power then flows to the front and rear combination lamps.

Component Function Check

INFOID:0000000001547135

1. CHECK PARKING LAMP OPERATION

WITHOUT CONSULT-III

- Activate IPDM E/R auto active test. Refer to PCS-12, "Diagnosis Description".
- 2. Check that the parking lamp is turned ON.

(P)CONSULT-III

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

TAIL : Parking lamp ON
OFF : Parking lamp OFF

Is the parking lamp turned ON?

YES >> Parking lamp circuit is normal.

NO >> Refer to EXL-34, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000001547136

1. CHECK PARKING LAMP FUSES

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

Unit	Location	Fuse No.	Capacity
Parking lamps	IPDM E/R	37	10A

Is the fuse open?

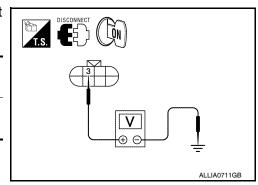
YES >> Repair the harness and replace the fuse.

NO >> GO TO 2

2.CHECK TAIL LAMP RELAY OUTPUT (VOLTAGE)

- 1. Turn the ignition switch OFF.
- 2. Disconnect the front combination lamp connector, rear combination lamp connector and license plate lamp connector.
- 3. Turn the ignition switch ON.
- Turn the parking lamps ON.
- 5. With the parking lamps ON, check voltage between the front combination lamp connectors and ground.

(+)			()	Voltage	
Connector		Terminal	(–)	voltage	
LH	E11	3	Ground	Battery voltage	
RH	E107	3	Giodila	Battery Voltage	

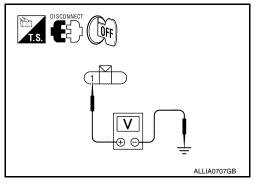


PARKING LAMP CIRCUIT

< COMPONENT DIAGNOSIS >

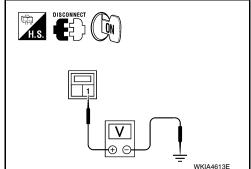
6. With the parking lamps ON, check voltage between the rear combination lamp connectors and ground.

(+)			(-)	Voltage
Connector Term		Terminal	(-)	voltage
LH	B70	1	Ground	Battery voltage
RH	B130	1	Ground	Ballery Vollage



7. With the parking lamps ON, check voltage between the license plate lamp connector and ground

(+)		(-)	Voltage	
Connector	Terminal	()	voltage	
D703	1	Ground	Battery voltage	



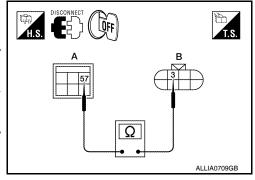
Are voltage readings as specified?

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

$\overline{\mathbf{3}}$.check parking, license plate and tail lamp circuit (open)

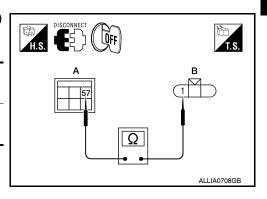
- Turn the ignition switch OFF.
- 2. Disconnect IPDM E/R connector.
- 3. Check continuity between the IPDM E/R harness connector (A) and the front combination lamp harness connector (B).

Α			В		Continuity
Co	onnector	tor Terminal Connecto		Terminal	Continuity
LH	E124	57	E11	3	Yes
RH	L12 4	37	E107	. s	165



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

A			В		Continuity
Co	onnector	Terminal	Connector Terminal		Continuity
LH	E124	57	B70	1	Yes
RH	L124	57	B130	!	168



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PARKING LAMP CIRCUIT

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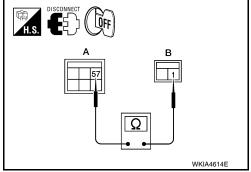
5. Check continuity between the IPDM E/R harness connector (A) and license plate lamp connector (B).

А			Continuity	
Connector	Terminal	Connector Terminal		Continuity
E124	57	D703	1	Yes

Are continuity test results as specified?

YES >> GO TO 4

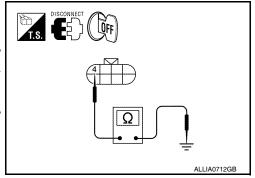
NO >> Repair the harnesses or connectors.



4. CHECK PARKING, LICENSE AND TAIL LAMP GROUND CIRCUITS

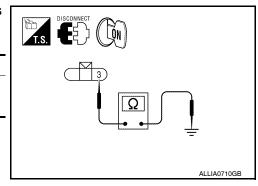
1. Check continuity between the front combination lamp harness connectors E11 and E107 terminal 4 and ground.

Connector		Terminal —		Continuity
LH	E11	1	Ground	Yes
RH	E107	4	Giodila	165



2. Check continuity between the rear combination lamp harness connectors B70 and B130 terminal 3 and ground.

Со	nnector	Terminal	_	Continuity
LH	B70	3	Ground	Yes
RH	B130	3	Ground	165



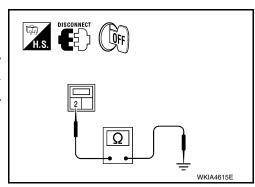
3. Check continuity between the license plate lamp harness connectors and ground.

Connector	Terminal	_	Continuity
D703	2	Ground	Yes

Does continuity exist?

YES >> Inspect the parking lamp bulb.

NO >> Repair the harness.



TURN SIGNAL LAMP CIRCUIT

< COMPONENT DIAGNOSIS >

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

INFOID:0000000001547138

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1. CHECK TURN SIGNAL LAMP

(E)CONSULT-III

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

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

Does the turn signal lamp blink?

YES >> Turn signal lamp circuit is normal.

NO >> Refer to EXL-37, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000001547139

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?

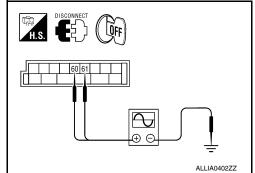
YES >> GO TO 2

NO >> Replace the bulb.

2.CHECK TURN SIGNAL LAMP OUTPUT VOLTAGE

- Turn the ignition switch OFF.
- Disconnect the front turn/fog lamp connector or the rear combination lamp connector.
- 3. Turn the ignition switch ON.
- 4. With turn signal switch operating, check the voltage between the BCM harness connector M20 and ground.

	(+)		(-)	Voltage
Con	nector	Terminal	()	Vollage
	LH	60		
M20	RH	61	Ground	(V) 15 10 5 0 1 s
				•



Is voltage reading as specified?

YES >> GO TO 3

NO >> Replace BCM. Refer to <u>BCS-55</u>, "Removal and Installation".

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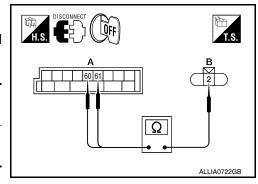
TURN SIGNAL LAMP CIRCUIT

< COMPONENT DIAGNOSIS >

3. CHECK TURN SIGNAL LAMP CIRCUIT FOR OPEN

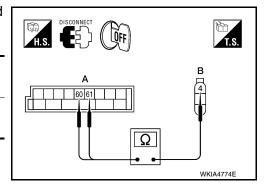
- 1. Turn the ignition switch OFF.
- 2. Disconnect BCM connector M20.
- 3. Check continuity between the BCM harness connector M20 and the front turn/fog lamps.

А			В		Continuity
Con	nector	Terminal	Connector	Terminal	Continuity
Front LH	M20	60	E101	2	Yes
Front RH	IVIZU	61	E102	2	165



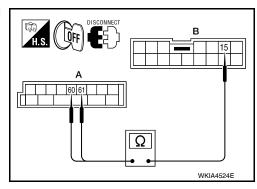
4. Check continuity between the BCM harness connector M20 and the rear combination lamp connectors.

Α			I	В	Continuity
Con	nector	Terminal	Connector	Terminal	Continuity
Rear LH	M20	60	B35	4	Yes
Rear RH	IVIZU	61	B105	4	165



5. Check continuity between the BCM harness connector M20 and the door mirror connectors.

	Α		E	Continuity	
Connec	ctor	Terminal	Connector	Terminal	Continuity
Door mirror LH	M20	60	D4	15	Yes
Door mirror RH		61	D107	15	165



Are continuity test results as specified?

YES >> GO TO 4

NO >> Repair the harnesses or connectors.

4. CHECK TURN SIGNAL LAMP SHORT CIRCUIT

Check continuity between the BCM harness connector M20 and ground.

С	onnector	Terminal	_	Continuity
LH	M20	60	Cround	No
RH	IVIZU	61	Ground	No

DISCONNECT H.S. DISCONNECT OFF ALLIA0404GB

Does continuity exist?

YES >> Repair the harnesses or connectors.

NO >> GO TO 5

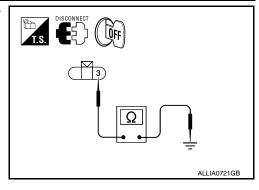
5. CHECK TURN SIGNAL LAMP GROUND CIRCUIT

TURN SIGNAL LAMP CIRCUIT

< COMPONENT DIAGNOSIS >

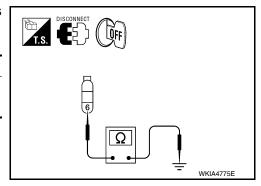
 Check continuity between the front turn/fog lamp harness connectors and ground.

Connector		Terminal	_	Continuity
Front LH	E11	3	Ground	Yes
Front RH	E107	3	Ground	163



2. Check continuity between the rear combination lamp harnness connectors and ground.

Connector		Terminal	_	Continuity
Rear LH	B35	6	Ground	Yes
Rear RH	B105	0	Ground	163



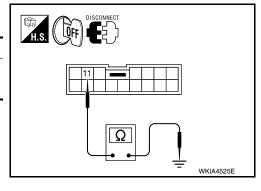
3. Check continuity between the door mirrors and ground.

Connector		Terminal	_	Continuity
Door mirror RH	D107	11	Ground	Yes
Door mirror LH	D4	11	Ground	

Are continuity test results as specified?

YES >> Replace the malfunctioning lamp.

NO >> Repair the harnesses or connectors.



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OPTICAL SENSOR

Description INFOID:000000001547140

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

Component Function Check

INFOID:0000000001547141

1. CHECK OPTICAL SENSOR SIGNAL BY CONSULT-III

(P)CONSULT-III

- 1. Turn the ignition switch ON.
- Select "OPTICAL SENSOR" of BCM (HEAD LAMP) DATA MONITOR item.
- 3. Turn the lighting switch to AUTO.
- With the optical sensor illuminating, check the monitor status.

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

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

Is the item status normal?

YES >> Optical sensor is normal.

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

Diagnosis Procedure

INFOID:0000000001547142

1. CHECK OPTICAL SENSOR GROUND CIRCUIT

- 1. Turn the ignition switch OFF.
- Disconnect BCM connector M18 and optical sensor connector M302.
- 3. Check continuity between BCM harness connector M18 (A) terminal 18 and optical sensor harness connector M302 (B) terminal 3.

Α				
Connector	Terminal	Connector	Terminal	Continuity
M18	18	M302	3	Yes

Check continuity between BCM harness connector M18 (A) terminal 18 and ground.

H.S. DISCONNECT OFF	
	В
	d <u>a</u> 5
	3
J	J
<u> </u>	
	ALLIA0406GB

	A		Continuity
Connector	Connector Terminal		Continuity
M18	18	Ground	No

Are continuity test results as specified?

YES >> GO TO 2

NO >> Repair harness or connector.

2.CHECK OPTICAL SENSOR SIGNAL CIRCUIT

OPTICAL SENSOR

< COMPONENT DIAGNOSIS >

Check continuity between BCM harness connector M20 (A) terminal 58 and optical sensor harness connector M302 (B) terminal 4.

	A			
Connector	Terminal	Connector	Terminal	Continuity
M20	58	M302	4	Yes

Check continuity between BCM harness connector M20 (A) terminal 58 and ground.

H.S. PISCONNECT OFF	
Α Ω	B 4 4 = = = = = = = = = = = = = = = = =
	ALLIA0407GB

,	A	_	Continuity
Connector	Terminal	_	Continuity
M20	58	Ground	No

Are the continuity test results as specified?

YES >> Replace the optical sensor. Refer to EXL-116, "Removal and Installation".

NO >> Repair harness or connector.

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HEADLAMP AIMING SWITCH

< COMPONENT DIAGNOSIS >

HEADLAMP AIMING SWITCH

Description INFOID:000000001806205

The manual headlamp aiming system uses a headlamp aiming switch to adjust the axis of the headlamp aiming motor. The headlamp aiming switch has four settings, each with a different resistance value. The headlamp aiming motor adjusts to the proper axis based off the position of the headlamp aiming switch.

Diagnosis Procedure

INFOID:0000000001806206

1. CHECK HEADLAMP AIMING SWITCH SIGNAL FOR OPEN OR SHORT CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect headlamp aiming switch connector M148, headlamp aiming motor LH connector E11 and headlamp aiming motor RH connector E107.
- 3. Check continuity between the headlamp aiming switch connector M148 terminal 1 and headlamp aiming motor LH E11 and RH E107 terminal 7.

Connector	Terminal	Connector	Terminal	Continuity	
M148	1	E11	7	Yes	
WITTO	-	E107	ı	tes	

4. Check continuity between the headlamp aiming switch connector M148 terminal 1 and ground.

Connector	Terminal	_	Continuity
M148	1	Ground	No

Are the continuity test results as specified?

YES >> GO TO 2

NO >> Repair the harness or connector.

2.CHECK HEADLAMP AIMING SWITCH

1. Check continuity between the headlamp aiming switch terminals 1 and 2 in each switch position.

Component	Terminal		Switch Position	Continuity
			0	604 ohms
Headlamp aiming switch	1	2	1	324 ohms
switch			2	191 ohms
			3	130 ohms

Are the continuity check results as specified?

YES >> GO TO 3

NO >> Replace the headlamp aiming switch.

3.check headlamp aiming switch ground circuit

- Turn the ignition switch OFF.
- 2. Disconnect headlamp aiming switch connector M148.
- 3. Check continuity between headlamp aiming switch connector M148 terminal 2 and ground.

Connector	Terminal —		Continuity	
M148	2	Ground	Yes	

Is continuity as specified?

YES >> Inspect headlamp aiming motors.

NO >> Repair harness or connector.

HEADLAMP Α Wiring Diagram INFOID:0000000001547143 IPDM E/R (INTELLIGENT DISTRIBUTION MODULE ENGINE ROOM) (E122), (E123) В ■ : DATA LINE C IGNITION RELAY (M31) w D 20A CPU Е 20A 52 F HID G HEAD-LAMP-HIGH Н HEADLAMP LOW RELAY 15A 15A 40 w HEADLAMP HIGH RELAY 40¥ J HEAD-OLAMP HIGH 10A 35 W K COMBI-NATION METER (M24). FUSE BLOCK (J/B) (M4), (M39) EXL HIGH BCM (BODY CONTROL MODULE) (M18). (M20) IGNITION SWITCH ON OR START 10A M 10A COMBINATION SWITCH (M28) Ν [2] 0 HEADLAMP 10G E152 M31 50A BATTERY Р

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HEADLAMP CONNECTORS

M4	Connector Name FUSE BLOCK (J/B)	WHITE	
Connector No.	Connector Name	Connector Color WHITE	

Connector Name | BCM (BODY CONTROL MODULE)

Connector No. M18

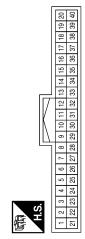
WHITE

Connector Color



Signal Name	-
Color of Wire	O/L
Terminal No.	5P

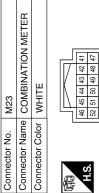
Signal Name	INPUT-5	INPUT-4	INPUT-3	7-104NI	I-TUANI	OUTPUT-5	4-TUTPUC	OUTPUT-3	OUTPUT-2	OUTPUT-1	IGN SW	CAN-H	CAN-L
Color of Wire	SB	G/Υ	>	G/B	>	R/G	R/Y	٦	O/B	B/W	W/L	_	۵
Terminal No.	2	က	4	5	9	32	33	34	35	36	38	39	40



Signal Name	_
Color of Wire	O/L
Terminal No.	5P

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Connector No. M24
Connector Name COMBINATION METER
Connector Color WHITE





' CONTROL		62 63 64	69 70

Connector No.	M20
Connector Name	Connector Name BCM (BODY CONTROL MODULE)
Connector Color BLACK	BLACK
	56 57 58 59 60 61 62 63 64 65 66 67 88 69 70



		-	22 21						
		3	23						
		4	25 24						
		2	25						
		9	56	🖺			_		
		7	27	Ra	l ı	Ιı	GND	l i	1
_		8	88	Signal Name			മ		
	17	6	32 31 30 29	g					
	V	9	30	NO.					
	Λ	Ξ	31						
	П	12	32	-					
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		4	34	કું≅	_	₾	ω	0/L	Y/R
		5	33	o					
		19	99	ું					
		18 17 16 15 14 13 12 11 10	37	=					
٨		2	88	.≌	10	=	8	2	40
Į.		19	33	Terminal No. Wire					
1		20	40	_ <u>=</u> _					

Signal Name

Color of Wire

Terminal No.

GND

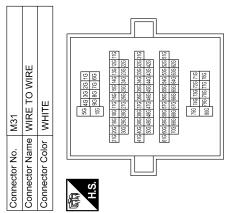
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Signal Name	GND (POWER)	BATT (FL)	
Color of Wire	В	W/B	
Terminal No.	29	70	

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Signal Name	ı	-	ı	1
Color of Wire	M/L	W/B	٦	Д
Terminal No.	9/	10G	31G	42G



	COMBINATION SWITCH	TE	10 9 8 7	Signal Name	J	1	1	ı	1	1	ı	1	1	I
M28	_	or WHITE	12 13	Color of Wire	R/W	O/B	٦	RY	R/G	>	G/B	SB	G/Y	>
Connector No.	Connector Name	Connector Color		Terminal No.	_	2	3	4	5	9	7	8	6	10

								_
7	FRONT COMBINATION LAMP RH (WITHOUT DAYTIME RUNNING LAMPS)	BLACK	٥ ٢	Signal Name	-	_	I	
E107		_	<u> </u>	Color of Wire	В	В	₽Ÿ	/ ۷ ۷ /
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	l	2	5	Ç

Connector No.). E11	_
Connector Name	ame FR LAI DA	FRONT COMBINATION LAMP LH (WITHOUT DAYTIME RUNNING LIGHTS)
Connector Color		BLACK
H.S.	[- u]	8 L 2 2 3 4 4 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
Terminal No.	Color of Wire	Signal Name
-	В	ı
2	В	ı
2	_	ı
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Connector No.		M39	
Connector Name		FUS	FUSE BLOCK (J/B)
Connector Color	_	BLACK) CK
所 H.S.		308	80 70 60 50 40
Terminal No.	Color of Wire	r of e	Signal Name
40	Y/R	~	I

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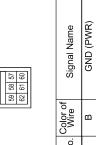
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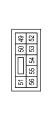
Connector No.	E124
Connector Name	Connector Name IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color BLACK	BLACK



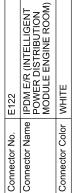


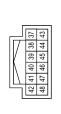
GND	Я	29
Signal	Color of Wire	Terminal No.

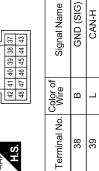
Connector No.	E123
Connector Name	Connector Name IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color BROWN	BROWN





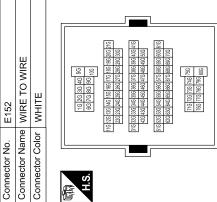






38	В	GND (SIG)
39	7	CAN-H
40	Ь	CAN-L
Connector No.	. E152	-

Signal Name	-	-	-	_
Color of Wire	N/T	W/B	٦	Ь
Terminal No.	9 <i>L</i>	10G	31G	42G

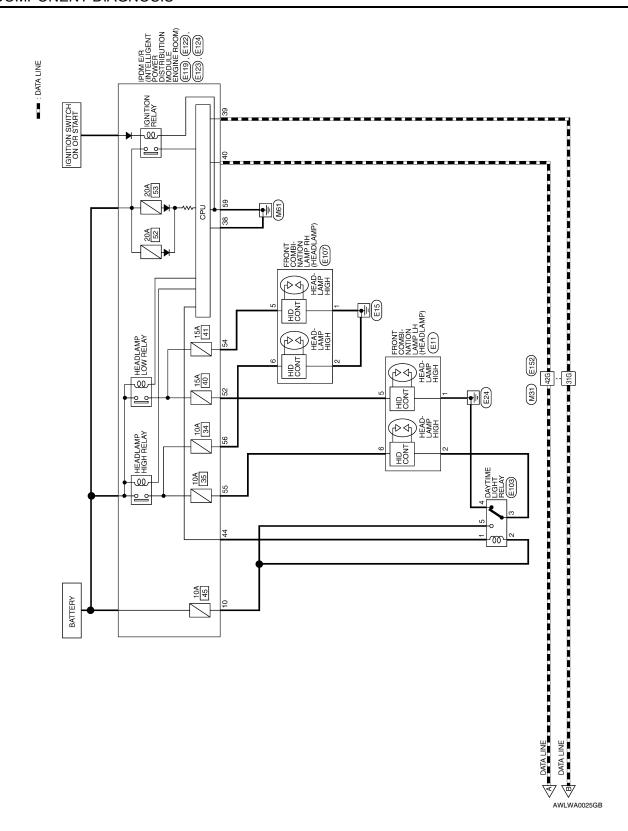




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DAYTIME LIGHT SYSTEM Α Wiring Diagram INFOID:0000000001547144 В ■ : DATA LINE C COMBINATION METER (M23), (M24) D ▼ BRAKE Е F UNIFIED METER CONTROL UNIT (WITH INFORMATION DISPLAY) E34 M40 M40 FUSE BLOCK (J/B) (M4), (M39) G Н 10A 14 10A J Κ (M20) BCM (BODY CONTROL MODULE) (M18) EXL IGNITION SWITCH ON OR START COMBINATION SWITCH (M28) 10A 59 M DAYTIME LIGHT SYSTEM Ν E152 BATTERY 0 Р

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DAYTIME LIGHT SYSTEM CONNECTORS

M4	Connector Name FUSE BLOCK (J/B)	WHITE	
Connector No.	Connector Name	Connector Color WHITE	

		,
₽	8Р	
2P	9Б	
ЗР	10P	
П	11P	
Ш	12P	
4 P	13P	
5P	14P	
99	15P	
7P	16P	

	Signal Name	
	Color of Wire	1/0
]	erminal No.	5P

M11	Connector Name PARKING BRAKE SWITCH	BLACK	
Connector No. M11	Connector Name	Connector Color BLACK	斯.S.
	(J/B)		P 2P 1P

ار Sign		
Color of Wire	9	
Terminal No.	-	

Connector No. Connector Name BCM (BODY CONTRC MODULE) Connector Color BLACK

ωΣ	r B	98
r Nam	r Colo	
Connector Name	Connector Color	

18.	Signal Nam GND (POW BATT (FI	Color of Wire B	Terminal No. 67
o i		Color of Wire	Terminal No.
			H.S.
	ACK	-	Connector Co
Connector Color BLACK	MODULE)		

Signal Name	INPUT-5	INPUT-4	INPUT-3	INPUT-2	INPUT-1	OUTPUT-5	OUTPUT-4	OUTPUT-3	OUTPUT-2	OUTPUT-1	IGN SW	CAN-H	CAN-L
Color of Wire	SB	G/Y	>	G/B	^	R/G	R/Υ	Т	O/B	R/W	M/L	Г	Ь
Terminal No.	2	က	4	5	9	32	33	34	35	36	38	39	40

				8	9
				19	98
					88
				17 18	37
	占			16	36
	Connector Name BCM (BODY CONTROL MODULE)			15	21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37
	Z			13 14	8
	8			5	æ
	≿		/	11 12	윉
	BCM (BOD MODULE)			Ξ	8
	@ ∃	Connector Color WHITE		9	೫
8	동문	눈		0	೪
M18	ĕĕ	≥	_	1 🗠	83
	Φ	_		^	27
ď	띭	응		9	8
ž	ž	ŭ		5	ડર
φ	to	호		4	24
ec	99	ec	(6	က	ន
Ĕ	Ę	Ĕ	H.S.	2	8
Connector No.	ပိ	ပိ		L	2

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M28 COMBINATION SWITCH WHITE	10 9 8 7	Signal Name	1	I I	I	1	1	I	I	1	ı	!	FUSE BLOCK (J/B)	ш	2010	80 70 60 50 40				Signal Name	ı	
me COMBI	12 13	Color of Wire	W G	٦	R/Y	R/G	>	G/B	SBS	ZyS	>			ior WHITE	1	200				Color of Wire	Y/R	
Connector No. Connector Name Connector Color	可可 H.S.	Terminal No.	- c	3 8	4	5	9	7	∞	6	10	Connector No.	Connector Name	Connector Color		H.S.				Terminal No.	4Q	
Connector No. M24 Connector Name COMBINATION METER Connector Color WHITE	M.S.	20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	22 27 57 57 50 20 20 20 20 20 20 20 20 20 20 20 20 20	Terminal No. Wire Signal Name		۵	20 B –	21 O/L –	31 G –	40 Y/R –		Terminal No. Wire Signal Name	- I/M 52	W/B	31G L –	42G P –						
No. M23 Name COMBINATION METER Color WHITE	46 45 44 43 42 41 72 75 75 75 10 40 48 47			Color of Signal Name	2 8							No. M31	Name WIRE TO WIRE	Color WHITE		56 46 36 26 16	210,020 190 180 170 160 150 140 170 170	300 (200) 280 (270) 260 (200 (200) 220 (200) (20	3436 42	61G 600 550 550 570 550 550 540 530 530 570 770 650 650 650 650 650 650 640 650 620	756 746 736 736 716	80G 79G 776 776

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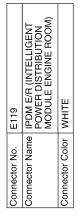
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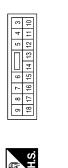
Connector No. E11 Connector Name FRONT COMBINATION LAMP LH (WITH DAYTIME RUNNING LIGHTS) Connector Color BLACK Signal Name Terminal No. Wire Signal Name Terminal No. Wire Signal Name Terminal No. Wire Signal Name Terminal No. Color of Signal Name Terminal Name Termi	Connector No. E103
Connector No. E5 Connector Name WIRE TO WIRE Connector Color WHITE Terminal No. Wire 3 L	Connector No. E34 Connector No. E34 Connector Name WIRE TO WIRE Connector Color WHITE
Connector No. M40 Connector Name WIRE TO WIRE Connector Color WHITE Submission Submission Submission Submissio	Connector No. E16 Connector Name ECM Connector Color BLACK Solution Solu

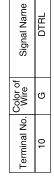
Revision: March 2010 **EXL-51** 2008 QX56

Connector No.	E122
Connector Name	Connector Name IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color WHITE	WHITE
H.S.	42 41 40 39 88 37 48 47 46 45 44 43

48 47 46 45 44 43	of Signal Name	GND (SIG)	CAN-H	CAN-L	DTRL
48 4	Color of Wire	В	_	Д	BR
	Terminal No.	38	39	40	44













Signal Name	ı	ı	1	1
Color of Wire	В	В	R/Y	٨
Terminal No.	1	2	5	9

Connector No.	E124
Connector Name	Connector Name IPDM E/R (INTELLIGE POWER DISTRIBUTIC MODULE ENGINE RO
Connector Color BLACK	BLACK





Signal Name	GND (PWR)	
Color of Wire	В	
Terminal No.	29	

g.	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)	BROWN	50 49	Signal Name	HEAD_LAMP_LH_LO	HEAD_L_HI_RH	HEAD_LAMP_LH_HI	HEAD_LAMP_RH_HI
. E123			51 56 55	Color of Wire	_	R/Υ	G	>
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	52	54	55	56

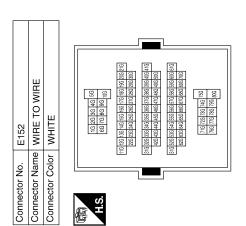
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DAYTIME LIGHT SYSTEM

< COMPONENT DIAGNOSIS >

Connector No.). F14	
Connector Name	ame WI	WIRE TO WIRE
Connector Color		WHITE
11 18	11 10 9 8	7 6 5 4 3 2 1
Color of William	Color of	Omod Nomo
ellillai NO.	wire	
3	7	-
5		ı
14	Д	ı
15	Ь	ı

Signal Name	ı	ı	I	_
Color of Wire	M	M/B	Т	Ь
Terminal No.	76	10G	31G	42G



Signal Name)		I		I		
Color of Wire		-	J	۵	L		
Terminal No. Wire		511	2	103	220		
	WIDE	MINE					

B69 THE TO WIRE OF WHITE	1 1 1 1 1 1 1 1 1 1
Connector No. B69 Connector Name WIRE TC	H.S. (1) 20 30 40 40 40 40 40 40 40 40 40 40 40 40 40

	RE TO WIRE	WHITE	5 6 7 8 9 10 11	Signal Name	1	1
. B40	me WII		2 3 4 15 14 15	Color of Wire	_	_
Connector No.	Connector Name WIRE TO WIRE	Connector Color	H.S.	Terminal No. Wire	23	24

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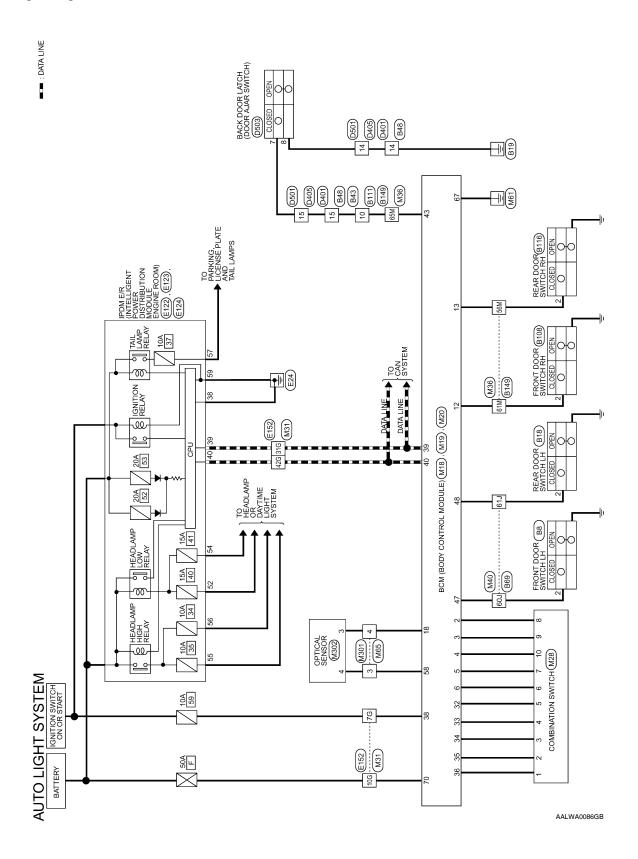
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AUTO LIGHT SYSTEM

Wiring Diagram



AUTO LIGHT SYSTEM CONNECTORS

Connector No.	M18
Connector Name	Connector Name BCM (BODY CONTROL MODULE)
Connector Color WHITE	WHITE

	20	40
	19	33
	48	38
	17	37
	16	36 37 38
	12 13 14 15 16 17 18	34 35
	4	34
	13	33
ı 117	12	32
ı IV	10 11	31
ı IN	10	30
	6	29
	80	28
i	7	27
	9	26
	2	22
	4	24
(6	က	21 22 23 24 25 26 27 28 29 30 31 32 33
US I	2	22
帰	-	21

Connector No.	. M19	
Connector Name		BCM (BODY CONTROL MODULE)
Connector Color	lor WHITE	TE
所 H.S.	41 42 43 44 4 50 51 52	41 42 43 44 45 46 47 48 49 49 49 49 49 49 49
Terminal No.	Color of Wire	Signal Name
43	R/B	BACK DOOR SW/FUEL LID OPEN SW
47	SB	DOOR SW (DR)
48	R/Y	DOOR SW (RL)

Signal Name	INPUT-5	INPUT-4	INPUT-3	INPUT-2	INPUT-1	DOOR SW (AS)	DOOR SW (RR)	SIG GND	OUTPUT-5	OUTPUT-4	OUTPUT-3	OUTPUT-2	OUTPUT-1	IGN SW	CAN-H	CAN-L
Color of Wire	SB	G/Y	>	G/B	>	R/L	GR	А	R/G	R/Y	٦	O/B	R/W	W/L	Г	Ф
erminal No.	2	3	4	5	9	12	13	18	32	33	34	35	36	38	39	40

Connector Name COMBINATION SWITCH Connector Color WHITE	IBINATION SWITCH
Connector Color WHI	
12 13 14 11	10 9 8 7

Connector Name BCM (BODY CONTROL MODULE)

M20

Connector No.

Connector Color BLACK

Signal Name

Terminal No.

R/≪ O/B R/G

2 9 G/B SB G/Y

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Connector No. M28 Connector Name COMBINATION Connector Color WHITE	υ _	M28 COMBI WHITE	ᄪ	≸	≓		
	1			,	'		
9	ſ			J	ī	ſ	
	12	13	10	Ш	П	6	
Ě	14	11	1	2	3	4	

r NO. M28	Connector Name COMBINATION 8	r Color WHITE	12 13 10	14 11 1 2	
Connector No.	Connecto	Connector Color	F	ů.	

66 57 68 69 70 68 69 70	Signal Name	AUTO_L_INPUT	GND (POWER)	BATT (FL)
56 57	Color of Wire	W/R	В	M/B
H.S.	Terminal No.	28	29	20

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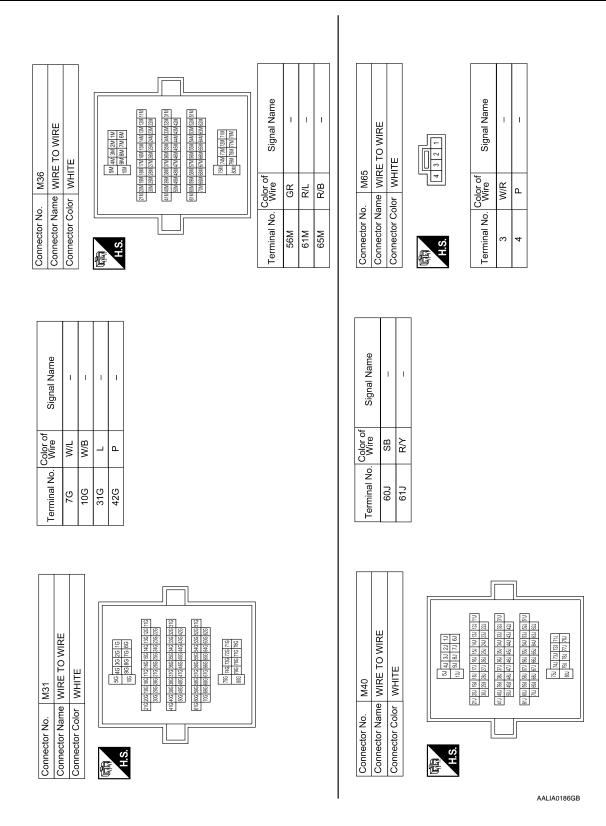
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							Γ
2	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)	ITE	42 41 40 39 38 37 48 47 46 45 44 43	Signal Name	(SIS) GND	CAN-H	LANC
. E122		lor WHITE	48 47 7	Color of Wire	В	_	۵
Connector No.	Connector Name	Connector Color	原列 H.S.	Terminal No.	38	39	40

	_			
M302 OPTICAL SENSOR	BLACK	Signal Name	_	1
<u>e</u> ;		Color of Wire	Ь	W/R
Connector No.	Connector Color	Terminal No. Wire	3	4
		·		

Connector No.). M301	11
Connector Name WIRE TO WIRE	ıme WIF	RE TO WIRE
Connector Color	_	WHITE
H.S.		3 2 1
Terminal No.	Color of Wire	Signal Name
က	W/R	ı
4	۵	1

Connector No.	E124	4	
Connector Name		IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)	
Connector Color	r BLACK	CK	
是 H.S.	0 2	09 19 23 25 85 65	
Terminal No.	Color of Wire	Signal Name	
22	R/L	TAIL_LAMP	
29	а	GND (PWR)	

Connector No.	E123
Connector Nan	Connector Name IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	or BROWN
H.S.	51 10 50 49 56 55 54 53 52
	Color of

Signal Name	HEAD_LAMP_LH_LO	HEAD_LAMP_RH_LO	HEAD_LAMP_LH_HI	HEAD_LAMP_RH_HI
Color of Wire	7	R/Y	Э	Υ
Terminal No.	52	54	22	26

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Revision: March 2010 **EXL-57** 2008 QX56

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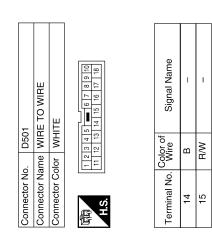
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Connector No. B48 Connector Name WIRE TO WIRE Connector Color WHITE (10 9 8 7 6 6 4 8 2 11) (18 17 16 15 14 13 12 11)	Terminal No. Wire Signal Name 14 B – 15 R/W – 15	Connector No. B111 Connector Name WIRE TO WIRE Connector Color WHITE Connector Color WHITE Terminal No. Wire Signal Name To RW -	
Connector No. B43 Connector Name WIRE TO WIRE Connector Color WHITE T 6 5 4 3 2 1 H.S.	Terminal No. Wire Signal Name	Connector No. B108 Connector Name FRONT DOOR SWITCH RH Connector Color WHITE Terminal No. Wire Signal Name 2 R/L -	
Connector No. B18 Connector Name REAR DOOR SWITCH LH Connector Color WHITE	Terminal No. Wire Signal Name	Connector No. B69	Terminal No. Color of Signal Name Signal Name Signal

Terminal No.	Color of Wire	Signal Name
26M	GR	ı
61M	B/L	1
M59	B/W	1

Connector No.	B149	
Connector Name WIRE TO WIRE	WIRE TO WIRE	
Connector Color	WHITE	
昼		
Ě	1M 2M 3M 4M 5M	
E S	6M 7M 8M 9M tou	
	1M 12M 13M 14M 15M 15M 16M 17M 18W 19M 20M 21M	
	22M 23M 24M 25M 26M 27M 28M 29M 30M	
1		
	our descriperation and are described and post for a second	

9	REAR DOOR SWITCH RH	ITE		Signal Name	1
. B116	me RE/	lor WHITE		Color of Wire	GR
Connector No.	Connector Name	Connector Color	周 H.S.	Terminal No.	2



	Ī		_
Connector No.	o. D405	5	
Connector Name WIRE TO WIRE	ame WIF	E TO WIRE	
Connector Color	olor WHITE	ITE	
S.H.	10 9 8 7 6	10 9 8 7 6 6 6 4 3 2 1 1 16 17 16 15 14 13 12 11	
Terminal No. Wire	Color of Wire	Signal Name	

Connector No. D401	Connector Name WIRE TO WIRE	Connector Color WHITE	
Connec	Connec	Connec	H.S.

5 6 7 8 9 10 14 15 16 17 18	Signal Name	-	ı
1 12 3 4 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Color of Wire	В	B/W
H.S.	Terminal No. Wire	14	15

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Signal Name	DOOR AJAR SW	GND
Color of Wire	B/W	В
Terminal No.	2	8

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HEADLAMP AIMING SYSTEM (MANUAL)

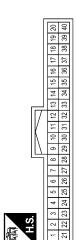
HEADLAMP AIMING SYSTEM (MANUAL) Α Wiring Diagram INFOID:0000000001806207 ■ : DATA LINE В C IGNITION RELAY w (M31) D CPU 20A Е 20A F FRONT COMBINATION LAMP RH (HEADLAMP AIMING MOTOR)(E107) HEADLAMP LOW RELAY Н E129 15A 41 Tub. FRONT COMBINATION LAMP LH (HEADLAMP AIMING MOTOR) M31 - E2 J TAIL LAMP RELAY Κ 10A -W EXL BCM (BODY CONTROL MODULE) (M18), (M20) HEADLAMP AIMING SYSTEM M COMBINATION SWITCH (M28) Ν IGNITION SWITCH ON OR START 0 M31 BATTERY Р AALWA0087GB

HEADLAMP AIMING SYSTEM CONNECTORS

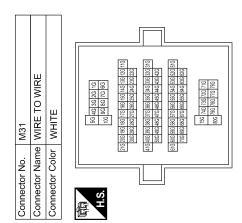
No. M18	Connector Name BCM (BODY CONTROL MODULE)	Solor WHITE	
Connector No.	Connector Nam	Connector Color WHITE	

0	BCM (BODY CONTROL MODULE)	BLACK	S6 S7 S8 S9 S0 G1 62 G3 G4	Signal Name	GND (POWER)	BATT (FL)	
. M20			56 57	Color of Wire	В	W/B	
Connector No.	Connector Name	Connector Color	H.S.	Terminal No. Wire	29	02	

Terminal No.	Color of Wire	Signal Name
2	SB	INPUT-5
က	G/Υ	INPUT-4
4	>	INPUT-3
9	G/B	INPUT-2
9	۸	INPUT-1
32	R/G	OUTPUT-5
33	K/Y	OUTPUT-4
34	7	OUTPUT-3
32	O/B	OUTPUT-2
36	R/W	OUTPUT-1
38	W/L	IGN SW
39	L	CAN-H
40	Ь	CAN-L



GND (POWER)	BATT (FL)		Signal Name	1	1	1	-	1
മ	M/B		Color of Wire	M/L	M/B	7	B/R	Δ
	20		Terminal No. Wire	9/	10G	31G	32G	5/27



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	COMBINATION SWITCH	ПЕ	10 9 8 7	Signal Name	ı	I	Ι	ı	_	_	_	_	_	-
M28	_	or WHITE	12 13	Color of Wire	R/W	0/B	_	R/Υ	R/G	>	G/B	SB	λ/9	⋆
Connector No.	Connector Name	Connector Color	原 H.S.	Terminal No.	-	2	င	4	5	9	2	8	6	10

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HEADLAMP AIMING SYSTEM (MANUAL)

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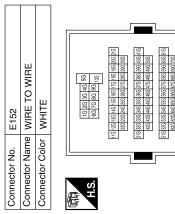
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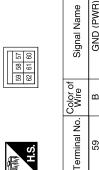
Connector No. E107 Connector Name FRONT COMBINATION LAMP RH Connector Color BLACK	Terminal No. Wire Signal Name 4 B - 7 B/R - 8 P/L - 8	Connector No. E123 Connector Name IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) Connector Color BROWN S S S S S S S S S S S S S S S S S S S	Terminal No. Wire Signal Name 49 R/L –
Connector No. E11 Connector Name FRONT COMBINATION LAMP LH Connector Color BLACK T 2 3 4 H.S.	Terminal No. Color of Wire Signal Name Transmit Name 4 B - 7 B/R - 8 P/L -	Connector No. E122 Connector Name IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) Connector Color WHITE A.S. A.B. A.B. A.B. A.B. A.B. A.B. A.B.	Terminal No. Color of Wire Signal Name Terminal No. 38 B GND (SIG) 39 L CAN-H 40 P CAN-L
Connector No. M148 Connector Name HEADLAMP AIMING SWITCH Connector Color WHITE	Terminal No. Color of Wire Signal Name 1 B/R - 2 B - 3 R/L - 4 BR -	Connector No. E121 Connector Name IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) Connector Color BROWN [2] [2] [2] [2] [3] [3] [3] [3] [3] [4] [4]	Terminal No. Color of Signal Name 26 P/L –

Revision: March 2010 **EXL-63** 2008 QX56



Signal Name	1	ı	-	1	ı
Color of Wire	ΓW	M/B	٦	B/B	Ь
Terminal No.	76	10G	31G	32G	42G

Connector No.	E124
Connector Name	Connector Name IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color BLACK	BLACK



Signal Name	GND (PWR)
Color of Wire	В
Terminal No.	29

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FRONT FOG LAMP SYSTEM

Wiring Diagram

--- : DATA LINE

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) (E123), (E123), GIGNITION BELAY M31 20A 53 CPU 20A (M20) BCM (BODY CONTROL MODULE) (M18), FRONT FOG LAMP RELAY COMBINATION SWITCH (M28) 20A 56 IGNITION SWITCH ON OR START 76 E152 50A BATTERY 2

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FRONT FOG LAMP

Signal Name

Terminal No.

W/B M/L

7G 10G 31G 42G

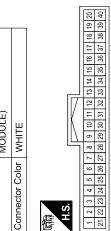
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Connector Name | BCM (BODY CONTROL MODULE)

Connector No.

FRONT FOG LAMP CONNECTORS

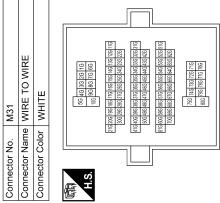
Connector Name BCM (BODY CONTROL MODULE)	ODY CONTROL
Connector Color WHITE	



ΩX	66 57 58 59 07 08 68 70 04 05 05 04 05 05 05 0	Signal Name	GND (POWER)	BATT (FL)
lor BL/	56 57	Color of Wire	В	M/B
Connector Color BLACK	E.S.	Terminal No. Wire	29	02

Signal Name	INPUT-5	INPUT-4	INPUT-3	INPUT-2	INPUT-1	DOOR SW (AS)	DOOR SW (RR)	OUTPUT-5	OUTPUT-4	OUTPUT-3	OUTPUT-2	OUTPUT-1	IGN SW	CAN-H	CAN-L
Color of Wire	SB	G/Y	>	G/B	>	R/L	GR	R/G	R/Y	٦	O/B	R/W	M/L	L	۵
Terminal No.	2	က	4	5	9	12	13	32	33	34	35	36	38	39	40

ector No.	M31
ector Name	ector Name WIRE TO WIRE
ector Color WHITE	WHITE



Connector No.	M28
Connector Name	Connector Name COMBINATION SWITCH
Connector Color WHITE	WHITE
12 12	13 10 9 8 7
14 H.S	11 1 2 3 4 5 6

H.S.
,
R/G
G/B
G/Y

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FRONT FOG LAMP SYSTEM

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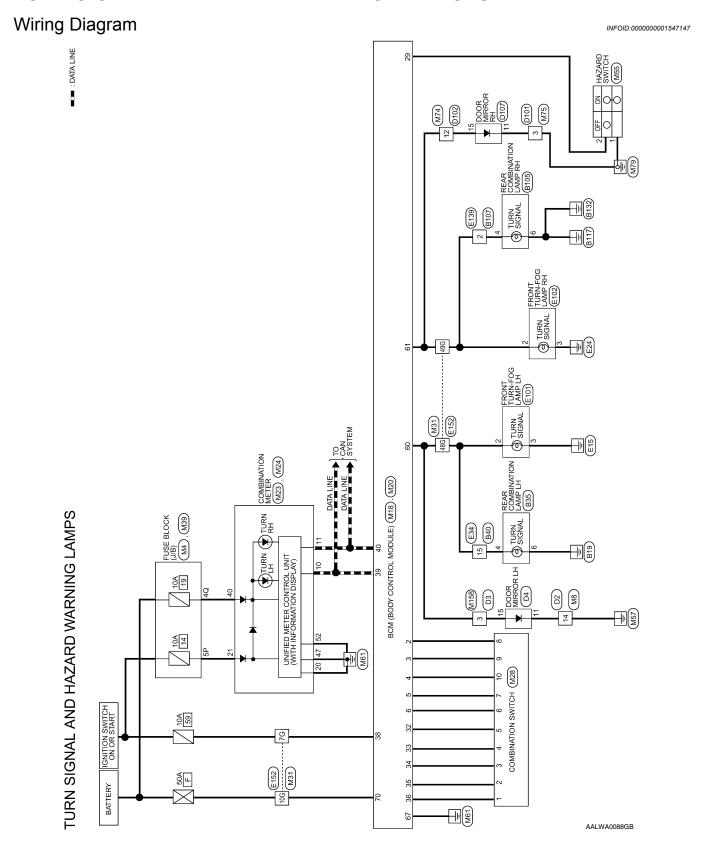
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E122 IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) WHITE	of Signal Name GND (SIG) CAN-H CAN-L	Connector No. E152 Connector Name WIRE TO WIRE Connector Color WHITE Color Color Color Color Color C	
	Color of Wire B	Ooly of LWWire PW WIRE WAY BY WING COOL OF WHITE PARTY OF THE PARTY OF	
Connector No. Connector Color Connector Color	Terminal No. 38 39 40	Connector No. Connector Name Connector Color H.S. Terminal No. Color 7G 10G 742G	
Connector No. E102 Connector Name FRONT FOG LAMP RH Connector Color BLACK	Terminal No. Wire Signal Name 1 W/R - 3 B	Connector No. E124 Connector Name IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) Connector Color BLACK ##S Terminal No. Color of Signal Name 59 B GND (PWR)	
Connector No. E101 Connector Name FRONT FOG LAMP LH Connector Color BLACK H.S.	Terminal No. Wire Signal Name 1 W/R - 3 B	Connector No. E123 Connector Name IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) Connector Color BROWN Terminal No. Wire Signal Name 50 W/R FR FOG LAMP LH 51 W/R FR FOG LAMP RH	E

Revision: March 2010 EXL-67 2008 QX56



TURN SIGNAL AND HAZARD WARNING LAMP CONNECTORS

M4	Connector Name FUSE BLOCK (J/B)	WHITE	
Connector No.	Connector Name	Connector Color WHITE	

M8	Connector Name WIRE TO WIRE	WHITE	7 6 5 4 3 2 11 10 9
Connector No.	Connector Name	Connector Color WHITE	H.S.
	OCK (J/B)		38 22 18 19109 99 89

Signal		
Color of Wire	В	
Terminal No.	14	
gnal Name	1	

Signal Name	1
Color of Wire	В
Terminal No.	14
Signal Name	1
Color of Wire	O/L
Terminal No.	5P

Connector No.	. M20	0
Connector Name		BCM (BODY CONTROL MODULE)
Connector Color	-	BLACK
是 H.S.	5657	85 57 58 59 60 61 62 63 64 65 65 64 65 65 64 65 65
Terminal No. Wire	Color of Wire	Signal Name

FLASHER OUTPUT (RIGHT) FLASHER OUTPUT (LEFT)

G/B չ

9 61 GND (POWER)

W/B

67

Signal Name	INPUT-5	INPUT-4	INPUT-3	INPUT-2	INPUT-1	HAZARD_SW	OUTPUT-5	OUTPUT-4	OUTPUT-3	OUTPUT-2	OUTPUT-1	IGN SW	CAN-H	CAN-L
Color of Wire	SB	G/Υ	Υ	G/B	>	M/B	R/G	R/Υ	٦	O/B	B/W	M/L	٦	Ь
Terminal No.	2	8	4	5	9	59	32	33	34	35	36	38	39	40

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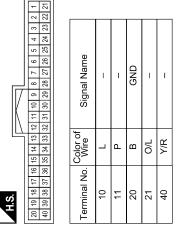
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	COMBINATION SWITCH	<u>E</u>		10 0 8 7	† †	Signal Name	1	ı	I	ı	I	-	ı	-	1	1
M28	-	or WHITE	1	12 13	⊣ I	Color of Wire	R/W	O/B	_	RY	R/G	^	G/B	SB	G/Y	\
Connector No.	Connector Name	Connector Color		E	H.S.	Terminal No.	-	2	င	4	5	9	7	8	6	10
							5 1									

6	FUSE BLOCK (J/B)	BLACK	80 \0 \0 \0 \0 \0 \0 \0 \0 \0 \0 \0 \0 \0	Signal Name	1
. M39		-		Color of Wire	Y/R
Connector No.	Connector Name	Connector Color	语.S.	Terminal No.	40
			· <u></u>		•

Connector No.	M24
Connector Name	Connector Name COMBINATION METER
Connector Color WHITE	WHITE

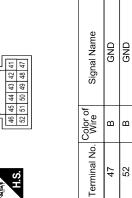


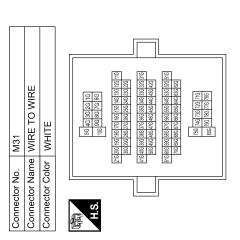
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Signal Name	_	ı	_	1
Color of Wire	M/L	W/B	G/B	G/Y
Terminal No.	9/	10G	48G	49G

Connector No.	≥	M23				
Connector Name COMBINATION METER	0	Ó	ΙBΙ	ž	\TIOI	N METER
Connector Color WHITE	>	Ī	≝	l		
	Ľ	Ш	Ш	Ц	Г	
E	\neg	\	\	/	<u> </u>	_
Ě	46	45	44	43	46 45 44 43 42 41	
Ġ.	52	51	20	49	52 51 50 49 48 47	



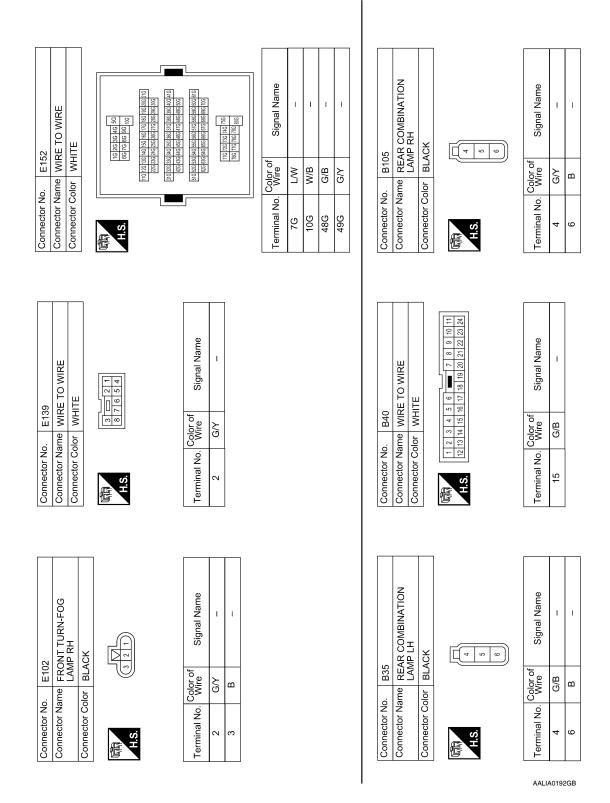


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<u>a</u>		<u> </u>	В
TO WIRE	E101 FRONT TURN-FOG LAMP LH BLACK	Signal Name	С
Connector No. M75 Connector Name WIRE TO WIRE Connector Color WHITE 10 8 7 6 5 10 8 7 6 5 10 8 7 8 7 10 8 7 8 7 10 8 7 8 7 10 8 7 8 7 10 8 7 8 7 10 8 7 8 7 10 8 7 8 7 10 8 7 8 7 10 8 7 8 7 10 8 7 8 7 10 9 8 7 8 10 9 9 7 10 9 9 10 9 10 9 10 9 10 9 10 9 10 9 10 9 10 9 9 10 9 10 9 10 9 10 9 10 9 10 9 10 9 10 9 10 9 10 9 1		Color of Wire G/B	D
Connector No. Connector Name Connector Color H.S. H.S. 3 3	Connector No. Connector Color Connector Color	Z 3	Е
			F
1110 1110 1110	14 3 2 1 15 14 13 12	lame lame	G
Connector No. M74 Connector Name WIRE TO WIRE Connector Color WHITE 9 7 6 5 4 3 2 1 2019 8 7 6 5 4 3 2 1 2019 8 7 6 5 4 3 2 1 2019 8 7 6 5 4 3 2 1 2019 8 7 6 5 4 3 2 1 2019 8 7 6 5 4 3 2 1 2019 8 7 6 5 4 3 2 1 2019 8 7 6 5 4 3 2 1 2019 8 7 6 5 4 3 2 1 2019 8 7 6 5 4 3 2 1 2019 8 7 6 5 4 3 2 1 2019 8 7 6 5 4 3 2 1 2019 8 7 6 5 4 3 2 1 2019 8 7 6 5 4 3 2 1 2019 8 7 6 5 4 3 2 1 2019 8 7 6 5 4 3 2 1 2019 8 7 6 5 4 3 2 1 2019 8 7 6 5 4 3 2 1 2019 8 7 6 5 4 3 2 1 2019 8 7 6 5 6 5 4 3 5 1 2019 8 7 6 7 7 7 2019 8 7 7 7 7 2019 8 7 7 7 2019 8 7 7 7 2019 8 7 7 7 2019 8 7 7 2019 8 7 7 2019 8 7 7 2019 8 7 7 2019 8 7 7 2019 8 7 7 2019 8 7 7 2019 8 7 7 2019 8 7 7 2019 8 2019 8 7 2019 8 7 2019 8 7 2019 8 2019 8 7 2019 8 2019 8 2019 8 2019 8 2019 8 2019 8 2019 8 2019 8 2019 8 2019 8 2019 8 2019 8 2019 8 2019 8 2019 8 2019 8 2019 8 2019 8 201	Connector No. E34 Connector Name WIRE TO WIRE Connector Color WHITE 11 10 9 8 7	Signal Name	Н
No. M74 Name WIRE T Color WHITE 2019181716 Ao. Color of G/Y G/Y	Connector No. E34 Connector Name WIRE T Connector Color WHITE 11 10 9 8 7 6 7 6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Color of G/B	I
Connector No. Connector Name Connector Color H.S. Terminal No. Vol	Connector No. Connector Colc	Terminal No.	J
			K
Signal Name		Signal Name	EXL
	Connector No. M158 Connector Name WIRE TO WIRE Connector Color WHITE		M
Connector No. MSE Connector Color WH HAS. H.S. Terminal No. Wire of 1 B 1 B 1 B 1 B 1 B 1 B 1 B 1 B 1 B 1	Connector Name WIRE T Connector Color WHITE Connector Color WHITE	No. Color of G/B	N
Connector Na. Connector Collector Co	Connector No. Connector Colo	Terminal No.	0
	I	AALIA0191GB	Р

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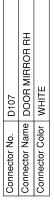


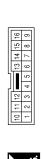
TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

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TO WIRE	Signal Name		Signal Name	С
ame WIRE TO US WHITE	Color of Wire G/B	3. D102 ame WIRE TO WIRE slor BROWN 1 2 3 4 5 6 6 6 17 10 11 12 13 14 15 16 17	Color of Wire G/Y	D
Connector No. D3 Connector Name WIRE TO WIRE Connector Color WHITE H.S.	Terminal No.	Connector No. D102 Connector Name WIRE TO WIRE Connector Color BROWN 1 2 3 4 5 6 6 17 17 12 13 14 15 16 17 17 17 17 17 17 17 17 17 17 17 17 17	Terminal No.	Е
				F
6 7 16 16 17 19 19 19 19 19 19 19 19 19 19 19 19 19	аше		ame	G
O WIRE	Signal Name	Connector No. D101 Connector Name WIRE TO WIRE Connector Color WHITE	Signal Name	Н
No. D2 Name WIRE T Color WHITE 1 2 3 10 11	Color of Wire B	No. D101 Name WIRE T Color WHITE	Color of Wire B	1
Connector No. Connector Color Connector Color H.S.	Terminal No.	Connector No. Connector Name Connector Color	Terminal No.	J
				K
	Signal Name -	표	Signal Name	EXL
Connector No. B107 Connector Name WIRE TO WIRE Connector Color WHITE		Connector No. D4 Connector Name DOOR MIRROR LH Connector Color WHITE STATE H.S.		M
r No. B107 r Name WIRE r Color WHII	No. Wire G/Y	r No. D4	Color of G/B B B B B B B B B B B B B B B B B B B	N
Connector No. Connector Name Connector Color	Terminal No.	Connector No. Connector Color Connector Color	Terminal No.	0
			AWLIA0163GB	Р

Revision: March 2010 **EXL-73** 2008 QX56







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< COMPONENT DIAGNOSIS > PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM Α Wiring Diagram INFOID:0000000001547148 IPDM E/R (INTELLIGENT POWEBUTION MODULE ENGINE ROOM) (E122), (E124) В ■□■: DATA LINE С (E152) (M31) D FRONT COMBINATION LAMP RH (E107) 6 IGNITION RELAY DATA LINE Е @PARKING CPU **◆**TO ILLUMINATION F 20A 53 REAR COMBINATION LAMP RH (8130) 20A 52 E139 B107 TAIL TAIL LAMP RELAY #33 #33 **⊕** Н REAR COMBINATION LAMP LH (B70) 10A TAIL AMP E34 B40 J FRONT COMBINATION LAMP LH (E11) PARKING, LICENSE PLATE AND TAIL LAMPS K **PARKING** EXL BCM (BODY CONTROL MODULE) (M18), (M20) LICENSE PLATE LAMP (D703) M н Фвн COMBINATION SWITCH (M28) Ν IGNITION SWITCH ON OR START 10A 59 70

E152) M31

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BATTERY

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Signal Name

Color of Wire

Terminal No.

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W/B W/L

> 10G 31G 42G

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PARKING, LICENSE PLATE AND TAIL LAMP CONNECTORS

Signal Name

Color of Wire

Terminal No.

Connector Name BCM (BODY CONTROL MODULE) Connector Color WHITE H.S. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 11 12 12 12 12 12 12 12 13 13 13 13 13 13 13 13 13 13 13 13 13	ŏ	Connector No.	60	ō	2	١.	_	M18	ω										_	
Connector Color WHITE Mail	ŭ	l L	<u></u>	ō	Sa	Įξ	-	l‰≥	ΣĞ	1 <u>@</u> =		≥	18	z	Ě	占				
H.S. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 16 19 10 11 12 13 14 15 16 17 18 19 19 19 19 19 19 19 19 19 19 19 19 19	ပ	딛	당	ō	ပြ	ē	-	≶	≒	щ										
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 10 11 12 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 35 36 37 38 38		Æ ±	16					<u> </u>		I IN	l 1 <i>V</i>	l 107	_							
21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39	L	2	m		2				ه ۱	10	=	7	_ হ	4	15	16	1	8		20
	21	22	23	24	25	26	27	28	29	8	31	32	33	34	35	36	37	88	88	40

0	BCM (BODY CONTROL MODULE)	BLACK	56 57 58 59 60 61 62 63 64 85 86 87 88 80 70	3		Signal Name	Olginal Fallic	GND (POWER)	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	BALI (FL)
. M20		-	56 57	3		Color of	0	В	0//4/	۸/R
Connector No.	Connector Name	Connector Color		H.S.		Terminal No Wing		29	0.5	2
									1	

OUTPUT-5 OUTPUT-4 OUTPUT-3

R/G

R/Υ

OUTPUT-2 OUTPUT-1

O/B ₩ IGN SW

W/L

38

INPUT-3

INPUT-2 INPUT-1

G/B

2 9 32 33 34 35 36

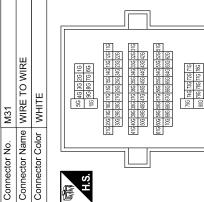
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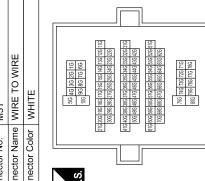
INPUT-4

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SB

CAN-L	Д	40
CAN-H	L	39





	COMBINATION SWITCH	WHITE	10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Signal Name	ı	ı	I	I	ı	I	I	-	_	_	
. M28	_		12 13	Color of Wire	R/W	O/B	٦	RY	R/G	>	G/B	SB	G/Y	У	
Connector No.	Connector Name	Connector Color	是 H.S.	Terminal No.	-	2	က	4	5	9	7	8	6	10	

< COMPONENT DIAGNOSIS >

E107 FRONT COMBINATION LAMP RH BLACK	6 2 3 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	Signal Name	_	1		
me FRONT LAMP R lor BLACK	- 5	Color of Wire	B/L	В		
Connector No. Connector Name Connector Color	H.S.	Terminal No. Wire	3	4		
				1		
E TO WIRE TE	20 19 18 17 16 15 14 13 12	Signal Name	1			
me WIRE	11 10 9 8 7 24 23 22 21 20	Color of Wire	R/L			
Connector No. E34 Connector Name WIRE TO WIRE Connector Color WHITE	H.S.	Terminal No.	12			
				,		
E11 FRONT COMBINATION LAMP LH BLACK	2 S R R R R R R R R R R R R R R R R R R	Signal Name	1	1		
-	- 29	Color of Wire	B/L	В		
Connector Name Connector Color	H.S.	Terminal No.	က	4		

						1
6	IE TO WIRE			Signal Name	1	
E139	or WH	[[<u> </u>	Color of Wire	R/L	
Connector No.	Connector Name WIRE TO WIRE Connector Color WHITE	Ą	H.S.	Terminal No. Wire	7	
4	Connector Name PDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)	CK	09 19 28 82 82 82 82 83 82 83 82 83 83 83 83 83 83 83 83 83 83 83 83 83	Signal Name	TAIL LAMP	GND (PWR)
E124	me IPDI POV MOI	lor BLACK	82 83	Color of Wire	R/L	В
Connector No.	Connector Na	Connector Color	呵呵 H.S.	Terminal No. Wire	22	59

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Š	GND (SIG)	CAN-H	CAN-L
Color of Wire	В	٦	Ь
Terminal No.	38	39	40
		Wire Signal	Wire Signature S

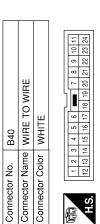
Connector Name | IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

Connector Color

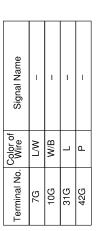
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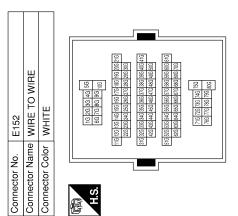
Revision: March 2010 EXL-77 2008 QX56

< COMPONENT DIAGNOSIS >

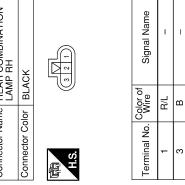


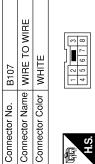
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4	15		Color of Wire	Ι,
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-	12		Terminal No.	
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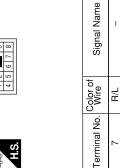












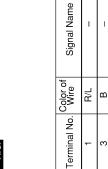
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Name REAR COMBINATION LAMP LH	Color BLACK	3 2 1

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Connector No.

Connector Connector



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< COMPONENT DIAGNOSIS >

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D601 WIRE TO WIRE WHITE Signal Name WIRE TO WIRE WHITE WIRE TO WIRE WHITE WHITE WHITE WHITE WHITE Wire Signal Name Wire Wire Signal Name Wire Signal Name Wire	С
Connector No. D601 Connector Color WHITE Terminal No. Wire Connector Name WIRE TO WIRE Signal No. Wire Connector Name WIRE TO WIRE Connector Name WIRE TO WIRE Connector Color MHITE To 6 5 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	D
Connector No. Connector No. H.S. Terminal No. Connector No. Connector Name Connector Color Terminal No. Terminal No. A. Terminal No. Terminal No. A. Terminal No. Terminal No	Е
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Name Name	G
Signal Signal	Н
Connector Name WIRE T Connector Color WHITE Terminal No. Wire Sonnector Name WIRE T Connector Name WIRE T Connector Color WHITE Terminal No. Color of RE T Connector Name WIRE T Terminal No. Wire S B Terminal No. Color of RE T Terminal No. Color of RE T Terminal No. Wire S B Terminal No. Wire S B Terminal No. Wire	I
Connector No. 3 Terminal No. Terminal No. 3	J
	K
Signal Name 1 1 1 1 1 1 1 1 1	EXL
	M
Connector Name WIRE T Connector Name WIRE T Connector Color WHITE A R/L A R/L Connector Name WIRE T Connector Name WIRE T Connector Color WHITE T E E E E E E E E	N
Connector No. Connector No. Connector No. Connector No. Connector Nan Connector Nan Connector Nan Connector Nan Connector Nan Connector Nan A 4	0
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Revision: March 2010 **EXL-79** 2008 QX56

Connector No.	D703
Connector Name	Connector Name LICENSE PLATE LAMPS
Connector Color WHITE	WHITE
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Signal Name	_	_
Color of Wire	B/L	В
Terminal No. Wire	1	2

Name	
RE TO WIRE IITE A 5 6 Signal Name	
me WIRE III III III III III III III III III	٥
Connector Name WIRE TO WIRE Connector Color WHITE Terminal No. Color of Signal Name of Wire	•

)1	WIRE TO WIRE	WHITE	0 11 12 13 14 15 16	Signal Name	_
. D701		_	8 9 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0	Color of Wire	<u>a</u>
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	4

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STOP LAMP

Wiring Diagram

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STOP LAMP

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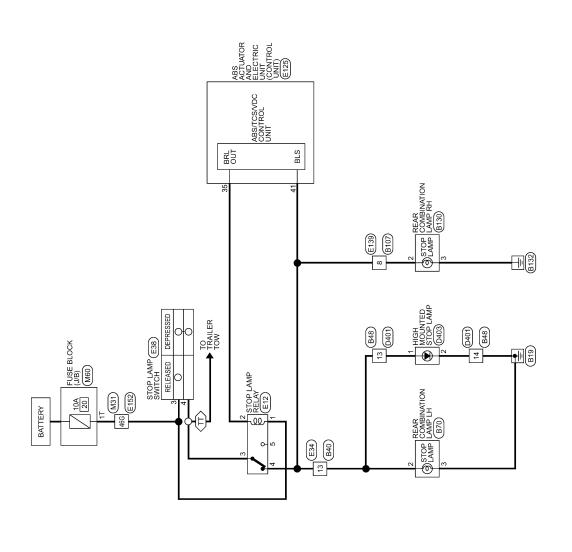
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STOP LAMP CONNECTORS

E12	STOP LAMP RELAY	BLACK
Connector No.	Connector Name	Connector Color
M60	FUSE BLOCK (J/B)	WHITE
Connector No.	Connector Name	Connector Color
M31	WIRE TO WIRE	WHITE
Connector No.	Connector Name	Connector Color





Color of Wire	R/Y
Terminal No.	11

Signal Name

Signal Name

Color of Wire

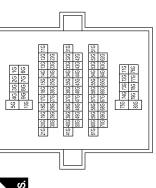
Terminal No.

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Signal Name	ı	
Color of Wire	R/Y	
Terminal No.	46G	



Connector Name STOP LAMP SWITCH

E38

Connector No.

Connector Color WHITE

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Signal Name

Color of Wire

Terminal No.

R/G ₽

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	15	46			
	14	45			
	2 3 4 5 6 7 8 9 10 11 12 13 14 15 17 18 19 20 21 28 29 30 3	33 34 35 36 37 38 39 40 41 42 43 44 45 46			
	12	43			<u>e</u>
	11	42			Signal Name
L	10 2	4	Н		<u>_</u>
	9	4			Sign
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H	7	38	Н		
	1 2	37			g e
	5 0	36			Solor of Wire
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	2 7 1	33			ina
	Η-	32			Terminal No.
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_					

BRL_OUT

L/W R/B

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BLS

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	WIRE TO WIRE	11	14 10 9 8 7	Signal Name	1
. E34	ıme WIF	lor WHITE	23 22 21 2	Color of Wire	R/B
Connector No.	Connector Name	Connector Color	H.S.	Terminal No. Wire	13

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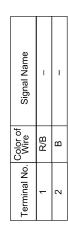
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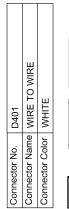
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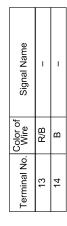
Connector No. B40		Connector No. B107 Connector Name WIRE TO WIRE Connector Color WHITE	Color of Signal Signal	n n n
Connector No. E152 Connector Name WIRE TO WIRE Connector Color WHITE To E25 Sto Ida 50 Ref To 86 50 90 Ref To 86 50 90	Terminal No. Wire Signal Name	Connector No. B70 Connector Name REAR COMBINATION LAMP LH Connector Color GRAY	Color of Signal Wire Signal	3 P P P P P P P P P P P P P P P P P P P
Vame -	Ten	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	аше	
Connector Name WIRE TO WIRE Connector Color WHITE A.S. Solor of Signal I		Connector No. B48 Connector Name WIRE TO WIRE Connector Color WHITE M.S.	Terminal No. Wire	

Connector Name HIGH MOUNTED STOP LAMP Connector Color GRAY	ir No. D403	Connector No.
Connector Color GRAY	r Name HIGH MOUNTED STOI	Connecto
	r Color GRAY	Connecto

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Signal Name	I	1
Color of Wire	R/B	В
Terminal No.	2	3

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BACK-UP LAMP

Wiring Diagram

⟨TT⟩: WITH TRAILER TOW

TO TOW NAVIGATION SYSTEM TO MIRROR E152 M31 M31 IGNITION SWITCH ON OR START 10A

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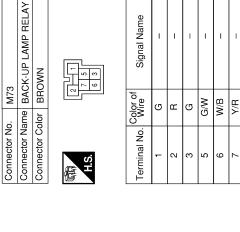
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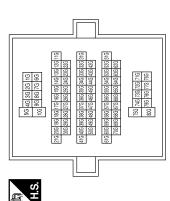
BACK-UP LAMP

BACK-UP LAMP CONNECTORS

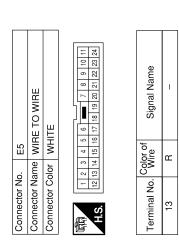




Signal Name	ı	I	ı	-	_
Color of Wire	5	G/W	M/B	Y/R	В
Terminal No.	1G	5G	98	96	14G



Connector No.	. E119	6
Connector Name		IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	lor WHITE	ITE
H.S.	9 8 7 6 18 17 18 15	9 8 7 6 5 4 3
Terminal No. Wire	Color of Wire	Signal Name
16	g	REV LAMP



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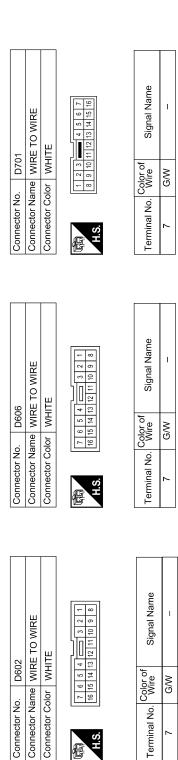
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	Connector No. F14 Connector Name WIRE TO WIRE Connector Color WHITE Title 9 8 7 = 6 5 4 3 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1							
Connector No. E139 Connector Color WHITE Connector Color WHITE A.S. Terminal No. Wire Signal Name 7 G/W -	Connector No. F9 Connector Name A/T ASSEMBLY Connector Color GREEN #S. # 1 2 1 1 1 1 1 1 1 1 1							
Connector No. E121 Connector Name IPDM E/R (INTELLICENT POWER DISTRIBUTION MODULE ENGINE ROOM) Connector Color BROWN Terminal No. Wire Signal Name 27 W/B T TOW REV LAMP	Connector No. E152 Connector Name WIRE TO WIRE Connector Color BROWN To propose the color of	Terminal No. Wire Signal Name	16 6	2G G/W -	8G W/B -	9G Y/R –	14G R –	
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Revision: March 2010 **EXL-87** 2008 QX56

onnector No. B107 onnector Name WIRE1 onnector Color WHITE H.S. Color of	TRANSMISSION TROL MODULE) Connector Name Wife Connector Color Wife ALS Terminal No. Color of Wife	SSION DULE)
	(TRANSMISSION TROL MODULE) Y Signal Name	(TRANSMISSION TROL MODULE) Y Signal Name



Color of Wire G/W Terminal No.

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Connector No. D602

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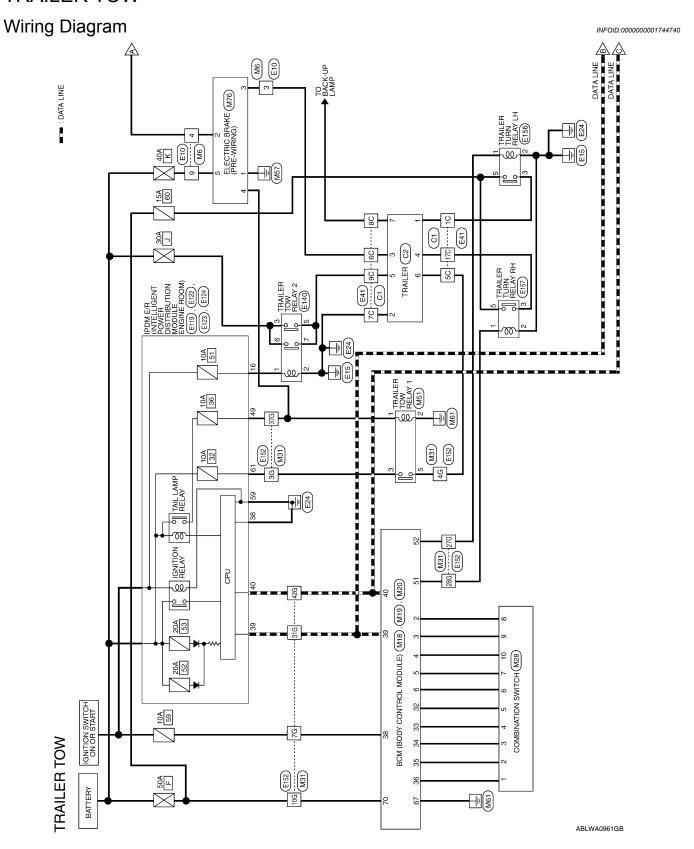
Connector No. D705

<u> </u>	Signal Name	I	
	Color of Wire	G/W	۵
所 H.S.	Terminal No.	-	c

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Connector Name BACK-UP LAMP LH	٩٧	<u> </u>	Signal Name	1	
ıme BAC	lor GRAY		Color of Wire	G/W	۵
Connector Na	Connector Color	H.S.	Terminal No.	-	c

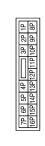
TRAILER TOW



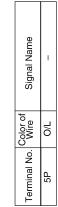
■ : DATA LINE Α В COMBINATION METER (M23), (M24) С D Е F IGNITION SWITCH ON OR START G UNIFIED METER CONTROL UNIT (WITH INFORMATION DISPLAY) 10A Н 194 40 J Κ EXL RELEASED DEPRESSED STOP LAMP SWITCH
(E38) \mathbb{N} Ν BATTERY 0 ABLWA0962GB Р

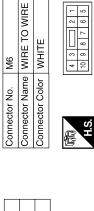
TRAILER TOW CONNECTORS

M4	Connector Name FUSE BLOCK (J/B)	WHITE
Connector No.	Connector Name	Connector Color WHITE



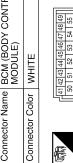






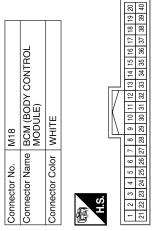
Signal Name	-	_	_
Color of Wire	BR/W	R/G	В
Terminal No.	3	4	6

M19	Connector Name BCM (BODY CONTROL MODULE)	WHITE	
Connector No.	Connector Name	Connector Color WHITE	



Signal Name	TRAILER_RH_FLASH	TRAILER_LH_FLASH
Color of Wire	G/Y	G/B
Terminal No.	51	52

Signal Name	INPUT-5	INPUT-4	INPUT-3	INPUT-2	INPUT-1	OUTPUT-5	OUTPUT-4	OUTPUT-3	OUTPUT-2	OUTPUT-1	IGN SW	CAN-H	CAN-L
Color of Wire	SB	G/Y	У	G/B	Λ	B/G	R/Y	Т	O/B	R/W	M/L	7	Ь
Terminal No.	2	3	4	2	9	32	33	34	32	36	38	39	40



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4	COMBINATION METER	WHITE				12 11 10 9 8 7 6 5 4 3	32 31 30 29 28 27 26 25 24 23	Signal Name	CAN-H	CAN-L	ı	ı	ı	1
. M24	_					15 14 13	35 34 33	Color of Wire	_	۵	ш	0/5	B/G	Y/R
Connector No.	Connector Name	Connector Color		管	H.S.	20 19 18 17 16	40 39 38 37 36	Terminal No.	10	Ξ	20	21	33	40

Signal Name

Terminal No.

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Signal Name	-	1	1	ı	1	-	_	_	ı	-
Color of Wire	R/W	O/B	T	R/Υ	R/G	۸	G/B	SB	G/Y	Υ
erminal No. Wire	1	2	3	4	2	9	7	8	6	10

Connector No.	tor No.	M23
Connect	tor Name	Connector Name COMBINATION METER
Connect	Connector Color WHITE	WHITE

Connector Name BCM (BODY CONTROL MODULE)

Connector No. M20

Connector Color BLACK



	_	_
Signal Name	GND (POWER)	BATT (FL)
Color of Wire	В	M/B
Terminal No.	29	20

Signal Name	GND (POWER)	BATT (FL)	
Color of Wire	В	M/B	
minal No.	29	20	

00										
Color of Wire	B/W	g/O	٦	R/Υ	B/G	>	G/B	SB	G/Y	^
Terminal No.	-	2	3	4	2	9	7	8	6	0+

Connector No.	M28
Connector Name	Connector Name COMBINATION SWITCH
Connector Color	WHITE
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	12 13 10 0 9 8 7
-	14 11 1 2 3 4 5 6
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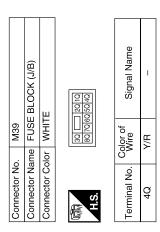
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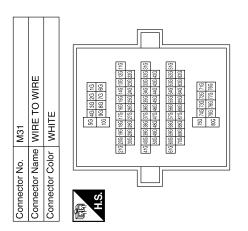
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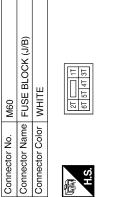
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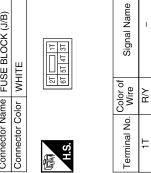


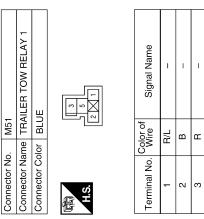
Signal Name	ı	ı	1	1	ı	ı	1	1	-	ı
Color of Wire	BR	æ	M/L	M/B	G/B	Y/B	7	B/L	Ь	R/Υ
Terminal No.	3G	46	76	10G	27G	28G	31G	37G	42G	46G



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	ELECTRIC BRAKE (PRE-WIRING)	WHITE	2	Signal Name	GND	STOP	I	ILL (TAIL)	B+
. M76		_	[2] -	Color of Wire	В	B/G	BR/W	R/L	۳
Connector No.	Connector Name	Connector Color	Э. н.	Terminal No.	1	2	ဧ	4	2







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nnector Name WIRE T	S. Signal Name Wire Signal Name Wire Signal Name Signal Na	Connector Name WIRE TO WIRE Connector Color WHITE Terminal No. Wire Signal N	Solor of Wire Color of Wire Color of Wire Color of Color	E TO WIRE TE Te Signal Name	Connector Name Connector Color H.S. Terminal No. Co	Connector Name WIRE T Connector Color WHITE ##S Terminal No. Wire	Connector Name WIRE TO WIRE Connector Color WHITE ##S Terminal No. Wire Signal Name
R/G	ı	က	BR/W	1	11	R/G	-
		4	B/G	1		-	-
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Signal Namo	olgilal Naille	ı	ı	ı	ı	ı	1	ı	
Color of	wire	G/B	œ	BR/W	В	Y/R	M/L	Y/B	
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]		1				
E41	lame WIRE TO WIRE	GRAY			2C 3C 4C 5C	6C 7C 8C 9C 10C 11C	120 130 140 150 160 170 180 190 210	220 230 240 250 260 270 280 290 300 310	
lo.	lame	olor			5	8	120	282	

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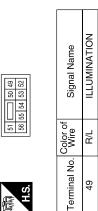
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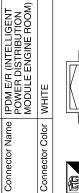
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WIRE TO WIRE	GRAY		2C 3C 4C 5C	6C 7C 8C 9C 10C 11C	120 130 140 150 160 170 180 190 200 210	220 230 240 250 260 270 280 290 300 310	32C 33C 34C 35C 37C 38C 39C 40C 41C	43C 44C 45C 46C 47C	49C 50C 51C 52C	
Connector Name	Connector Color		10		120		380	420	48C	

Connector No. J Κ Connector Name STOP LAMP SWITCH Signal Name EXL M Connector Color WHITE Terminal No. Wire R/G | N/G Connector No. Ν က Conne Termi 0 ABLIA2476GB Ρ

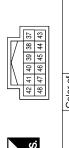
Connector No.	E123
Connector Name	Connector Name PDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color BROWN	BROWN

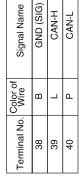




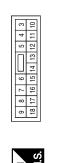
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Connector No.



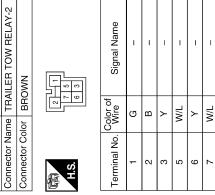






Signal Name	REVERSE LAMP	
Color of Wire	В	
Terminal No.	16	





Connector No.	E124
Sonnector Name	Connector Name PDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color BLACK	BLACK



Signal Name	GND (PWR)	TRAIL RLY SUPP	
Color of Wire	В	BR	
Terminal No.	29	61	

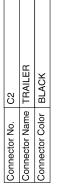
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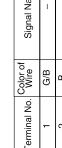
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. E156	-	lor BLUE		3	<u> "</u>	X				Color of Wire	G/B	В	_	G/B	Color of Wire	G/B	æ	BR/W	В	Y/R	M/L	Y/B											D
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Color of	. Wire	BB	В	L/W	M/B	G/B	A/B	_	R/L	Ь	R/Y				o. C1	olor GRA	5		ြင္သ	10C 9C	210 200 190 18	310 300 290 280 270	410 400 390 38	46C 45C	220								I
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E152	Connector Name WIRE TO WIRE	v WHITE			16 26 3	66 76 8	11G 12G 13G 14G 15G 16G 17G	226 236 246 256	31G 32G 33G 34G 35G 36G 37G 42G 43G 44G 45G 46G 47G	516 526 536 546 556	56	716 726 73	V/0// 00/		E157	n Allen	DLUE	67	2	2 🗙			Color of		Y/B	В		Y/B					M
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Signal Name	ı	1	1	I	l	1	ı
Color of Wire	G/B	В	BR/W	A//B	M/L	В	Y/B
Terminal No.	-	2	3	4	2	9	7

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BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

ECU DIAGNOSIS Α **BCM (BODY CONTROL MODULE)** Description INFOID:0000000001547151 В REFERENCE VALUES FOR BCM For BCM reference values, refer to BCS-38, "Reference Value". TERMINAL LAYOUT FOR BCM D For the terminal layout for the BCM, refer to BCS-40, "Terminal Layout". PHYSICAL VALUES FOR BCM Е For physical values for the BCM, refer to BCS-40, "Physical Values". WIRING DIAGRAM - BCM F For the BCM wiring diagram, refer to BCS-46, "Wiring Diagram". DTC INSPECTION PRIORITY CHART - BCM For the BCM DTC inspection priority chart, refer to BCS-50, "DTC Inspection Priority Chart". DTC INDEX - BCM Н For the BCM DTC index, refer to BCS-50, "DTC Index". K **EXL** Ν

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

< ECU DIAGNOSIS >

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

Description INFOID:000000001547152

REFERENCE VALUES FOR IPDM E/R

For IPDM E/R reference values, refer to PCS-19, "Reference Value".

TERMINAL LAYOUT FOR IPDM E/R

For the terminal layout for the IPDM E/R, refer to PCS-21, "Terminal Layout".

PHYSICAL VALUES FOR IPDM E/R

For physical values for the IPDM E/R, refer to PCS-21, "Physical Values".

WIRING DIAGRAM - IPDM E/R

For the IPDM E/R wiring diagram, refer to PCS-26, "Wiring Diagram".

FAIL SAFE - IPDM E/R

For IPDM E/R fail safe information, refer to PCS-29. "Fail Safe".

DTC INDEX - IPDM E/R

For the IPDM E/R DTC index, refer to PCS-31, "DTC Index".

EXTERIOR LIGHTING SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

SYMPTOM DIAGNOSIS

EXTERIOR LIGHTING SYSTEM SYMPTOMS

Symptom Table

CAUTION:

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

Symp	otom	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 <u>EXL-28</u> .
	Both sides	Symptom diagnosis "BOTH SIDE HEADLAMPS DO N Refer to EXL-104.	OT SWITCH TO HIGH BEAM"
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.		Combination switch Harness between the combination switch and BCM BCM	Combination switch Refer to BCS-36.
	Both sides	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-30</u> .
	Both sides	Symptom diagnosis "BOTH SIDE HEADLAMPS (LO) A Refer to EXL-105, "Description".	ARE NOT TURNED ON"
	When the ignition switch is turned ON	BCM Combination switch	Combination switch Refer to BCS-36.
Headlamp does not turn OFF.	The ignition switch is turned OFF (After activating the battery saver).	IPDM E/R	_
Headlamp is not turned Ol	N/OFF with the lighting	Combination switch Harness between the combination switch and BCM BCM	Combination switch Refer to BCS-36.
switch AUTO.		Optical sensor Harness between the optical sensor and BCM BCM	Optical sensor Refer to <u>EXL-40</u> .

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EXTERIOR LIGHTING SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

Symp	otom	Possible cause	Inspection item			
Daytime light system does	not activate.	 Either high beam bulb Parking brake switch Combination switch BCM IPDM E/R Daytime light relay Harness between IPDM E/R and daytime light relay. 	Daytime light system description. Refer to EXL-9, "System Description".			
Front fog lamp is not turned ON.	One side	Front fog lamp bulb Harness between IPDM E/R and the front combination lamp Front combination lamp IPDM E/R	Front fog lamp circuit Refer to EXL-32.			
	Both sides	Symptom diagnosis "BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON" Refer to EXL-107.				
Parking lamp is not turned ON.	One side	Fuse Parking lamp bulb Harness between IPDM E/R and the front/rear combination lamp Front/rear combination lamp IPDM E/R	Parking lamp circuit Refer to <u>EXL-34</u> .			
	Both sides	Symptom diagnosis "PARKING, LICENSE PLATE AND ON" Refer to EXL-106.	TAIL LAMPS ARE NOT TURNED			
Turn signal lamp does not blink.	Indicator lamp is normal. (The applicable side performs the high flasher activation).	Harness between BCM and each turn signal lamp Turn signal lamp bulb Door mirror	Turn signal lamp circuit Refer to EXL-37.			
	One side	Combination meter	_			
Turn signal indicator lamp	Both sides (Always)	Turn signal indicator lamp signal Combination meter BCM	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)	The combination meter power supply and the ground circuit Combination meter	Combination meter Power supply and the ground circuit Refer to MWI-30.			

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

NORMAL OPERATING CONDITION

Description A

XENON HEADLAMPS

The brightness and color of the light may vary slightly immediately after turning the headlamp ON. This conditionwill 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.

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BOTH SIDE HEADLAMPS DO NOT SWITCH TO HIGH BEAM

< SYMPTOM DIAGNOSIS >

BOTH SIDE HEADLAMPS DO NOT SWITCH TO HIGH BEAM

Description INFOID:000000001547155

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

Diagnosis Procedure

INFOID:0000000001547156

1. COMBINATION SWITCH INSPECTION

Check the combination switch. Refer to BCS-36, "Diagnosis Procedure".

Is the combination switch normal?

YES >> GO TO 2

NO >> Repair or replace the malfunctioning part.

2.CHECK HEADLAMP (HI) REQUEST SIGNAL INPUT

(P)CONSULT-III DATA MONITOR

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

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

Is the item status normal?

YES >> GO TO 3

NO >> Replace BCM. Refer to BCS-55, "Removal and Installation".

3.HEADLAMP (HI) CIRCUIT INSPECTION

Check the headlamp (HI) circuit. Refer to EXL-28. "Description".

Is the headlamp (HI) circuit normal?

YES >> Replace IPDM E/R. Refer to PCS-34, "Removal and Installation of IPDM E/R".

NO >> Repair or replace the malfunctioning part.

BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

Description INFOID:000000001547157

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

Diagnosis Procedure

INFOID:0000000001547158

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1. CHECK COMBINATION SWITCH

Check the combination switch. Refer to BCS-36, "Diagnosis Procedure".

Is the combination switch normal?

YES >> GO TO 2

NO >> Repair or replace the malfunctioning part.

2.CHECK HEADLAMP (LO) REQUEST SIGNAL INPUT

©CONSULT-III DATA MONITOR

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

Monitor item	Condition		Monitor status
HL LO REQ	Lighting switch	2ND	ON
		OFF	OFF

Is the item status normal?

YES >> GO TO 3

NO >> Replace BCM. Refer to BCS-55, "Removal and Installation".

3.HEADLAMP (LO) CIRCUIT INSPECTION

Check the headlamp (LO) circuit. Refer to EXL-30, "Description".

Is the headlamp (LO) circuit normal?

YES >> Replace IPDM E/R. Refer to PCS-34, "Removal and Installation of IPDM E/R".

NO >> Repair or replace the malfunctioning part.

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Revision: March 2010 **EXL-105** 2008 QX56

PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

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

INFOID:0000000001547160

1. COMBINATION SWITCH INSPECTION

Check the combination switch. Refer to BCS-36, "Diagnosis Procedure".

Is the combination switch normal?

YES >> GO TO 2

NO >> Repair or replace the malfunctioning part.

2.CHECK TAIL LAMP RELAY REQUEST SIGNAL INPUT

(P)CONSULT-III DATA MONITOR

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

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

Is the item status normal?

YES >> GO TO 3

NO >> Replace BCM. Refer to BCS-55, "Removal and Installation".

3. PARK LAMP CIRCUIT INSPECTION

Check the parking lamp circuit. Refer to EXL-34, "Description".

Is the tail lamp circuit normal?

YES >> Replace IPDM E/R. Refer to PCS-34, "Removal and Installation of IPDM E/R".

NO >> Repair or replace the malfunctioning part.

BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

INFOID:0000000001547161

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

Diagnosis Procedure

INFOID:0000000001547162

1. COMBINATION SWITCH INSPECTION

Check the combination switch. Refer to BCS-36, "Diagnosis Procedure".

Is the combination switch normal?

YES >> GO TO 2

Description

NO >> Repair or replace the malfunctioning part.

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2.CHECK FRONT FOG LAMP REQUEST SIGNAL INPUT

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

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

Is the item status normal?

YES >> GO TO 3

NO >> Replace BCM. Refer to BCS-55, "Removal and Installation".

3.FRONT FOG LAMP CIRCUIT INSPECTION

Check the front fog lamp circuit. Refer to EXL-32, "Description".

Is the front fog lamp circuit normal?

YES >> Replace IPDM E/R. Refer to PCS-34, "Removal and Installation of IPDM E/R".

NO >> Repair or replace the malfunctioning part.

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Revision: March 2010 **EXL-107** 2008 QX56

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PRECAUTION

PRECAUTIONS

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

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the 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.

Precaution Necessary for Steering Wheel Rotation After Battery Disconnect

INFOID:0000000006218447

NOTE:

- This Procedure is applied only to models with Intelligent Key system and NATS (NISSAN ANTI-THEFT SYS-TEM).
- Remove and install all control units after disconnecting both battery cables with the ignition knob in the "LOCK" position.
- Always use CONSULT-III to perform self-diagnosis as a part of each function inspection after finishing work. If DTC is detected, perform trouble diagnosis according to self-diagnostic results.

For models equipped with the Intelligent Key system and NATS, an electrically controlled steering lock mechanism is adopted on the key cylinder.

For this reason, if the battery is disconnected or if the battery is discharged, the steering wheel will lock and steering wheel rotation will become impossible.

If steering wheel rotation is required when battery power is interrupted, follow the procedure below before starting the repair operation.

OPERATION PROCEDURE

1. Connect both battery cables.

NOTF:

Supply power using jumper cables if battery is discharged.

- 2. Use the Intelligent Key or mechanical key to turn the ignition switch to the "ACC" position. At this time, the steering lock will be released.
- Disconnect both battery cables. The steering lock will remain released and the steering wheel can be rotated.
- 4. Perform the necessary repair operation.

PRECAUTIONS

< PRECAUTION >

5. When the repair work is completed, return the ignition switch to the "LOCK" position before connecting the battery cables. (At this time, the steering lock mechanism will engage.)

6. Perform a self-diagnosis check of all control units using CONSULT-III.

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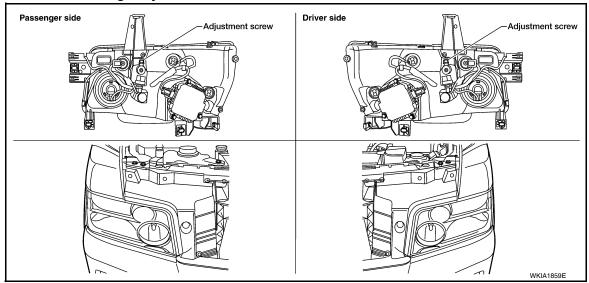
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ON-VEHICLE REPAIR

ADJUSTMENT AND INSPECTION HEADLAMP

HEADLAMP: Aiming Adjustment

INFOID:0000000001547282



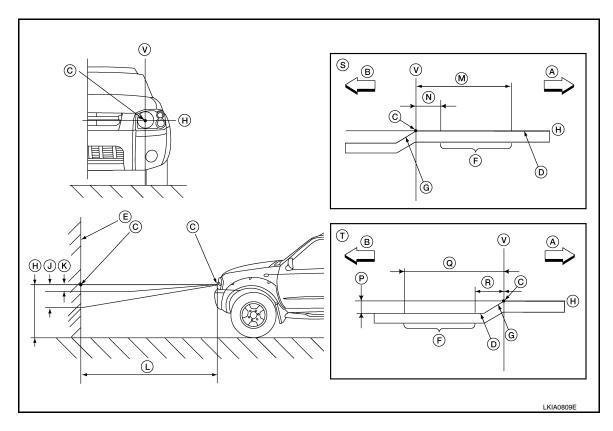
NOTE:

- For details, refer to the regulations in your area.
- If vehicle front body has been repaired and /or the headlamp assembly has been replaced, check headlamp aiming.

HEADLAMP AIMING

NOTE:

- Before performing aiming adjustment, check the following:
- Ensure all tires are inflated to correct pressure.
- Place 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). Coolant and engine oil filled to correct level, and fuel tank full.
- Confirm spare tire, jack and tools are properly stowed.
- Aim each headlamp individually and ensure other headlamp beam pattern is blocked from screen.
- Use adjusting screw to perform aiming adjustment



- A. Right
- D. Cutoff line
- G. Step
- K. 37 mm (1.46 in.)
- N. 133 mm (5.24 in.)
- R. 200 mm (7.87 in.)

- B. Left
- E. Screen
- H. Horizontal center line of headlamp
- L. 7.62 m (25 ft.)
- P. 53.2 mm (2.09 in.)
- S. RH headlamp aiming screen
- C. Center of headlamp bulb (H-V point)
- F. Aim evaluation segment
- J. 103 mm (4.06 in.)
- M. 399 mm (15.71 in.)
- Q. 466 mm (18.35 in.)
- T. LH headlamp aiming screen

NOTE:

Basic illuminating area for adjustment should be within the range shown on the aiming chart. Adjust head-lamps accordingly.

LOW BEAM AND HIGH BEAM

- 1. Turn headlamp low beam on.
- 2. Use adjusting screw to perform aiming adjustment.

FRONT FOG LAMP

FRONT FOG LAMP : Aiming Adjustment

The fog lamp is a semi-sealed beam type which uses a replaceable halogen bulb. Before performing aiming adjustment, make sure of the following.

- · Keep all tires inflated to correct pressure.
- Place vehicle on level ground.

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ADJUSTMENT AND INSPECTION

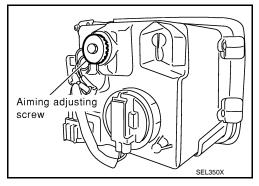
< ON-VEHICLE REPAIR >

 See that 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 driver seat.

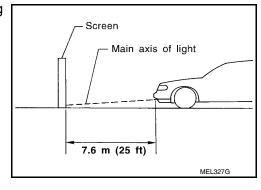
Adjust aiming in the vertical direction by turning the adjustment screw.

NOTE:

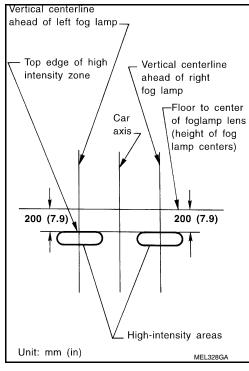
Access adjustment screw from underneath front bumper. Turn screw clockwise to raise pattern and counterclockwise to lower pattern.



- 1. Set the distance between the screen and the center of the fog lamp lens as shown.
- Turn front fog lamps ON.



- 3. Adjust front fog lamps using adjusting screw so that the top edge of the high intensity zone is 200 mm (7.9 in) below the height of the fog lamp centers as shown.
 - When performing adjustment, if necessary, cover the head-lamps and opposite fog lamp.



REMOVAL AND INSTALLATION

HEADLAMP

Bulb Replacement

CAUTION:

- Disconnect battery negative terminal before touching xenon bulb or headlamp wiring harness assembly.
- Turn headlamp switch OFF before disconnecting headlamp harness connector.
- Do not touch bulb by hand right after being turned off. Burning may result.
- Do not touch the glass of bulb directly by hand. Keep grease and other oily substances away from it.
- Do not turn xenon bulb ON when xenon bulb is removed from front combination lamp assembly.
- After installing the bulb, be sure to install the bulb socket securely to ensure watertightness.
- Do not leave bulb out of front combination lamp assembly for a long time because dust, moisture, smoke, etc. may affect the performance of the lamp. When replacing bulb, be sure to replace it with a new one.

HEADLAMP (OUTER SIDE), FOR LOW BEAM

Removal

- 1. Position fender protector aside.
- 2. Turn headlamp switch OFF.
- Disconnect battery negative terminal.
- Remove ballast.
- Disconnect headlamp electrical connector.
- 6. Release bulb retaining spring and pull bulb straight out.

Installation

Installation is in the reverse order of removal.

HEADLAMP (INNER SIDE), FOR HIGH BEAM

Removal

- 1. Turn headlamp switch OFF.
- Disconnect headlamp electrical connector.
- Turn the bulb counterclockwise to remove it.

Installation

Installation is in the reverse order of removal.

FRONT PARKING LAMP (INNER OR OUTER)

Removal

- 1. Turn the bulb socket counterclockwise to unlock it.
- 2. Pull the bulb to remove it from the socket.

Installation

Installation is in the reverse order of removal.

SIDE MARKER LAMP (FRONT)

Removal

- Position fender protector aside.
- 2. Turn the side marker lamp (front) bulb socket counterclockwise and remove side marker lamp (front) bulb socket.
- Pull to remove side marker lamp (front) from the side marker lamp (front) bulb socket.

Installation

Installation is in the reverse order of removal.

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Removal and Installation

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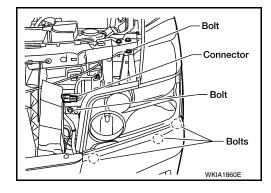
FRONT COMBINATION LAMP ASSEMBLY

CAUTION:

- Disconnect battery negative terminal before touching xenon bulb or headlamp wiring harness assembly.
- Turn headlamp switch OFF before disconnecting headlamp harness connector.
- Do not touch bulb by hand right after being turned off. Burning may result.
- Do not touch the glass of bulb directly by hand. Keep grease and other oily substances away from it.
- Do not turn xenon bulb ON when xenon bulb is removed from front combination lamp assembly.
- After installing the bulb, be sure to install the bulb socket securely to ensure watertightness.
- Do not leave bulb out of front combination lamp assembly for a long time because dust, moisture, smoke, etc. may affect the performance of the lamp. When replacing bulb, be sure to replace it with a new one.

Removal

- 1. Disconnect battery negative terminal.
- 2. Disconnect front combination lamp assembly.
- 3. Remove front fascia. Refer to EXT-13, "Removal and Installation".
- 4. Remove front combination lamp assembly bolts.
- 5. Remove front combination lamp assembly.



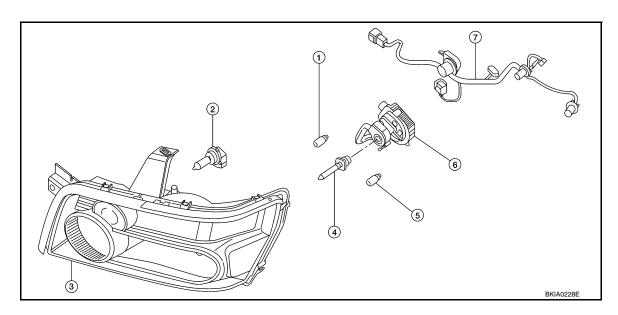
Installation

Installation is in the reverse order of removal.

Disassembly and Assembly

INFOID:0000000001551510

FRONT COMBINATION LAMP ASSEMBLY



- 1. Parking lamp bulb (outer)
- 2. Headlamp bulb (high beam)
- 3. Headlamp assembly

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HEADLAMP

< REMOVAL AND INSTALLATION >

- 4. Xenon bulb (low beam) 5. Side marker lamp (front) bulb 6. Ballast
- 7. Wiring harness assembly

Disassembly

- 1. Remove ballast.
- 2. Release xenon bulb retaining spring and remove xenon bulb.
- 3. Turn high beam bulb counterclockwise to unlock and remove high beam bulb.
- 4. Turn parking lamp bulb (inner) socket counterclockwise to unlock and remove parking lamp bulb.
- 5. Turn parking lamp bulb (outer) socket counterclockwise to unlock and remove parking lamp bulb.
- 6. Turn side marker lamp (front) bulb socket counterclockwise to unlock and remove side marker lamp (front) bulb.

Assembly

Assembly is in the reverse order of disassembly.

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AUTO LIGHT SYSTEM

< REMOVAL AND INSTALLATION >

AUTO LIGHT SYSTEM

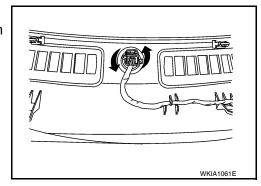
Removal and Installation

INFOID:0000000001547169

OPTICAL SENSOR

Removal

- 1. Remove defroster grille. Refer to IP-11, "Exploded View".
- 2. Disconnect the optical sensor connector.
- 3. Turn the optical sensor counterclockwise to remove it from defroster grille.



Installation

FRONT FOG LAMP

Bulb Replacement

INFOID:0000000001553094

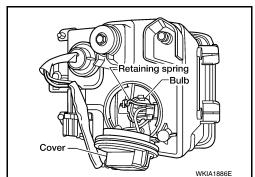
FRONT FOG LAMP

Removal

- Remove the front turn/fog lamp assembly. Refer to <u>EXL-117, "Removal and Installation"</u>.
- 2. Turn the bulb cover counterclockwise to remove it.
- Unlatch retaining spring.
- 4. Remove bulb and disconnect the connector.

CAUTION:

- Do not touch the glass of bulb directly by hand. Keep grease and other oily substances away from it. Do not touch bulb by hand while it is lit or right after being turned off. Burning may result.
- Do not leave bulb out of fog lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of fog lamp. When replacing bulb, be sure to replace it with new one.



Installation

Installation is in the reverse order of removal.

Removal and Installation

INFOID:0000000001553095

FRONT FOG LAMP

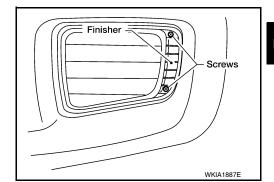
The fog lamp is a semi-sealed beam type which uses a replaceable halogen bulb.

CAUTION:

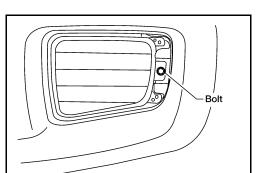
- Do not leave fog lamp assembly without bulb for a long period of time. Dust, moisture, smoke, etc.
 entering the fog lamp body may affect the performance. Remove the bulb from the headlamp assembly just before replacement bulb is installed.
- Grasp only the plastic base when handling the bulb. Never touch the glass envelope. Touching the glass could significantly affect the bulb life and/or fog lamp performance.

Removal

1. Remove the front turn/fog lamp finisher.



- 2. Remove bolt and pull fog lamp out of front fascia.
- Disconnect electrical connector.



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FRONT FOG LAMP

< REMOVAL AND INSTALLATION >

Installation

LIGHTING & TURN SIGNAL SWITCH

< REMOVAL AND INSTALLATION >

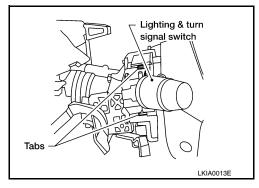
LIGHTING & TURN SIGNAL SWITCH

Removal and Installation

INFOID:0000000001547172

REMOVAL

- 1. Remove steering column cover.
- 2. While pressing tabs, pull lighting and turn signal switch toward driver door and disconnect from the base.



INSTALLATION

Installation is in the reverse order of removal.

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HAZARD SWITCH

< REMOVAL AND INSTALLATION >

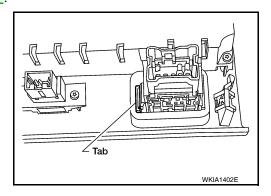
HAZARD SWITCH

Removal and Installation

INFOID:0000000001547173

REMOVAL

- 1. Remove cluster lid C. Refer to IP-15, "Removal and Installation".
- 2. While pressing the tab, push out the hazard switch.



INSTALLATION

PUDDLE LAMP

< REMOVAL AND INSTALLATION >

PUDDLE LAMP

Removal and Installation

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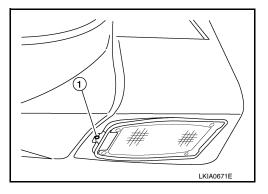
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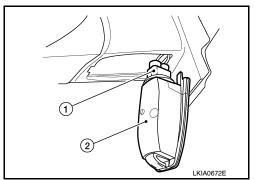
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REMOVAL

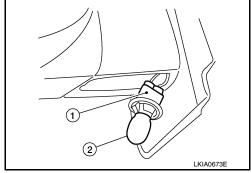
1. Depress tab (1) on outer edge of puddle lamp housing.



- 2. Lower outer edge and slide puddle lamp housing out of door mirror.
- 3. Twist and pull to remove puddle lamp socket (1) from puddle lamp housing (2).



4. Pull to remove puddle lamp bulb (2) from puddle lamp socket (1).



INSTALLATION

Installation is in the reverse order of removal.

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Revision: March 2010 **EXL-121** 2008 QX56

LICENSE PLATE LAMP

< REMOVAL AND INSTALLATION >

LICENSE PLATE LAMP

Bulb Replacement

INFOID:0000000001679761

LICENSE PLATE LAMP

Removal

- 1. Remove back door lower finisher. Refer to EXT-24, "Removal and Installation".
- 2. Turn bulb socket counterclockwise to remove it.
- 3. Pull bulb from socket.

Installation

Installation is in the reverse order of removal.

Removal and Installation

INFOID:0000000001679762

LICENSE PLATE LAMP

Removal

- Remove back door lower finisher. Refer to <u>INT-21, "Removal and Installation"</u>.
- 2. Remove license plate lamp screws.
- 3. Remove license plate lamp.

Installation

STOP LAMP

< REMOVAL AND INSTALLATION >

STOP LAMP

Bulb Replacement

INFOID:0000000001547174

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HIGH-MOUNTED STOP LAMP

NOTE:

High-mounted stop lamp bulbs are not serviceable.

STOP LAMP

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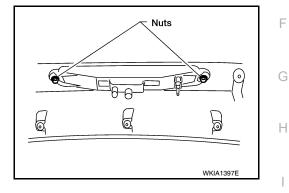
Refer to EXL-123. "Removal and Installation".

Removal and Installation

HIGH-MOUNTED STOP LAMP

Removal

- 1. Remove back door upper finisher. Refer to INT-21, "Removal and Installation".
- 2. Remove 2 nuts and remove high-mounted stop lamp.



Installation

Installation is in the reverse order of removal.

STOP LAMP

Refer to EXL-124, "Removal and Installation".

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REAR COMBINATION LAMP

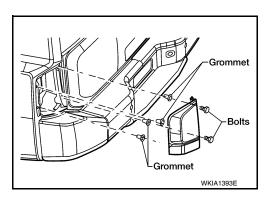
< REMOVAL AND INSTALLATION >

REAR COMBINATION LAMP

Bulb Replacement

REMOVAL

1. Remove rear combination lamp bolts.



- 2. Pull rear combination lamp to remove.
- 3. Turn bulb socket counterclockwise and unlock it.
- 4. Remove bulb.

INSTALLATION

Installation is in the reverse order of removal.

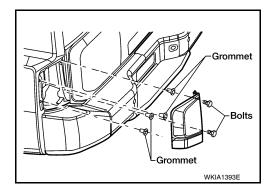
Removal and Installation

INFOID:0000000001547177

INFOID:0000000001547176

REMOVAL

- 1. Remove rear combination lamp bolts.
- 2. Pull rear combination lamp to remove.
- 3. Disconnect rear combination lamp connector.



INSTALLATION

BULB SPECIFICATIONS

< SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

BULB SPECIFICATIONS

Headlamp INFOID:000000001547324

Item	Wattage (W)*
Low	35
High	60/65

^{*:} Always check with the Parts Department for the latest parts information.

Exterior Lamp

Item		Wattage (W)*
Front combination lamp	Parking lamp (inner)	7
	Parking lamp (outer)	7
	Side marker lamp (front)	7
Rear combination lamp	Stop/Tail lamp	LED*
	Side marker lamp (rear)	*
	Turn signal lamp	27
Back-up lamp		*
Turn/fog lamp	Fog	55
	Turn	21
Puddle lamp		8
License plate lamp		*
High-mounted stop lamp		LED*

^{*:} Always check with the Parts Department for the latest parts information.

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Revision: March 2010 **EXL-125** 2008 QX56