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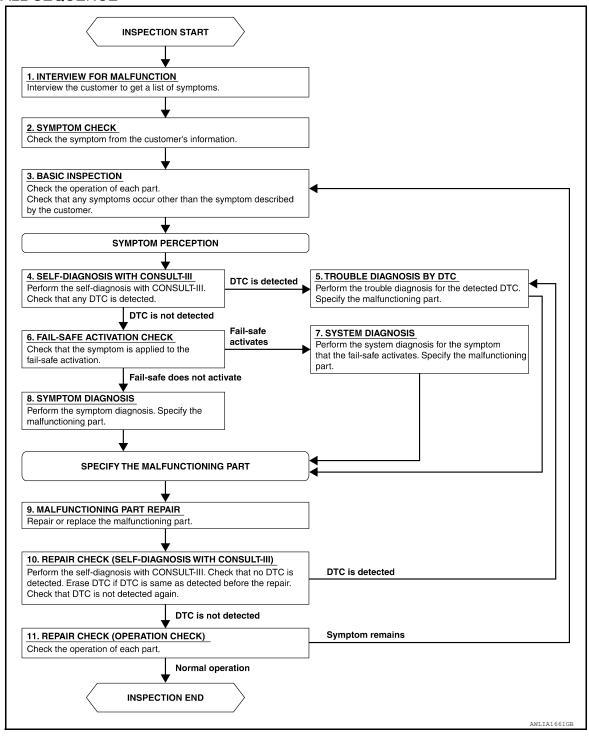
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BASIC INSPECTION

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 $oldsymbol{5}$. TROUBLE DIAGNOSIS BY DTC Perform the trouble diagnosis for the detected DTC. Specify the malfunctioning part. >> GO TO 9 6. FAIL-SAFE ACTIVATION CHECK Determine if the customer's concern is related to fail-safe activation. Does the fail-safe activate? 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. Verify 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?

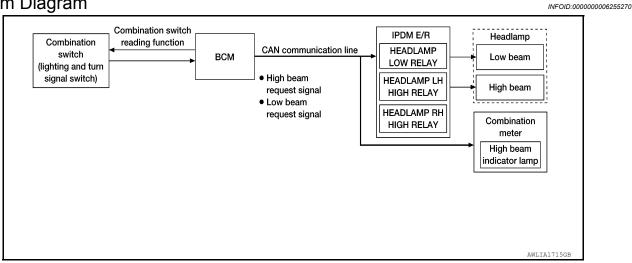
YES >> Inspection End.

NO >> GO TO 3

SYSTEM DESCRIPTION

HEADLAMP

System Diagram



System Description

INFOID:0000000006255271

Control of the headlamp system operation is dependent upon the position of the combination switch (lighting and turn signal switch). When the combination switch (lighting and turn signal 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 LH high, headlamp RH high and headlamp low relay coils. When energized, these relays direct power to the respective headlamps, which then illuminate.

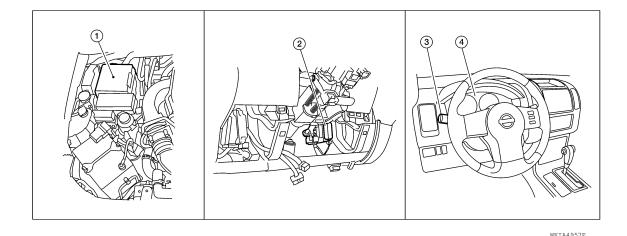
HIGH BEAM OPERATION/FLASH-TO-PASS OPERATION

With the combination switch (lighting and turn signal 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.

Component Parts Location

INFOID:0000000006255272



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HEADLAMP

< SYSTEM DESCRIPTION >

- 1. IPDM E/R E122, E123, E124
- BCM M18, M20 (view with lower instru- 3. ment panel LH removed)
- Combination switch (lighting and turn signal switch) M28

4. Combination meter M24

Component Description

INFOID:0000000006255273

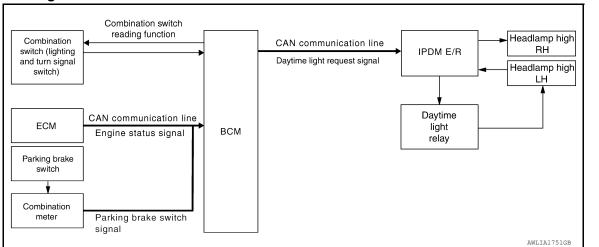
Part name	Description
ВСМ	 Receives combination switch (lighting and turn signal switch) request via BCM combination switch reading function. Sends headlamp high/low request signal to the IPDM E/R.
IPDM E/R	Activates the headlamp high and headlamp low relays upon request from the BCM.
Combination switch (lighting and turn signal switch)	Outputs lighting requests to the BCM.

DAYTIME RUNNING LIGHT SYSTEM

< SYSTEM DESCRIPTION >

DAYTIME RUNNING LIGHT SYSTEM

System Diagram



System Description

The headlamp system for Canada vehicles is equipped with a daytime light control 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.

OPERATION

The BCM monitors inputs from the parking brake switch and the combination switch (lighting and turn signal switch) to determine when to activate the daytime light system. The BCM sends a daytime light request to the IPDM E/R via the CAN communication lines. The IPDM E/R grounds the daytime light relay 1 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.

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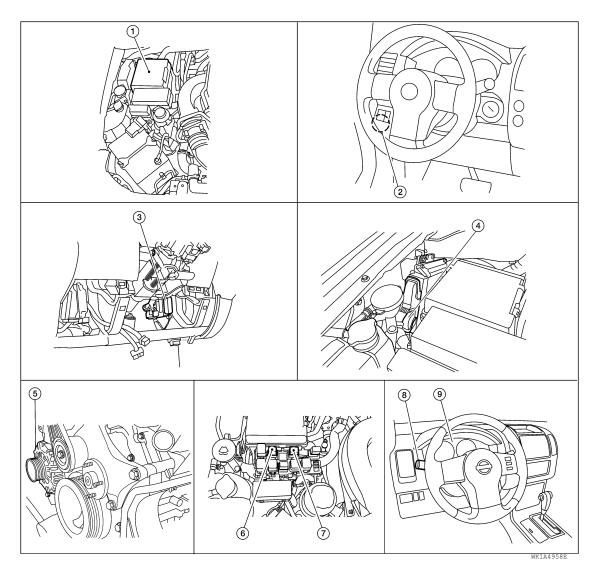
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Component Parts Location

INFOID:0000000006255276



- 1. IPDM E/R E119, E122, E123, E124
- 4. ECM E16 (view with ECM cover removed)
- 7. Daytime light relay 2 E104
- 2. Parking brake switch B84
- 5. Generator E205, E209
- 8. Combination switch (lighting and turn 9. signal switch) M28
- 3. BCM M18, M20 (view with lower instrument panel LH removed)
- 6. Daytime light relay 1 E103
- Combination meter M24

Component Description

INFOID:0000000006255277

Part name	Description
ВСМ	 Receives combination switch (lighting and turn signal switch) inputs via BCM combination switch reading function. Receives park brake applied input from the park brake switch. Receives engine running status from the ECM via CAN communication.
IPDM E/R	Receives daytime light request from the BCM and activates the daytime light relay.
Combination switch (lighting and turn signal switch)	Outputs lighting requests to the BCM.

DAYTIME RUNNING LIGHT SYSTEM

< SYSTEM DESCRIPTION >

Parking brake switch	Outputs parking brake status to the combination meter which forwards that information to the BCM via CAN communication.
ECM	Outputs engine running status to the BCM.

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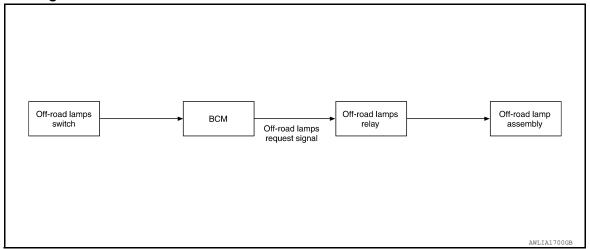
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OFF-ROAD LAMPS

System Diagram

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System Description

INFOID:0000000006255279

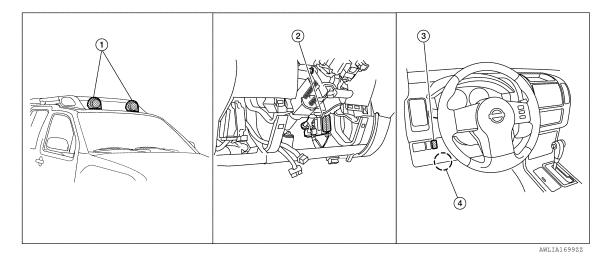
The off-road lamps are activated with the off-road lamps switch. The off-road lamps switch provides a request signal to the BCM. The BCM grounds the off-road lamps relay coil to activate the off-road lamps. The high beam headlamps must be ON and the off-road lamp covers removed in order for the BCM to activate the off-road lamps relay.

OFF ROAD LAMP OPERATION

When the off-road lamps switch is in the ON position, the lighting switch is in the 2nd position with the high beams activated and the off-road lamp covers removed, the BCM grounds the off-road lamp relay coil to activate the off-road lamps. The BCM monitors the off-road lamps switch, the lighting switch position via the combination switch reading function and the off-road lamp covers via the off-road lamp cover sensors. The off-road lamp cover sensor is a magnetic sensor which monitors for the presence of the off-road lamp covers.

Component Parts Location

INFOID:0000000006255280



- Off-road lamp assembly LH B527, B528 RH B529, B530
- 4. Off-road lamps relay M81
- BCM M18, M19, M20 (view with lower 3. Off-road lamps switch M80 instrument panel LH removed)

OFF-ROAD LAMPS

< SYSTEM DESCRIPTION >

Component Description

INFOID:0000000006255281

Part name	Description
ВСМ	 Receives lighting switch requests via BCM combination switch reading function. Receives off-road lamps request information from the off-road lamps switch. Receives off-road lamp cover installation status from the off-road lamp cover sensors. Grounds the off-road lamps relay to activate the off-road lamps.
Off-road lamps switch	Sends off-road lamps request signal to the BCM.
Combination switch (lighting and turn signal switch)	Monitors lighting switch position.
Off-road lamp cover sensors	Senses whether the off-road lamp covers are installed.

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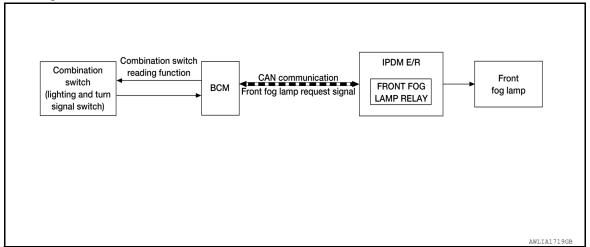
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FRONT FOG LAMP

System Diagram

INFOID:0000000006255282



System Description

INFOID:0000000006255283

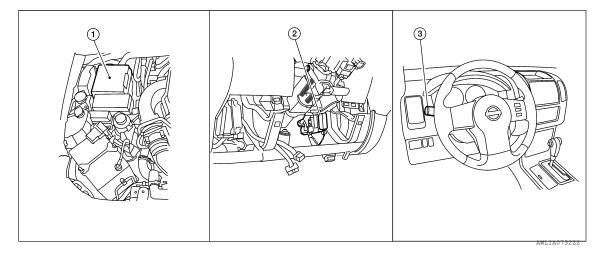
The front fog lamps are activated with the combination switch (lighting and turn signal switch). The combination switch (lighting and turn signal switch) signal to the BCM is monitored with the BCM combination switch reading function. When the fog lamps are turned ON with the combination switch (lighting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

FRONT FOG LAMP OPERATION

When the combination switch (lighting and turn signal switch) is in front fog lamp ON position and also in 1ST or 2ND position or AUTO (if equipped) position (headlamp is ON), the BCM detects FR FOG ON and the HEAD LAMP1 or 2 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.

Component Parts Location

INFOID:0000000006255284



- IPDM E/R E122, E123, E124
- 2. BCM M18, M20 (view with lower instru- 3. ment panel LH removed)
- Combination switch (lighting and turn signal switch) M28

FRONT FOG LAMP

< SYSTEM DESCRIPTION >

Component Description

INFOID:0000000006255285

Part name	Description
BCM	 Receives lighting switch requests via BCM combination switch reading function. Sends headlamp high/low request signal to the IPDM E/R.
IPDM E/R	Activates the front fog lamp relay upon request from the BCM.
Combination switch (lighting and turn signal switch)	Outputs lighting requests to the BCM.

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TURN SIGNAL AND HAZARD WARNING LAMPS

< SYSTEM DESCRIPTION >

TURN SIGNAL AND HAZARD WARNING LAMPS

System Diagram

INFOID:0000000006255286 Combination switch Combination Combination reading function meter CAN communication switch Turn indicator signal Turn signal (lighting and turn indicator signal switch) lamp (LH/RH) Buzzer всм Hazard switch Turn signal signal Hazard switch lamps (LH) Turn signal lamps (RH)

System Description

INFOID:0000000006255287

TURN SIGNAL OPERATION

When the combination switch (lighting and 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.

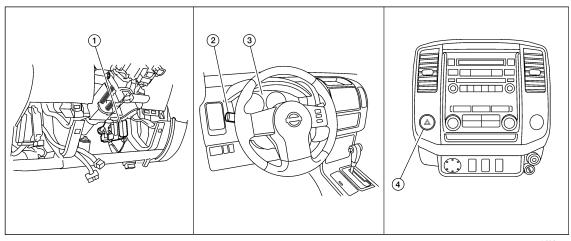
REMOTE KEYLESS ENTRY OPERATION

The remote keyless entry receiver transmits a hazard request signal to the BCM, then BCM controls hazard lamps.

Refer to DLK-14, "REMOTE KEYLESS ENTRY: System Description".

Component Parts Location

INFOID:0000000006255288



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TURN SIGNAL AND HAZARD WARNING LAMPS

< SYSTEM DESCRIPTION >

- 1. BCM M18, M20 (view with lower in-
- strument panel LH removed)
- 2. Combination switch (lighting and turn 3. Combination meter M24 signal switch) M28

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Hazard switch M55

Component Description

INFOID:0000000006255289	

Part name	Description
BCM	Controls turn signal and hazard flasher operation.
Combination switch (lighting and turn signal 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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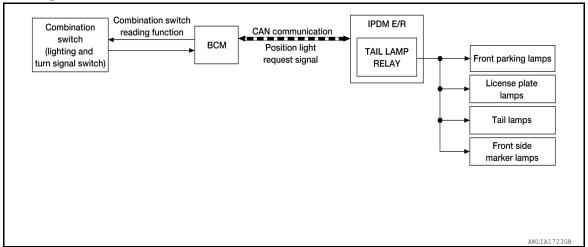
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PARKING, LICENSE PLATE AND TAIL LAMPS

System Diagram

INFOID:0000000006255290



System Description

INFOID:0000000006255291

PARKING, LICENCE PLATE AND TAIL LAMPS OPERATION

When the combination switch (lighting and turn signal 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

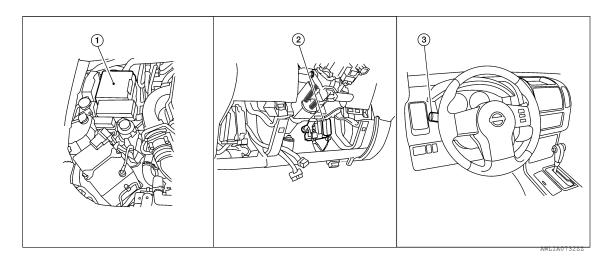
With the combination switch (lighting and turn signal switch) in the 2ND position and the ignition switch is turned from ON or ACC to OFF, the battery saver feature is activated.

Under this condition, the headlamps remain illuminated for 5 minutes unless the combination switch (lighting and turn signal switch) position is changed. If the combination switch (lighting and turn signal switch) position is changed, then the headlamps are turned off.

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

Component Parts Location

INFOID:0000000006255292



1. IPDM E/R E121, E122, E123, E124

- BCM M18, M20 (view with lower instru- 3. ment panel LH removed)
- Combination switch (lighting and turn signal switch) M28

PARKING, LICENSE PLATE AND TAIL LAMPS

< SYSTEM DESCRIPTION >

Component Description

INFOID:0000000006255293

Part name	Description
BCM	 Receives combination switch (lighting and turn signal 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 and turn signal switch)	Outputs lighting requests to the BCM.

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TRAILER TOW

System Diagram

INFOID:0000000006255294 Trailer turn relay LH Trailer connector Trailer turn relay RH Combination switch reading function IPDM E/R Combination CAN communication line Trailer всм TAIL LAMF tow relay RELAY To exterior lamps Can communication line Combination meter Stop lamp switch

System Description

INFOID:0000000006255295

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TRAILER TAIL LAMP OPERATION

The trailer tail lamps are controlled by the trailer tow relay 1 located in the IPDM E/R. With the combination switch (lighting and turn signal 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 combination switch (lighting and turn signal switch) is in the LH or RH position with the ignition switch ON, the combination switch (lighting and turn signal 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

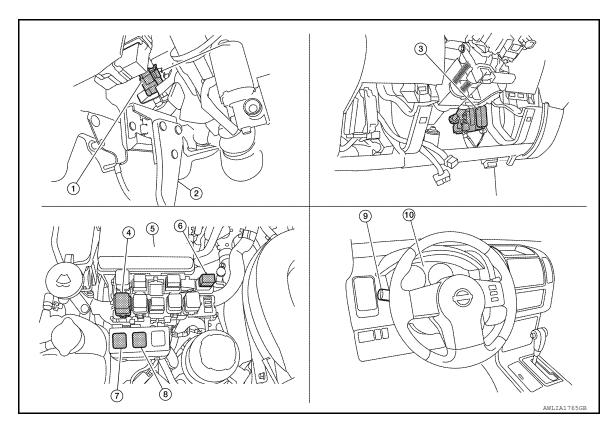
The trailer hazard lamps are controlled by the BCM. When the hazard switch is pressed, the BCM detects the the hazard ON request. The BCM then sends a control signal to both trailer turn relays which sends power to the trailer connector.

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:0000000006255296



- Stop lamp switch E38 (with M/T) or E39 (with A/T) (view with lower instrument panel LH removed)
- 4. Trailer turn relay LH E169
- 7. Trailer tow relay 2 E228
- 2. Brake pedal
 - 5. IPDM E/R E121, E122, E124
- 8. Trailer tow relay 1 E227
- 3. BCM, M18, M19, M20 (view with lower instrument panel LH removed)
- 6. Trailer turn relay RH E170
- 9. Combination switch (lighting and turn signal switch) M28

10. Combination meter M24

Component Description

INFOID:0000000006255297

Part name	Description
ВСМ	 Receives lighting and turn signal requests from combination switch (lighting and turn signal 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.
Combination meter	 Receives stop lamp switch signal from stop lamp switch. Sends stop lamp signal request to the BCM via CAN communication.
Combination switch (lighting and turn signal switch)	Outputs lighting and turn signal requests to the BCM.

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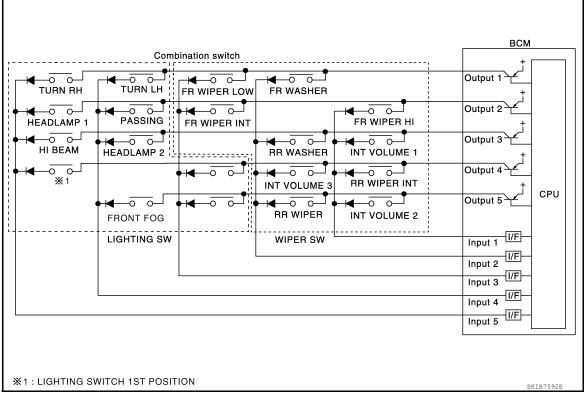
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COMBINATION SWITCH READING SYSTEM

System Diagram

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System Description

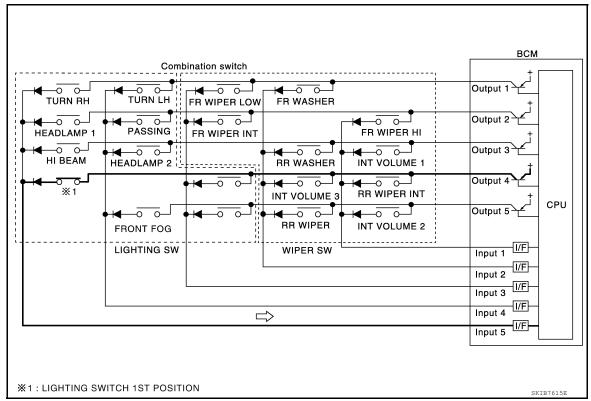
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OUTLINE

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

COMBINATION SWITCH MATRIX





Combination switch INPUT-OUTPUT system list

of the first of th						
System	OUTPUT 1	OUTPUT 2	OUTPUT 3	OUTPUT 4	OUTPUT 5	
INPUT 1	_	FR WASHER	FR WIPER LOW	TURN LH	TURN RH	
INPUT 2	FR WIPER HI	_	FR WIPER INT	PASSING	HEADLAMP 1	
INPUT 3	INT VOLUME 1	RR WASHER	_	HEADLAMP 2	HI BEAM	
INPUT 4	RR WIPER INT	INT VOLUME 3	_	_	TAIL LAMP	
INPUT 5	INT VOLUME 2	RR WIPER	_	FR FOG	_	

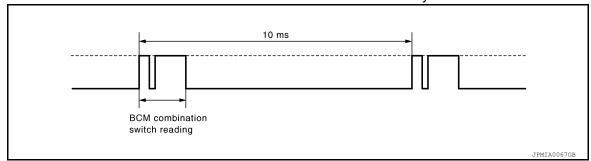
NOTE:

Headlamp has a dual system switch.

COMBINATION SWITCH READING FUNCTION

Description

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



NOTE:

BCM reads the status of the combination switch at 20 ms interval when BCM is controlled at low power consumption control mode.

- BCM operates as follows and judges the status of the combination switch.
- INPUT 1 5 outputs the voltage waveforms of 5 systems simultaneously.
- It operates the transistor on OUTPUT side in the following order: OUTPUT $5 \rightarrow 4 \rightarrow 3 \rightarrow 2 \rightarrow 1$.

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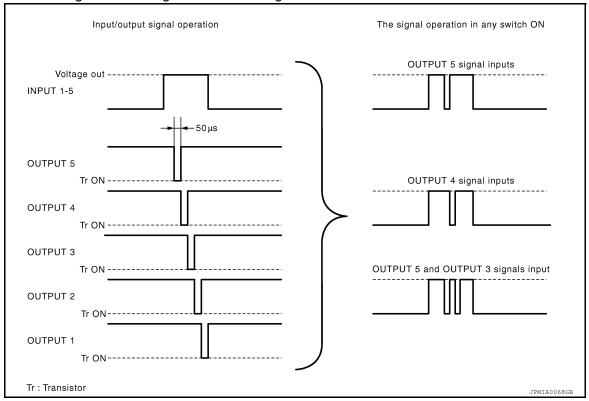
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< SYSTEM DESCRIPTION >

- The voltage waveform of INPUT corresponding to the formed circuit changes according to the operation of the transistor on OUTPUT side if any (1 or more) switches are ON.
- It reads this change of the voltage as the status signal of the combination switch.

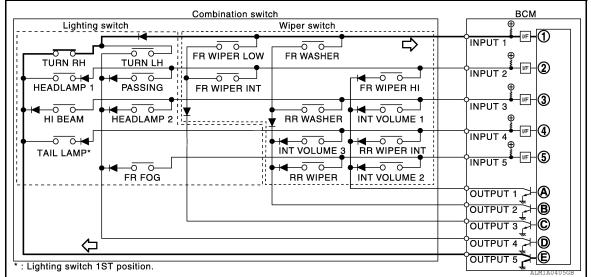


Operation Example

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

Example 1: When a switch (TURN RH switch) is turned ON

The circuit between INPUT 1 and OUTPUT 5 is formed when the TURN RH switch is turned ON.

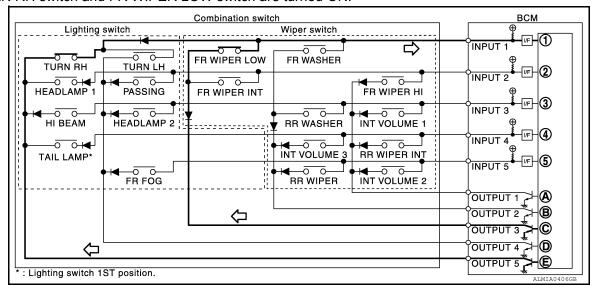


- BCM detects the combination switch status signal "1E" when the signal of OUTPUT 5 is input to INPUT 1.
- BCM judges that the TURN RH switch is ON when the signal "1E" is detected.

Example 2: When some switches (turn RH switch, front wiper LO switch) are turned ON

< SYSTEM DESCRIPTION >

• The circuits between INPUT 1 and OUTPUT 5 and between INPUT 1 and OUTPUT 3 are formed when the TURN RH switch and FR WIPER LOW switch are turned ON.

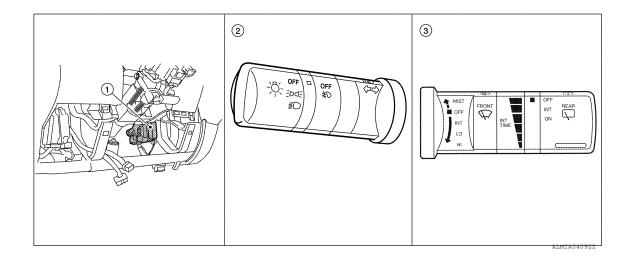


- BCM detects the combination switch status signal "1CE" when the signals of OUTPUT 3 and OUTPUT 5 are input to INPUT 1.
- BCM judges that the TURN RH switch and FR WIPER LOW switch are ON when the signal "1CE" is detected.

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

Wiper intermittent	Intermittent	INT	VOLUME switch ON/OFF s)FF status		
dial position	operation delay interval	INT VOLUME 1 switch	INT VOLUME 2 switch	INT VOLUME 3 switch		
1	Short	ON	ON	ON		
2	↑	ON	ON	OFF		
3		ON	OFF	OFF		
4	-	OFF	OFF	OFF		
5	-	OFF	OFF	ON		
6	↓ ↓	OFF	ON	ON		
7	Long	OFF	ON	OFF		

Component Parts Location



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< SYSTEM DESCRIPTION >

1. BCM M18, M19, M20 (view with low- 2. er instrument panel LH removed)

Combination switch (lighting and turn signal switch) M28

3. Combination switch (wiper and washer switch) M28

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

COMMON ITEM: CONSULT-III Function (BCM - COMMON ITEM)

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APPLICATION ITEM

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

Direct Diagnostic Mode	Description
Ecu Identification	The BCM part number is displayed.
Self Diagnostic Result	The BCM self diagnostic results are displayed.
Data Monitor	The BCM input/output data is displayed in real time.
Active Test	The BCM activates outputs to test components.
Work support	The settings for BCM functions can be changed.
Configuration	 The vehicle specification can be read and saved. The vehicle specification can be written when replacing BCM.
CAN Diag Support Mntr	The result of transmit/receive diagnosis of CAN communication is displayed.

SYSTEM APPLICATION

BCM can perform the following functions.

				Direct D	Diagnosti	c Mode		
System	Sub System	Ecu Identification	Self Diagnostic Result	Data Monitor	Active Test	Work support	Configuration	CAN Diag Support Mntr
Door lock	DOOR LOCK		×	×	×	×		
Rear window defogger	REAR DEFOGGER			×	×			
Warning chime	BUZZER			×	×			
Interior room lamp timer	INT LAMP			×	×	×		
Remote keyless entry system	MULTI REMOTE ENT			×	×	×		
Exterior lamp	HEAD LAMP			×	×	×		
Wiper and washer	WIPER			×	×	×		
Turn signal and hazard warning lamps	FLASHER			×	×			
Air conditioner	AIR CONDITIONER			×				
Combination switch	COMB SW			×				
BCM	BCM	×	×			×	×	×
Immobilizer	IMMU		×	×	×			
Interior room lamp battery saver	BATTERY SAVER			×	×	×		
Back door open	TRUNK			×	×			
Vehicle security system	THEFT ALM			×	×	×		
RAP system	RETAINED PWR			×	×	×		
Signal buffer system	SIGNAL BUFFER			×	×			
TPMS	AIR PRESSURE MONITOR		×	×	×	×		
Panic alarm system	PANIC ALARM				×			

HEADLAMP

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

HEADLAMP : CONSULT-III Function (BCM - HEAD LAMP)

INFOID:0000000006835754

DATA MONITOR

Monitor Item [Unit]	Description
IGN ON SW [On/Off]	Indicates condition of ignition switch ON position.
ACC ON SW [On/Off]	Indicates condition of ignition switch ACC position.
HI BEAM SW [On/Off]	
HEAD LAMP SW 1 [On/Off]	
HEAD LAMP SW 2 [On/Off]	Indicates condition of combination switch.
LIGHT SW 1ST [On/Off]	Indicates condition of combination switch.
PASSING SW [On/Off]	
FR FOG SW [On/Off]	
DOOR SW-DR [On/Off]	Indicates condition of front door switch LH.
DOOR SW-AS [On/Off]	Indicates condition of front door switch RH.
DOOR SW-RR [On/Off]	Indicates condition of rear door switch RH.
DOOR SW-RL [On/Off]	Indicates condition of rear door switch LH.
BACK DOOR SW [On/Off]	Indicates condition of back door switch.
TURN SIGNAL R [On/Off]	Indicates condition of combination switch.
TURN SIGNAL L [On/Off]	Indicates condition of combination switch.

ACTIVE TEST

Test Item Description	
TAIL LAMP	This test is able to check tail lamp operation [Off/On].
HEAD LAMP	This test is able to check head lamp operation [Off/Lo/Hi].
FR FOG LAMP	This test is able to check front fog lamp operation [Off/On].

WORK SUPPORT

Support Item	Setting	Description		
BATTERY SAVER SET	Off	Exterior lamp battery saver function OFF.		
BATTERT SAVER SET	On*	Exterior lamp battery saver function ON.		

^{*:} Initial setting

FLASHER

FLASHER: CONSULT-III Function (BCM - FLASHER)

INFOID:0000000006835755

DATA MONITOR

Monitor Item [Unit]	Description
IGN ON SW [On/Off]	Indicates condition of ignition switch ON position.
HAZARD SW [On/Off]	Indicates condition of hazard switch.
TURN SIGNAL R [On/Off]	Indicates condition of turn signal function of combination switch.
TURN SIGNAL L [On/Off]	- indicates condition of turn signal function of combination switch.
BRAKE SW [On/Off]	Indicates condition of brake switch.

ACTIVE TEST

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

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

COMB SW

COMB SW: CONSULT-III Function (BCM - COMB SW)

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DATA MONITOR

Monitor Item [Unit]	Description	
TURN SIGNAL R [On/Off]	Indicates condition of turn signal eneration of combination quitab	
TURN SIGNAL L [On/Off]	Indicates condition of turn signal operation of combination switch.	
HI BEAM SW [On/Off]	Indicates condition of hi beam operation of combination switch.	
HEAD LAMP SW 1 [On/Off]	Indicates condition of bondleron execution of combination quitab	
HEAD LAMP SW 2 [On/Off]	Indicates condition of headlamp operation of combination switch.	
LIGHT SW 1ST [On/Off]	Indicates condition of lighting operation of combination switch.	
PASSING SW [On/Off]	Indicates condition of passing switch operation of combination switch.	
FR FOG SW [On/Off]	Indicates condition of front fog light operation of combination switch.	
FR WIPER HI [On/Off]		
FR WIPER LOW [On/Off]	Indicates condition of front wiper operation of combination switch.	
FR WIPER INT [On/Off]		
FR WASHER SW [On/Off]	Indicates condition of front washer operation of combination switch.	
INT VOLUME [1 - 7]	Indicates condition of intermittent wiper operation of combination switch.	
RR WIPER ON [On/Off]	Indicates condition of room vines engaging of combination quite!	
RR WIPER INT [On/Off]	Indicates condition of rear wiper operation of combination switch.	
RR WASHER SW [On/Off]	Indicates condition of rear washer operation of combination switch.	

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< SYSTEM DESCRIPTION >

DIAGNOSIS SYSTEM (IPDM E/R)

Diagnosis Description

INFOID:0000000006835757

AUTO ACTIVE TEST

Description

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

- · Oil pressure low warning indicator
- · Oil pressure gauge
- Rear window defogger
- · Front wipers
- · Tail, license and parking lamps
- Front fog lamps (if equipped)
- Headlamps (Hi, Lo)
- A/C compressor (magnetic clutch)
- Cooling fan

Operation Procedure

Close the hood and front door RH, and lift the wiper arms from the windshield (to prevent windshield damage due to wiper operation).

NOTE:

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

- 2. Turn ignition switch OFF.
- 3. Turn the ignition switch ON and, within 20 seconds, press the front door switch LH 10 times. Then turn the ignition switch OFF.
- 4. Turn the ignition switch ON within 10 seconds. After that the horn sounds once and the auto active test starts.
- 5. After a series of the following operations is repeated 3 times, auto active test is completed.

NOTE:

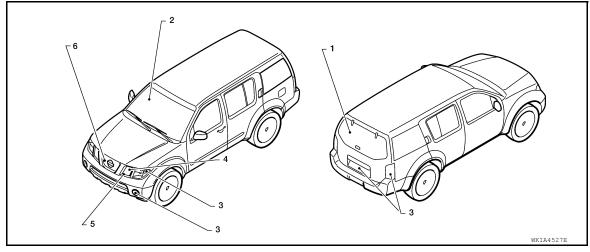
When auto active test mode has to be cancelled halfway through test, turn ignition switch OFF.

CAUTION:

- If auto active test mode cannot be actuated, check door switch system. Refer to DLK-25, "Description".
- · Do not start the engine.

Inspection in Auto Active Test Mode

When auto active test mode is actuated, the following 7 steps are repeated 3 times.

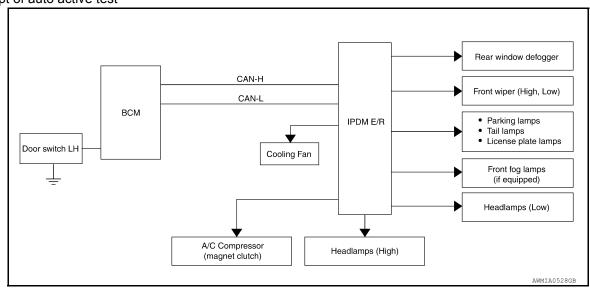


Item Number	Test Item	Operation Time/Frequency
1	Rear window defogger	10 seconds
2	Front wipers	LOW 5 seconds then HIGH 5 seconds
3	License plate, tail, parking and fog lamps (if equipped)	10 seconds

< SYSTEM DESCRIPTION >

Item Number	Test Item	Operation Time/Frequency	
4	Headlamps	LOW 10 seconds then HIGH ON-OFF 5 times	
5	A/C compressor (magnet clutch)	ON-OFF 5 times	
6	Cooling fan	LOW 5 seconds, then HIGH 5 seconds	

Concept of auto active test



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

Diagnosis chart in auto active test mode

Symptom	Inspection contents		Possible cause	
Oil pressure low warning indicator does not operate	Perform auto active test. Does the oil pressure low warning indicator operate?	YES	IPDM E/R signal input circuit ECM signal input circuit CAN communication signal between ECM and combination meter	
		NO	CAN communication signal between IPDM E/R, BCM and combination meter	
	Perform auto active test.	YES	IPDM E/R signal input circuit	
Oil pressure gauge does not operate	Does the oil pressure gauge operate?	NO	CAN communication signal between IPDM E/R, BCM and combination meter	
		YES	BCM signal input circuit	
Rear window defogger does not operate	Perform auto active test. Does the rear window defogger operate?	NO	Harness or connector between front air control and BCM CAN communication signal between BCM and IPDM E/R	

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< SYSTEM DESCRIPTION >

Symptom	Inspection contents		Possible cause	
		YES	BCM signal input system	
Any of the following components do not operate Front wipers Tail lamps License plate lamps Parking lamps Front fog lamps (if equipped) Headlamps (Hi, Lo)	Perform auto active test. Does the applicable system operate?	NO	Lamp or front wiper motor malfunction Lamp or front wiper motor ground circuit Harness or connector between IPDM E/R and applicable system IPDM E/R (integrated relay malfunction)	
A/C compressor does not approte	Perform auto active test. Does the A/C compressor op-	YES	BCM signal input circuit CAN communication signal between BCM and ECM CAN communication signal between ECM and IPDM E/R	
A/C compressor does not operate	erate?	NO	Magnetic clutch malfunction Harness or connector between IPDM E/R and magnetic clutch IPDM E/R (integrated relay malfunction)	
		YES	ECM signal input circuit CAN communication signal between ECM and IPDM E/R	
Cooling fan does not operate	Perform auto active test. Does the cooling fan operate?		Cooling fan motor malfunction Harness or connector between IPDM E/R and cooling fan IPDM E/R (integrated relay malfunction)	

CONSULT - III Function (IPDM E/R)

INFOID:0000000006835758

APPLICATION ITEM

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

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

SELF DIAGNOSTIC RESULT

Refer to EXL-79, "DTC Index".

DATA MONITOR

Monitor Item [Unit]	Main Signals	Description
MOTOR FAN REQ [1/2/3/4]	×	Indicates cooling fan speed signal received from ECM on CAN communication line
AC COMP REQ [On/Off]	×	Indicates A/C compressor request signal received from ECM on CAN communication line

< SYSTEM DESCRIPTION >

Monitor Item [Unit]	Main Signals	Description
TAIL&CLR REQ [On/Off]	×	Indicates position light request signal received from BCM on CAN communication line
HL LO REQ [On/Off]	×	Indicates low beam request signal received from BCM on CAN communication line
HL HI REQ [On/Off]	×	Indicates high beam request signal received from BCM on CAN communication line
FR FOG REQ [On/Off]	×	Indicates front fog light request signal received from BCM on CAN communication line
FR WIP REQ [Stop/1LOW/Low/Hi]	×	Indicates front wiper request signal received from BCM on CAN communication line
WIP AUTO STOP [STOP P/ACT P]	×	Indicates condition of front wiper auto stop signal
WIP PROT [Off/BLOCK]	×	Indicates condition of front wiper fail-safe operation
ST RLY REQ [On/Off]		Indicates starter request signal received from ECM on CAN communication line
IGN RLY [On/Off]	×	Indicates condition of ignition relay
RR DEF REQ [On/Off]	×	Indicates rear defogger request signal received from BCM on CAN communication line
OIL P SW [Open/Close]		Indicates condition of oil pressure switch
DTRL REQ [Off]		Indicates daytime light request signal received from BCM on CAN communication line
THFT HRN REQ [On/Off]		Indicates theft warning horn request signal received from BCM on CAN communication line
HORN CHIRP [On/Off]		Indicates horn reminder signal received from BCM on CAN communication line

ACTIVE TEST

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

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POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

DTC/CIRCUIT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT BCM (BODY CONTROL MODULE)

BCM (BODY CONTROL MODULE): Diagnosis Procedure

INFOID:0000000006835767

Regarding Wiring Diagram information, refer to BCS-47, "Wiring Diagram".

1. CHECK FUSES AND FUSIBLE LINK

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

Terminal No.	Signal name	Fuses and fusible link No.	
57	Detter revier comb.	21 (10A)	
70	Battery power supply	G (50A)	
11	Ignition ACC or ON	4 (10A)	
38	Ignition ON or START	1 (10A)	

Is the fuse blown?

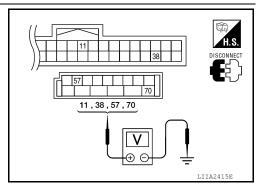
YES >> Replace the blown fuse or fusible link after repairing the affected circuit.

NO >> GO TO 2

2. CHECK POWER SUPPLY CIRCUIT

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

Connector	Terminals		Power	Condition	Voltage (V) (Ap-	
Connector	(+)	(-)	source	Condition	prox.)	
M18	11	Ground	ACC power supply	Ignition switch ACC or ON	Battery voltage	
	38	Ground	Ignition power supply	Ignition switch ON or START	Battery voltage	
M20	57	Ground	Battery power supply	Ignition switch OFF	Battery voltage	
19120	70	Ground	Battery power supply	Ignition switch OFF	Battery voltage	



Is the measurement value normal?

YES >> GO TO 3

NO >> Repair or replace harness.

 $oldsymbol{3}$. CHECK GROUND CIRCUIT

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

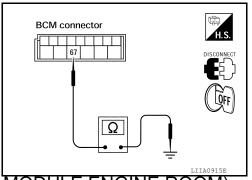
Check continuity between BCM harness connector and ground.

В	CM		Continuity
Connector Terminal		Ground	Continuity
M20	67		Yes

Does continuity exist?

YES >> Inspection End.

NO >> Repair or replace harness.



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

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

Regarding Wiring Diagram information, refer to PCS-23, "Wiring Diagram".

1. CHECK FUSIBLE LINKS

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

Terminal No.	Signal name	Fusible link No.
1		A, D
2	Battery	С
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Is the fusible link blown?

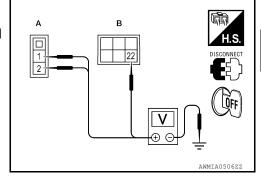
YES >> Replace the blown fusible link after repairing the affected circuit.

NO >> GO TO 2

2. CHECK BATTERY POWER SUPPLY CIRCUIT

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

Terminals			Ignition	V-11 0.0
(+)		(-)	switch posi-	Voltage (V) (Approx.)
Connector	Terminal	(-)	tion	(
E118 (A)	1	Ground	OFF	Battery voltage
	2			
E120 (B)	22			



Is there voltage on all pins?

YES >> GO TO 3

NO >> Repair or replace harness.

3. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.

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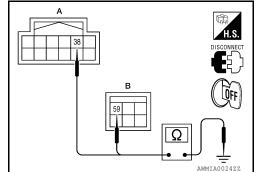
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POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

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

IPDM E/R			Continuity
Connector	Terminal	Ground	Continuity
E122 (A)	38		Yes
E124 (B)	59		



Does continuity exist?

YES >> Inspection End.

NO >> Repair or replace harness.

< DTC/CIRCUIT DIAGNOSIS >

HEADLAMP (HI) CIRCUIT

Description

The IPDM E/R (intelligent power distribution module engine room) controls the headlamp LH high and headlamp RH high relays based on inputs from the BCM via the CAN communication lines. When the headlamp LH high and headlamp RH high relays are 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

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1. CHECK HEADLAMP (HI) OPERATION

WWITHOUT CONSULT-III

1. Start IPDM E/R auto active test. Refer to PCS-10, "Diagnosis Description".

Check that the headlamp switches to the high beam.

NOTE:

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

(E)CONSULT-III

Select "EXTERNAL LAMPS" 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 <u>EXL-37</u>, "<u>Diagnosis Procedure</u>".

Diagnosis Procedure

INFOID:0000000006255310

Regarding Wiring Diagram information, refer to <u>EXL-80, "Wiring Diagram"</u> (without DTRL) or <u>EXL-84, "Wiring Diagram"</u> (with DTRL).

1. CHECK HEADLAMP (HI) FUSES

Turn the ignition switch OFF.

2. Check that the following fuses are not open.

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Unit	Location	Fuse No.	Capacity
Headlamp HI (LH)	IPDM E/R	35	10A
Headlamp HI (RH)	IPDM E/R	34	10A

Is the fuse open?

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

NO >> GO TO 2

2.CHECK HEADLAMP (HI) OUTPUT VOLTAGE

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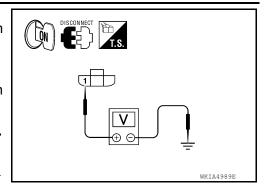
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< DTC/CIRCUIT DIAGNOSIS >

- 1. Turn the ignition switch OFF.
- 2. Disconnect the front combination lamp connector E7 (with DTRL), E11(without DTRL) 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.

(+) Connector			(-)	Voltage
		Terminal	(-)	voltage
LH	E7 (with DTRL)			
LII	E11 (without DTRL)	1	Ground	Battery voltage
RH	E107			



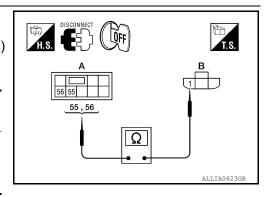
Is battery voltage present?

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

3.CHECK HEADLAMP (HI) CIRCUIT FOR OPEN

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

	Α		В		Continuity
Conn	ector	Terminal	Connector	Terminal	Continuity
LH		55	E7 (with DTRL)		
LII	E123	33	E11 (without DTRL)	1	Yes
RH		56	E107		



Does continuity exist?

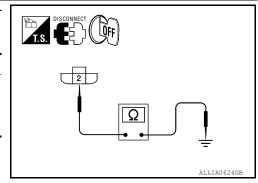
YES >> Replace IPDM E/R. Refer to PCS-29, "Removal and Installation of IPDM E/R".

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	E7 (with DTRL)			
LII	E11 (without DTRL)	2	Ground	Yes
RH	E107			



Does continuity exist?

YES >> Inspect the headlamp bulb.

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

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

5.CHECK CONTINUITY BETWEEN FRONT HEADLAMP LH (HI) AND DAYTIME LIGHT RELAY $^{ m 1}$

- Disconnect daytime light relay 1 connector.
- Check continuity between front headlamp LH harness connector and daytime light relay 1 harness connector.

Front headlamp LH		Daytime light relay 1		Continuity	
Connector	Terminal	Connector Terminal		Continuity	
E7	2	E103	3	Yes	

< DTC/CIRCUIT DIAGNOSIS >

Does continuity exist?

YES >> GO TO 6.

NO >> Repair the harness or connector.

6. CHECK DAYTIME LIGHT RELAY 1 GROUND CIRCUIT

Check continuity between daytime light relay 1 harness connector and ground.

Daytime li	ght relay 1		Continuity	
Connector	Connector Terminal		Continuity	
E103	4		Yes	

Does continuity exist?

YES >> GO TO 7.

NO >> Repair the harness or connector.

7.CHECK DAYTIME LIGHT RELAY 1

Check daytime light relay 1. Refer to EXL-45, "Component Inspection"

Is the inspection result normal?

YES >> Inspect the headlamp bulb.

NO >> Replace daytime light relay 1.

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< DTC/CIRCUIT DIAGNOSIS >

HEADLAMP (LO) CIRCUIT

Description INFOID:0000000006255311

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:0000000006255312

1.CHECK HEADLAMP (LO) OPERATION

WITHOUT CONSULT-III

- 1. Start IPDM E/R auto active test. Refer to PCS-10, "Diagnosis Description".
- 2. Check that the headlamp is turned ON.

NOTE:

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

PCONSULT-III

- Select "EXTERNAL LAMPS" of IPDM E/R active test item.
- 2. 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-40, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000006255313

Regarding Wiring Diagram information, refer to <u>EXL-80, "Wiring Diagram"</u> (without DTRL) or <u>EXL-84, "Wiring Diagram"</u> (with DTRL).

1. CHECK HEADLAMP (LO) FUSES

- Turn the ignition switch OFF.
- 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 >> Replace the fuse after repairing the affected circuit.

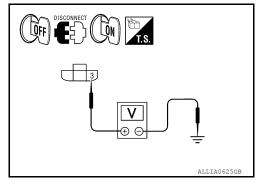
NO >> GO TO 2

2.CHECK HEADLAMP (LO) OUTPUT VOLTAGE

< DTC/CIRCUIT DIAGNOSIS >

- 1. 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	E7 (with DTRL)				
LII	E11 (without DTRL)	3	Ground	Battery voltage	
RH	E107				



Is battery voltage present?

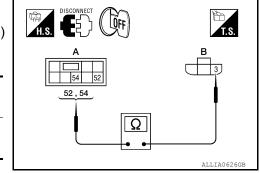
YES >> GO TO 8

NO (Except LH with DTRL)>>CHECK HEADLAMP (LO) CIRCUIT FOR OPEN GO TO 3 NO (LH with DTRL)>>CHECK HEADLAMP (LO) CIRCUIT FOR OPEN GO TO 4

3.CHECK HEADLAMP (LO) CIRCUIT FOR OPEN (EXCEPT LH WITH DTRL)

- 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 headlamp harness connector (B).

	А		В		Continuity
Con	nector	Terminal	Connector	Terminal	Continuity
LH	E123	52	E11	3	Yes
RH	L123	54	E107	3	165



Does continuity exist?

YES >> Replace IPDM E/R. Refer to PCS-29, "Removal and Installation of IPDM E/R".

NO >> Repair the harnesses or connectors.

4.CHECK HEADLAMP (LO) CIRCUIT FOR OPEN (LH WITH DTRL)

- Turn the ignition switch OFF.
- 2. Disconnect IPDM E/R connector E123 and daytime light relay 2 connector.
- Check continuity between the IPDM E/R harness connector and the daytime light relay 2 harness connector.

IPDM E/R		Daytime light r	elay 2	Continuity
Connector	Terminal	Connector	Terminal	Continuity
E123	52	E104	5	Yes
E123	52	E 104	2	165

Does continuity exist?

YES >> GO TO 5

NO >> Repair the harnesses or connectors.

CHECK DAYTIME LIGHT RELAY 2 CIRCUIT

 Check continuity between the daytime light relay 2 harness connector and the front headlamp LH harness connector.

Daytime light relay 2		Front headlamp LH		Continuity
Connector	Terminal	Connector	Terminal	Continuity
E104	3	E7	3	Yes

^{2.} Check continuity between the daytime light relay 2 harness connector and ground.

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< DTC/CIRCUIT DIAGNOSIS >

Daytime light relay 2			Continuity
Connector	Terminal	Ground	Continuity
E104	3		No

Is the measurement value normal?

YES >> GO TO 6

NO >> Repair the harnesses or connectors.

$oldsymbol{6}$.CHECK DAYTIME LIGHT RELAY 2 GROUND CIRCUIT

Check continuity between daytime light relay 2 harness connector and ground.

Daytime li	ght relay 2		Continuity
Connector	Terminal	Ground	Continuity
E104	1		Yes

Does continuity exist?

YES >> GO TO 7

NO >> Repair the harness or connector.

7.CHECK DAYTIME LIGHT RELAY $_{ m 2}$

Check daytime light relay 2. Refer to EXL-43, "Component Inspection".

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-29, "Removal and Installation of IPDM E/R".

NO >> Replace daytime light relay 2.

8.CHECK FRONT HEADLAMP (LO) GROUND CIRCUIT

Check continuity between the front headlamp harness connector terminal 2 and ground.

	Connector	Terminal	_	Continuity
LH	E7 (with DTRL)			
LΠ	E11 (without DTRL)	2	Ground	Yes
RH	E107			

Does continuity exist?

>> Inspect the headlamp bulb.

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

NO (LH with DTRL)>> GO TO 9

9.CHECK CONTINUITY BETWEEN FRONT HEADLAMP LH (HI) AND DAYTIME LIGHT RELAY 1

- Disconnect daytime light relay 1 connector.
- Check continuity between front headlamp LH harness connector and daytime light relay 1 harness connector.

Front hea	adlamp LH	Daytime light relay 1		Continuity
Connector	Terminal	Connector	Terminal	Continuity
E7	2	E103	3	Yes

Does continuity exist?

YES >> GO TO 10

NO >> Repair the harness or connector.

10.CHECK DAYTIME LIGHT RELAY 1 GROUND CIRCUIT

Check continuity between daytime light relay 1 harness connector and ground.

< DTC/CIRCUIT DIAGNOSIS >

Daytime light relay 1			Continuity
Connector	Terminal	Ground	Continuity
E103	4		Yes

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Does continuity exist?

YES >> GO TO 11

NO >> Repair the harness or connector.

11. CHECK DAYTIME LIGHT RELAY 1

Check daytime light relay 1. Refer to EXL-45, "Component Inspection"

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-29, "Removal and Installation of IPDM E/R".

NO >> Replace daytime light relay 1.

Component Inspection

INFOID:0000000006766362

1. CHECK DAYTIME LIGHT RELAY 2

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

Terminals Condition Continuity

3 and 5 12V direct current supply between terminals 1 and 2 Yes

No current supply No

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace daytime light relay 2.

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Revision: March 2012 EXL-43 2011 Xterra

DAYTIME LIGHT RELAY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

DAYTIME LIGHT RELAY CIRCUIT

Description INFOID:000000006824164

The BCM sends a daytime light request to the IPDM E/R via the CAN communication lines. The power flows backward through fuse 45 located in IPDM E/R to daytime light relay 1 and LH high beam lamp to IPDM E/R, through the high beam fuses, through 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.

Diagnosis Procedure

INFOID:0000000006824165

Regarding Wiring Diagram information, refer to EXL-84, "Wiring Diagram".

1. CHECK DAYTIME LIGHT RELAY 1 FUSE

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

Unit	Location	Fuse No.	Capacity
Daytime light relay 1	IPDM E/R	45	10A

Is the fuse open?

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

NO >> GO TO 2

2.CHECK IPDM E/R OUTPUT SIGNAL

- 1. Turn the ignition switch OFF.
- Disconnect the daytime light relay 1 connector.
- Turn the ignition switch ON.
- 4. Check the voltage between the daytime light relay 1 harness connector and ground.

(+)		(-)	Voltago	
Connector	Terminal	(-)	Voltage	
E103	2	Ground	Pattory voltage	
E103	5	Giouna	Battery voltage	

Is battery voltage present?

YES >> GO TO 3

NO >> GO TO 5

3.CHECK DAYTIME LIGHT RELAY 1 CIRCUIT

- 1. Turn the ignition switch OFF.
- 2. Disconnect IPDM E/R connector E122.
- Check continuity between the IPDM E/R harness connector and the daytime light relay 1 harness connector.

IPDN	IPDM E/R		Daytime light relay 1	
Connector	Terminal	Connector	Terminal	Continuity
E122	44	E103	1	Yes

Check continuity between the daytime light relay 1 harness connector and ground.

Connector	Terminal	_	Continuity
E103	1	Ground	No

Is the measurement value normal?

DAYTIME LIGHT RELAY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

YES >> GO TO 4

NO >> Repair the harnesses or connectors.

4.CHECK DAYTIME LIGHT RELAY 1

Check daytime light relay 1. Refer to EXL-45, "Component Inspection".

Is the inspection result normal?

YES >> Check headlamp (HI) circuit. If OK, replace IPDM E/R. Refer to PCS-29, "Removal and Installation of IPDM E/R". If NG, refer to EXL-37, "Diagnosis Procedure".

NO >> Replace daytime light relay1.

CHECK DAYTIME LIGHT RELAY CIRCUIT FOR OPEN

- Turn the ignition switch OFF.
- Disconnect IPDM E/R connector E119. 2.
- Check continuity between the IPDM E/R harness connector and the daytime light relay 1 harness connector.

IPDM	1 E/R	Daytime light relay 1				Continuity
Connector	Terminal	Connector	Terminal	Continuity		
E119	10	E103	2	Yes		
L119	10	L 103	5	165		

Does continuity exist?

YES >> Replace IPDM E/R. Refer to PCS-29, "Removal and Installation of IPDM E/R".

NO >> Repair the harnesses or connectors.

Component Inspection

CHECK DAYTIME LIGHT RELAY 1

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

Terminals	Condition	Continuity
3 and 5		Yes
3 and 3	No current supply	No
3 and 4	12V direct current supply between terminals 1 and 2	No
3 anu 4	No current supply	Yes

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace daytime light relay 1

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OFF-ROAD LAMPS SWITCH CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

OFF-ROAD LAMPS SWITCH CIRCUIT

Description INFOID:0000000006255314

The off-road lamps switch sends a momentary ground signal to the BCM requesting the off-road lamps be activated. The BCM controls the off-road lamps relay based on inputs from the combination switch (lighting and turn signal switch), the off-road lamps switch and the off-road lamp cover sensors. If the headlamps are on high beam, the off-road lamp covers are removed and the off-road lamps switch is activated, the BCM grounds the off-road lamp relay. When the off-road lamps relay is energized, power flows from the off-road lamps relay to the off-road lamps assembly.

Component Function Check

INFOID:0000000006255315

1. CHECK OFF-ROAD LAMPS SWITCH OPERATION

Check that the indicator lamp on the off-road lamps switch illuminates from the off-road lamps switch, combination switch (lighting and turn signal switch) and off-road lamp cover sensor.

Is the inspection result normal?

YES >> Off-road lamps switch function is OK.

NO >> Inoperative from off-road lamps switch only, refer to EXL-46, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000006255316

Regarding Wiring Diagram information, refer to EXL-96, "Wiring Diagram".

1. CHECK OFF-ROAD LAMPS SWITCH VOLTAGE

- Turn the ignition switch OFF.
- 2. Disconnect the off-road lamps switch connector M80.
- Turn the ignition switch ON.
- 4. Check the voltage between the off-road lamps switch connector M80 terminal 1 and ground.

(+)		()	Voltage
Connector	Terminal	(–)	voltage
M80	1	Ground	5V

Is the inspection result normal?

YES >> GO TO 3

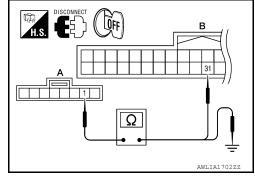
NO >> GO TO 2.

2.CHECK OFF-ROAD LAMPS SWITCH SIGNAL CIRCUIT

- Turn the ignition switch OFF.
- 2. Disconnect BCM connector M18.
- Check continuity between the off-road lamps switch harness connector (A) and BCM harness connector (B).

Α			Continuity	
Connector	Terminal	Connector Terminal		Continuity
M80	1	M18	31	Yes

Check continuity between the off-road lamps switch harness connector (A) and ground.



OFF-ROAD LAMPS SWITCH CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

	Α		Continuity	
Connector	Terminal	<u> </u>	Continuity	
M80	1	Ground	No	

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Is inspection result normal?

YES >> Replace BCM. Refer to BCS-53, "Removal and Installation".

NO >> Repair the harness.

3.check off-road lamps switch ground circuit

- Turn the ignition switch OFF.
- Check continuity between the off-road lamps switch harness connector M80 terminals 2, 6 and ground.

Connector	Terminal	_	Continuity
M80	2	Ground	Yes
	6	Ground	163

Does continuity exist?

YES >> GO TO 4

NO >> Repair the harness or connector.

4. CHECK OFF-ROAD LAMPS SWITCH INDICATOR CIRCUIT

- 1. Disconnect off-road lamps relay.
- Check continuity between the off-road lamps relay harness connector and off-road lamps switch harness connector.

Off-road	lamps relay	Off-road lamps switch		Continuity
Connector	Terminal	Connector Terminal		Continuity
M81	5	M80	5	Yes

Does continuity exist?

- YES >> Check off-road lamps circuit. If OK, Replace off-road lamps switch. If NG, refer to EXL-51, "Diagnosis Procedure".
- NO >> Repair and replace the harness.

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EXL-47 Revision: March 2012 2011 Xterra

OFF-ROAD LAMP COVER SENSOR CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

OFF-ROAD LAMP COVER SENSOR CIRCUIT

Description INFOID.000000006255317

The off-road lamp cover sensors sense the presence of the off-road lamp covers. If the off-road lamp covers are installed on the vehicle, the BCM will not activate the off-road lamps. The BCM controls the off-road lamps relay based on inputs from the combination switch (lighting and turn signal switch), the off-road lamps switch and the off-road lamp cover sensors. When the off-road lamps relay is energized, power flows from the off-road lamps relay to the off-road lamps assembly.

Component Function Check

INFOID:0000000006255318

1. CHECK OFF-ROAD LAMPS SWITCH OPERATION

Check that the indicator lamp on the off-road lamps switch illuminates from the off-road lamps switch, combination switch (lighting and turn signal switch) and off-road lamp cover sensor.

Is the inspection result normal?

YES >> Off-road lamps switch function is OK.

NO >> Inoperative from off-road lamp cover sensor only, refer to EXL-48, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000006255319

Regarding Wiring Diagram information, refer to EXL-96, "Wiring Diagram".

1. CHECK OFF-ROAD LAMPS FUSE

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

Unit	Location	Fuse No.	Capacity
Off-road lamp cover sensor	Fuse block (J/B)	12	10A

Is the fuse open?

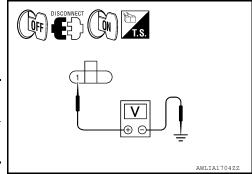
YES >> Replace the fuse after repairing the affected circuit.

NO >> GO TO 2

2.CHECK OFF-ROAD LAMP COVER SENSOR POWER SUPPLY

- 1. Disconnect the off-road lamp assembly connectors.
- 2. Turn the ignition switch ON.
- 3. Check the voltage between the off-road lamp assembly connectors and ground.

(+)			(-)	Voltage	
Connector		Terminal	(-)	voltage	
LH	B527	1	Ground	Battery voltage	
RH	B529	1	Giodila	ballery vollage	
	14	10			



Is battery voltage present?

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

3.CHECK OFF-ROAD LAMP COVER SENSOR GROUND CIRCUIT

1. Turn the ignition switch OFF.

OFF-ROAD LAMP COVER SENSOR CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

2. Check continuity between the off-road lamp assembly harness connectors and ground.

Connector		Terminal	_	Continuity
LH	B527	2	Ground	Yes
RH	B529	2	Sibulia	103

DISCONNECT T.S.

Does continuity exist?

YES >> GO TO 4.

NO >> Repair the harness.

4. CHECK OFF-ROAD LAMP COVER SENSOR OUTPUT SIGNAL

- 1. Disconnect BCM connector M19 and connect the off-road lamp assembly.
- 2. Remove off-road lamp cover.
- 3. Turn the ignition switch ON.
- 4. Check voltage between off-road lamp cover sensor harness connector and ground.

(+)			(-)	Voltage	
Со	Connector Terminal		(-)	voltage	
LH	B527	3	Ground	5V	
RH	B529	3	Ground	30	

Is inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-53</u>, "Removal and Installation".

NO >> GO TO 5

CHECK OFF-ROAD LAMP COVER SENSOR SIGNAL CIRCUIT

- 1. Turn the ignition switch OFF.
- 2. Disconnect off-road lamp assembly.
- 3. Check continuity between the off-road lamp assembly harness connectors (A) and BCM harness connector (B).

	A			Continuity	
Со	nnector	Terminal	Connector	Terminal	Continuity
LH	B527	3	M19	42	Yes
RH	B529	3	10119	42	165

4. Check continuity between the off-road lamp assembly harness connector and ground.

T.S. OFF CSCONNECT	H.S.
Δ Ω	B 42 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
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	Α		
minal	Connector Terminal		
3 Ground	3	B527	LH
3	3	B529	RH

Is inspection result normal?

YES >> Replace the off-road lamp cover sensor.

NO >> Repair the harness.

6.CHECK OFF-ROAD LAMP COVER SENSOR CIRCUIT FOR OPEN

- Turn the ignition switch OFF.
- 2. Disconnect fuse block (J/B) connector M4.
- Check continuity between the off-road lamp assembly harness connector and fuse block (J/B) harness connector.

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OFF-ROAD LAMP COVER SENSOR CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

Off-	Off-road lamp cover assembly		Fuse block (J/B)		Continuity
Со	nnector	Terminal	Connector Terminal		
LH	B527	1	M4	2P	Yes
RH	B529	1	IVI -1	21	163

Does continuity exist?

>> Replace fuse block (J/B). >> Repair the harness. YES

NO

OFF-ROAD LAMPS CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

OFF-ROAD LAMPS CIRCUIT

Description

The BCM controls the off-road lamps relay based on inputs from the combination switch (lighting and turn signal switch), the off-road lamps switch and the off-road lamp cover sensors. When the off-road lamps relay is energized, power flows from the off-road lamps relay to the off-road lamps assembly.

Component Function Check

1. CHECK OFF-ROAD LAMPS SWITCH OPERATION

Check that the indicator lamp on the off-road lamps switch illuminates from the off-road lamps switch, combination switch (lighting and turn signal switch) and off-road lamp cover sensor.

Is the inspection result normal?

YES >> Off-road lamps switch function is OK.

NO >> Inoperative from off-road lamp only, refer to EXL-51, "Diagnosis Procedure".

Diagnosis Procedure

Regarding Wiring Diagram information, refer to EXL-96. "Wiring Diagram".

1. CHECK OFF-ROAD LAMPS FUSE

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

Unit	Location	Fuse No.	Capacity
Off road lamps assembly	Fuse block (J/B)	9	15A

Is the fuse open?

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

NO >> GO TO 2

2.CHECK OFF-ROAD LAMPS VOLTAGE

- Turn the ignition switch OFF.
- Disconnect the off-road lamps assembly connectors.
- 3. Remove the off-road lamps covers.
- 4. Turn the ignition switch ON.
- 5. Turn the high beam headlamps ON.
- 6. Check the voltage between the off-road lamp assembly connectors and ground.

(+)		(_)	Condition	Voltage		
Co	onnector	Terminal	(-)	Condition	voltage	
LH	B528	4	Ground	Off-road lamps switch :ON	Battery voltage	
RH	B530	4	Giouna	Off-road lamps switch :OFF	0V	

Is the inspection result normal?

YES >> GO TO 3

Fixed ON>>GO TO 9

Fixed OFF>>GO TO 4

3.CHECK OFF-ROAD LAMPS GROUND CIRCUIT

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OFF-ROAD LAMPS CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

Check continuity between the off-road lamps assembly harness connector and ground.

Coni	nector	Terminal	_	Continuity
LH	B528	5	Ground	Yes
RH	B530	5	Sibulia	163

DISCONNECT T.S.

Is the inspection result normal?

YES >> Inspect the off-road lamp bulb.

NO >> Repair the harness.

4. CHECK OFF-ROAD LAMPS RELAY

- 1. Turn the ignition switch OFF.
- 2. Disconnect the off-road lamps relay connector.
- Check off-road lamps relay. Refer to <u>EXL-53, "Component Inspection"</u>.

Is the inspection result normal?

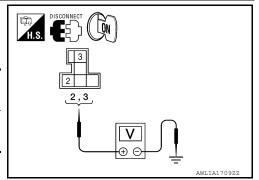
YES >> GO TO 5

NO >> Replace off-road lamps relay.

5.CHECK OFF-ROAD LAMPS RELAY POWER SUPPLY

- 1. Turn the ignition switch ON.
- 2. Check the voltage between the off-road lamps relay harness connector and ground.

(+)		(-)	Voltage	
Connector	Terminal	()	Voltage	
M81	2	Ground	Battery voltage	
	3	Glound	Battery voltage	



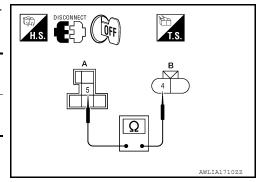
Is the inspection result normal?

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

6. CHECK OFF-ROAD LAMPS POWER SUPPLY CIRCUIT

- 1. Turn the ignition switch OFF.
- 2. Check continuity between the off-road lamps relay harness connector (A) and off-road lamp assembly harness connectors (B).

Α		В			Continuity
Connector	Terminal	Connector		Terminal	Continuity
M81	5	LH	B528	4	Yes
M81	5	RH	B530	4	165



Is inspection result normal?

YES >> GO TO 7

NO >> Repair harness or connector.

.CHECK OFF-ROAD LAMPS RELAY CONTROL CIRCUIT

1. Disconnect BCM connector M19.

OFF-ROAD LAMPS CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

Check continuity between the off-road lamps relay harness connector (A) and BCM harness connectors (B).

Α			Continuity	
Connector	Terminal	Connector	Terminal	Continuity
M81	1	M19	50	Yes

Is inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-53</u>, "Removal and Installation".

NO >> Inspect harness or connectors.

8.CHECK OFF-ROAD LAMPS RELAY POWER SUPPLY CIRCUIT

- 1. Turn the ignition switch OFF.
- 2. Disconnect fuse block (J/B) connector M3.
- Check continuity between the off-road lamps relay harness connector and fuse block (J/B) harness connectors.

Off-road la	amps relay	Fuse ble	ock (J/B)	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M01	2	M3	2N	Yes
M81	3	IVIS	ZIN	165

Does continuity exist?

YES >> Replace fuse block (J/B).

NO >> Repair the harness or connectors.

9. CHECK OFF-ROAD LAMPS RELAY FOR SHORT CIRCUIT

- 1. Turn the ignition switch OFF.
- 2. Disconnect the off-road lamps relay connectors.
- 3. Check continuity between the off-road lamps relay harness connector and ground.

Connector	Terminal	_	Continuity
M81	1	Ground	No

Does continuity exist?

YES >> Repair the harness or connectors.

NO >> Replace BCM. Refer to <u>BCS-53</u>, "Removal and Installation".

Component Inspection

1. CHECK OFF-ROAD LAMPS RELAY

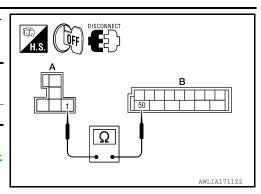
Check off-road lamps relay.

Terminal		Condition	Continuity	
Off-road la	amps relay	Conducti	Continuity	
3	5	12V direct current supply between terminals 1 and 2.	Yes	
		No current supply	No	

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace off-road lamps relay.



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FRONT FOG LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

FRONT FOG LAMP CIRCUIT

Description INFOID:000000006255324

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:0000000006255325

1. CHECK FRONT FOG LAMP OPERATION

WITHOUT CONSULT-III

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

(P)CONSULT-III

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

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

Is the front fog lamp turned ON?

YES >> Front fog lamp circuit is normal.

NO >> Refer to EXL-54, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000006255326

Regarding Wiring Diagram information, refer to EXL-92, "Wiring Diagram".

1. CHECK FRONT FOG LAMP FUSE

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

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

Is the fuse open?

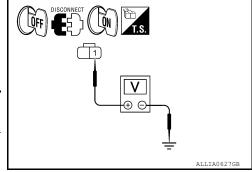
YES >> Replace the fuse after repairing the affected circuit.

NO >> GO TO 2

2.CHECK FRONT FOG LAMP OUTPUT VOLTAGE

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

(+)			(-)	Voltage
Connector Terminal		Terminal	(-)	voltage
LH	E101	1	Ground	Battery voltage
RH	E102	1	Ground	Ballery Vollage



Is battery voltage present?

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

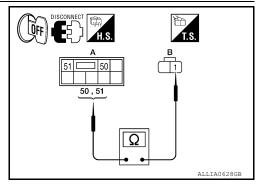
FRONT FOG LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

3.CHECK FRONT FOG LAMP OPEN CIRCUIT

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

	А		В		Continuity
Conr	nector	Terminal	Connector	Terminal	Continuity
LH	E123	50	E101	1	Yes
RH	L123	51	E102	1	162



Does continuity exist?

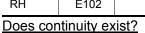
YES >> Replace IPDM E/R. Refer to PCS-29, "Removal and Installation of IPDM E/R".

NO >> Repair the harnesses or connectors.

4. CHECK FRONT FOG LAMP GROUND CIRCUIT

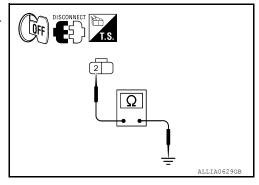
- 1. Disconnect the front fog lamp connector.
- 2. Check continuity between the front fog lamp harness connector terminal and ground.

Conr	nector	Terminal	_	Continuity
LH	E101	2	Ground	Yes
RH	E102	2	Ground	163



YES >> Inspect the fog lamp bulb.

NO >> Repair the harness.



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Revision: March 2012 EXL-55 2011 Xterra

PARKING LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

PARKING LAMP CIRCUIT

Description INFOID.000000006255327

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 36 and 37, located in the IPDM E/R. Power then flows to the front and rear combination lamps, license plate lamp.

Component Function Check

INFOID:0000000006255328

1. CHECK PARKING LAMP OPERATION

NWITHOUT CONSULT-III

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

®CONSULT-III

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

TAIL : Parking lamp ON
OFF : Parking lamp OFF

Is the parking lamp turned ON?

YES >> Parking lamp circuit is normal.

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

Diagnosis Procedure

INFOID:0000000006255329

Regarding Wiring Diagram information, refer to EXL-107, "Wiring Diagram".

1. CHECK PARKING LAMP FUSES

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

Unit	Location	Fuse No.	Capacity
Parking lamps	IPDM E/R	36	10A
r arking lamps	IF DIVI L/IX	37	10A

Is the fuse open?

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

NO >> GO TO 2

2.CHECK TAIL LAMP RELAY OUTPUT (VOLTAGE)

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

(+)			()	Voltage
	Connector	Terminal	(–)	Voltage
LH	E27	5	Ground	Battery voltage
RH	E111	3	Glound	

PARKING LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

6. With the parking lamps ON, check voltage between the front side marker lamp connector and ground.

(+)		()	Voltage	
	Connector	Terminal	(-)	vollage
LH	E17	7	Ground	Battery voltage
RH	E108	,	Giodila	Dattery Voltage

7. With the parking lamps ON, check voltage between the rear combination lamp connector and ground.

(+)			(–)	Voltage
-	Connector	Terminal	(-)	vollage
LH	B35	1	Ground	Battery voltage
RH	B105	1 Ground Batter	1 Ground	Ballery Vollage

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

(+)		(-)	Voltage
Connector	Terminal	(-)	voltage
C12	1	Ground	Battery voltage

Are voltage readings as specified?

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

 $3. \mathsf{CHECK}$ PARKING, LICENSE PLATE AND TAIL LAMP CIRCUIT (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 parking lamp harness connector.

C	onnector	Terminal	Connector	Terminal	Continuity
LH	E121	28	E27	5	Yes
RH	E123	49	E111	3	103

4. Check continuity between the IPDM E/R harness connector and the front side marker lamp harness connector.

Co	onnector	Terminal	Connector	Terminal	Continuity
LH	E121	28	E17	7	Yes
RH	E123	49	E108	,	165

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

	IPDM E/R Rear combination lamp			Continuity	
Co	onnector	Terminal	Connector	Terminal	Continuity
LH	H E124 57		B35	1	Yes
RH		37	B105		165

6. Check continuity between the IPDM E/R harness connector and license plate lamp connector.

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PARKING LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

IPDI	M E/R	License plate lamp		Continuity
Connector	Terminal	Connector Terminal		Continuity
E124	57	C12	1	Yes

Are continuity results as specified?

YES >> Replace IPDM E/R. Refer to PCS-29, "Removal and Installation of IPDM E/R".

NO >> Repair the harnesses or connectors.

4. CHECK PARKING, LICENSE AND TAIL LAMP GROUND CIRCUITS

1. Check continuity between the front parking lamp harness connectors and ground.

Со	nnector	Terminal	_	Continuity
LH	E27	6	Ground	Yes
RH	E111	0	Glound	163

2. Check continuity between the front side marker lamp harness connectors and ground.

Со	nnector	Terminal	_	Continuity
LH	E17	8	Ground	Yes
RH	E108	0	Glound	163

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

Со	nnector	Terminal	_	Continuity
LH	B35	5	Ground	Yes
RH	B105	5	Glound	163

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

Connector	Terminal	_	Continuity
C12	2	Ground	Yes

Are continuity results as specified?

YES >> Inspect the parking lamp bulb.

NO >> Repair the harness.

TURN SIGNAL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

TURN SIGNAL LAMP CIRCUIT

Description INFOID:0000000006255330

The BCM monitors inputs from the combination switch (lighting and turn signal 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

NOTE:

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

Component Function Check

1.CHECK TURN SIGNAL LAMP

(P)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 blinking RH : Turn signal lamp RH blinking **OFF** : The turn signal lamp OFF

Does the turn signal lamp blink?

YES >> Turn signal lamp circuit is normal.

>> Refer to EXL-59, "Diagnosis Procedure". NO

Diagnosis Procedure

Regarding Wiring Diagram information, refer to <a>EXL-101, "Wiring Diagram".

1. CHECK TURN SIGNAL LAMP BULB

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

Is the bulb OK?

YES >> GO TO 2

NO >> Replace the bulb.

2.CHECK TURN SIGNAL LAMP OUTPUT VOLTAGE

- Turn the ignition switch OFF.
- 2. Disconnect the front combination lamp connectors and the rear combination lamp connector.
- Turn the ignition switch ON.
- 4. With turn signal switch operating, check the voltage between the front combination lamp harness connector and ground.

(+)		(-)	Voltage	
Con	nector	Terminal	()	vollage
E27	LH			
E111	RH	4	Ground	(V) 15 10 5 0 1 s

EXL-59 Revision: March 2012 2011 Xterra **EXL**

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TURN SIGNAL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

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

	(+)		(-)	Voltage	
Con	nector	Terminal	()	voluge	
B35	LH				
B105	RH	4	Ground	(V) 15 10 5 0 1 s PKID0926E	

Is voltage reading as specified?

YES >> GO TO 5 NO >> GO TO 3

3.check turn signal lamp circuit for open

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

	BCM		Front comb	ination lamp	Continuity
Con	nector	Terminal	Connector	Terminal	Continuity
Front LH	M20	60	E27	4	Yes
Front RH	IVIZU	61	E111	4	165

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

	BCM		Rear comb	ination lamp	Continuity
Con	nector	Terminal	Connector	Terminal	Continuity
Rear LH	M20	60	B35	4	Yes
Rear RH	IVIZU	61	B105	4	163

Are continuity 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	Ground	No
RH	IVIZO	61	Ground	140

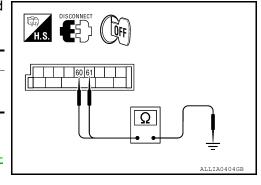
Does continuity exist?

YES >> Repair the harnesses or connectors.

NO >> Replace BCM. Refer to <u>BCS-53</u>, "Removal and Installation".

5. CHECK TURN SIGNAL LAMP GROUND CIRCUIT

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



TURN SIGNAL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

Conne	ector	Terminal	_	Continuity
Front LH	E27	6	Ground	Yes
Front RH	E111		Ground	163

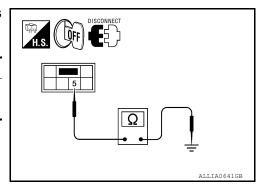
2. Check continuity between the rear combination lamp harness connectors and ground.

Conne	ector	Terminal	_	Continuity
Rear LH	B35	5	Ground	Yes
Rear RH	B105	5	Ground	165

Are continuity results as specified?

YES >> Replace the malfunctioning lamp.

NO >> Repair the harnesses or connectors.



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< ECU DIAGNOSIS INFORMATION >

ECU DIAGNOSIS INFORMATION

BCM (BODY CONTROL MODULE)

Reference Value

NOTE:

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

- Activate and display TPMS transmitter IDs
- Display tire pressure reported by the TPMS transmitter
- Read TPMS DTCs
- Register TPMS transmitter IDs

VALUES ON THE DIAGNOSIS TOOL

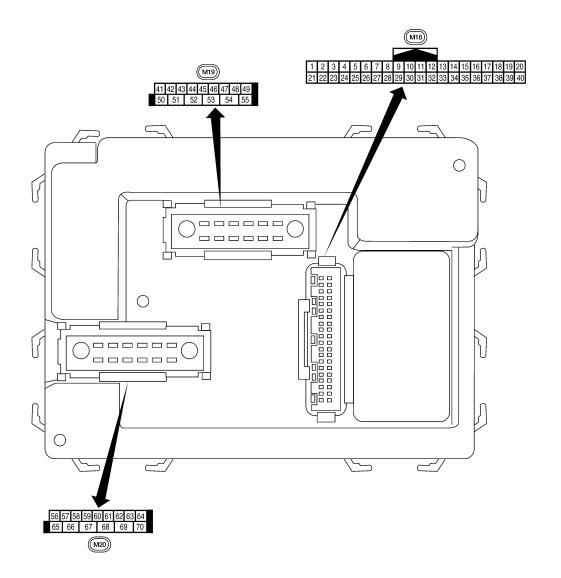
Monitor Item	Condition	Value/Status
ACC ON SW	Ignition switch OFF or ON	Off
ACC ON SW	Ignition switch ACC	On
AIR COND SW	A/C switch OFF	Off
AIR COND SW	A/C switch ON	On
AIR PRESS FL	Front left tire air pressure value	kPa, kg/cm ² , psi
AIR PRESS FR	Front right tire air pressure value	kPa, kg/cm², psi
AIR PRESS RL	Rear left tire air pressure value	kPa, kg/cm², psi
AIR PRESS RR	Rear right tire air pressure value	kPa, kg/cm², psi
BACK DOOR SW	Back door closed	Off
BACK DOOK SW	Back door opened	On
BRAKE SW	Brake pedal released	Off
DRANE SW	Brake pedal applied	On
BUCKLE SW	Seat belt buckle unfastened	Off
BOOKLE SW	Seat belt buckle fastened	On
BUZZER	Buzzer in combination meter OFF	Off
BUZZER	Buzzer in combination meter ON	On
CARGO LAMP SW	Cargo lamp switch OFF	Off
CANGO LAMIF SW	Cargo lamp switch ON	On
CDL LOCK SW	Door lock/unlock switch does not operate	Off
CDL LOCK SW	Press door lock/unlock switch to the LOCK side	On
CDL UNLOCK SW	Door lock/unlock switch does not operate	Off
CDL UNLOCK 3W	Press door lock/unlock switch to the UNLOCK side	On
DOOR SW-AS	Front door RH closed	Off
DOOK SW-AS	Front door RH opened	On
DOOR SW-DR	Front door LH closed	Off
DOOK SW-DK	Front door LH opened	On
DOOR SW-RL	Rear door LH closed	Off
DOOK SW-KL	Rear door LH opened	On
DOOR SW-RR	Rear door RH closed	Off
DOOK SW-KK	Rear door RH opened	On
FAN ON SIG	Blower motor fan switch OFF	Off
I AN ON OIG	Blower motor fan switch ON	On

Monitor Item	Condition	Value/Status
FR FOG SW	Front fog lamp switch OFF	Off
FR FOG SW	Front fog lamp switch ON	On
FR WASHER SW	Front washer switch OFF	Off
FR WASHER SW	Front washer switch ON	On
ED WIDED LOW	Front wiper switch OFF	Off
FR WIPER LOW	Front wiper switch LO	On
ED WIDED III	Front wiper switch OFF	Off
FR WIPER HI	Front wiper switch HI	On
ED WIDED INT	Front wiper switch OFF	Off
FR WIPER INT	Front wiper switch INT	On
ED WIDED OTOD	Any position other than front wiper stop position	Off
FR WIPER STOP	Front wiper stop position	On
114.74.DD 014/	When hazard switch is not pressed	Off
HAZARD SW	When hazard switch is pressed	On
LIEAD LAMB OM 4	Headlamp switch OFF	Off
HEAD LAMP SW 1	Headlamp switch 1st	On
LIEAD LANAD OVACO	Headlamp switch OFF	Off
HEAD LAMP SW 2	Headlamp switch 1st	On
	High beam switch OFF	Off
HI BEAM SW	High beam switch HI	On
ID REGST FL1	ID registration of front left tire incomplete	YET
	ID registration of front left tire complete	DONE
ID DECCT ED4	ID registration of front right tire incomplete	YET
ID REGST FR1	ID registration of front right tire complete	DONE
ID DECOT DI 4	ID registration of rear left tire incomplete	YET
ID REGST RL1	ID registration of rear left tire complete	DONE
ID DECOT DD4	ID registration of rear right tire incomplete	YET
ID REGST RR1	ID registration of rear right tire complete	DONE
IONI ONI OVA	Ignition switch OFF or ACC	Off
IGN ON SW	Ignition switch ON	On
IONI CIAL CANI	Ignition switch OFF or ACC	Off
IGN SW CAN	Ignition switch ON	On
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	1 - 7
KEY OWL LIK OW	Door key cylinder LOCK position	Off
KEY CYL LK-SW	Door key cylinder other than LOCK position	On
KEN ON THE OW	Door key cylinder UNLOCK position	Off
KEY CYL UN-SW	Door key cylinder other than UNLOCK position	On
KEY ON OW	Mechanical key is removed from key cylinder	Off
KEY ON SW	Mechanical key is inserted to key cylinder	On
WE/4 E00 00''	LOCK button of key fob is not pressed	Off
KEYLESS LOCK	LOCK button of key fob is pressed	On
WEW E00 BAL!!	PANIC button of key fob is not pressed	Off
KEYLESS PANIC	PANIC button of key fob is pressed	On

Monitor Item	Condition	Value/Status
KEVI FOR LINII OOK	UNLOCK button of key fob is not pressed	Off
KEYLESS UNLOCK	UNLOCK button of key fob is pressed	On
LIQUE OWN ACT	Lighting switch OFF	Off
LIGHT SW 1ST	Lighting switch 1st	On
OIL PRESS SW	Ignition switch OFF or ACC Engine running	Off
	Ignition switch ON	On
PASSING SW	Other than lighting switch PASS	Off
PASSING SW	Lighting switch PASS	On
	Rear window defogger switch OFF	Off
REAR DEF SW	Rear window defogger switch ON	On
RR WASHER SW	Rear washer switch OFF	Off
	Rear washer switch ON	On
DD WIDED INT	Rear wiper switch OFF	Off
RR WIPER INT	Rear wiper switch INT	On
DD WIDED ON	Rear wiper switch OFF	Off
RR WIPER ON	Rear wiper switch ON	On
RR WIPER STOP	Rear wiper stop position	Off
RR WIPER STOP	Other than rear wiper stop position	On
TURN SIGNAL L	Turn signal switch OFF	Off
TURN SIGNAL L	Turn signal switch LH	On
TUDNI CICNIAL D	Turn signal switch OFF	Off
TURN SIGNAL R	Turn signal switch RH	On
VEHICLE SPEED	While driving	Equivalent to speedometer reading
MADNING LAMD	Low tire pressure warning lamp in combination meter OFF	Off
WARNING LAMP	Low tire pressure warning lamp in combination meter ON	On

< ECU DIAGNOSIS INFORMATION >

Terminal Layout



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Physical Values

			Signal		Measuring condition	
Terminal	Wire color	Signal name	input/ output	Ignition switch	Operation or condition	Reference value or waveform (Approx.)
	BR	Ignition keyhole illumi-	Outout	OFF	Door is locked (SW OFF)	Battery voltage
1	ВК	nation	Output	OFF	Door is unlocked (SW ON)	0V
2	Р	Combination switch input 5	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 6 4 2 0 **5ms SKIA5291E
3	SB	Combination switch input 4	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 6 4 2 0 **5ms
4	V	Combination switch input 3	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 6 4 2 0 **5ms
5	L R	Combination switch input 2 Combination switch input 1	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 6 4 2 0
		input 1 Front door lock as-			ON (open, 2nd turn)	SKIA5292E Momentary 1.5V
7	GR	sembly LH (key cylinder switch) and back door key cylinder switch (unlock)	Input	OFF	OFF (closed)	0V
		Front door lock as-			ON (open)	Momentary 1.5V
8	SB	sembly LH (key cylinder switch) and back door key cylinder switch (lock)	Input	OFF	OFF (closed)	0V
		Deposite de la C			Rear window defogger switch ON	0V
9	Υ	Rear window defogger switch	Input	ON	Rear window defogger switch OFF	5V
11	G/B	Ignition switch (ACC or ON)	Input	ACC or ON	Ignition switch ACC or ON	Battery voltage
12	LG	Front door switch RH	Input	OFF	ON (open)	0V
			F		OFF (closed)	Battery voltage

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	Wire		Signal		Measuring condition	Reference value or waveform
Terminal	color	Signal name	input/ output	Ignition switch	Operation or condition	(Approx.)
13	L	Rear door switch RH	Input	OFF	ON (open)	0V
13	L	ixeai door switch ixi i	iliput	OH	OFF (closed)	Battery voltage
15	W	Tire pressure warning check connector	Input	OFF	_	5V
18	BR	Remote keyless entry receiver (ground)	Output	OFF	_	0V
19	V	Remote keyless entry receiver (power sup- ply)	Output	OFF	Ignition switch OFF	(V) 6 4 2 0
20	G	Remote keyless entry receiver (signal)	Input	OFF	Stand-by (keyfob buttons released)	(V) 4 2 0 + 50 ms LIIA1894E
20					When remote keyless entry receiver receives signal from keyfob (keyfob buttons pressed)	(V) 6 4 2 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
21	GR	NATS antenna amp.	Input	OFF → ON	Ignition switch (OFF \rightarrow ON)	Just after turning ignition switch ON: Pointer of tester should move for approx. 1 second, then return to battery voltage.
23	G	Security indicator lamp	Output	OFF	Goes OFF → illuminates (Every 2.4 seconds)	Battery voltage → 0V
25	BR	NATS antenna amp.	Input	OFF → ON	Ignition switch (OFF → ON)	Just after turning ignition switch ON: Pointer of tester should move for approx. 1 second, then return to battery voltage.
27	W	Compressor ON sig-	Input	ON	A/C switch OFF	5V
<u> </u>	٧٧	nal	прас	O.V	A/C switch ON	0V
28	R	Front blower monitor	Input	ON	Front blower motor OFF	Battery voltage
		The state of the s	pat	3.,	Front blower motor ON	0V
29	G	Hazard switch	Input	OFF	ON	0V
			iriput	OFF	OFF	5V
31	R	Off-road lamps switch	Input	ON	ON	0V
•		,			OFF	5V

	\A/'		Signal		Measuring con	dition	Defended a second
Terminal	Wire color	Signal name	input/ output	Ignition switch	Operation	or condition	Reference value or waveform (Approx.)
32	0	Combination switch output 5	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4		(V) 6 4 2 0 ***5ms
33	GR	Combination switch output 4	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4		(V) 4 2 0 + + 5ms skia5292E
34	G	Combination switch output 3	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4		(V) 64 20 ••5ms skia5291E
35	BR	Combination switch output 2			Lighting, turn, wiper OFF Wiper dial position 4		
36	LG	Combination switch output 1	Output	ON			(V) 6 2 0 + + 5ms SKIA5292E
37	В	Key switch and key	Input	OFF	Key inserted		Battery voltage
		lock solenoid	mput		Key inserted		0V
38	W/R	Ignition switch (ON)	Input	ON	-	_	Battery voltage
39	L	CAN-H	_	_	-	_	_
40	Р	CAN-L		_	-	ON	
42	L	Off-road lamps	Output	ON	Off-road lamps switch	OFF	Battery voltage
46		Deals de constitut	1	055	ON (open)	<u> </u>	0V
43	Y	Back door switch	Input	OFF	OFF (closed)		Battery voltage
					Rise up position (rear wiper arm on stopper) A Position (full clockwise stop position) Forward sweep (counterclockwise direction)		0V
			Input				Battery voltage
44	0	Rear wiper auto stop switch		ON			Fluctuating
					B Position (full wise stop posi	counterclock- tion)	0V
					Reverse swee rection)	p (clockwise di-	Fluctuating

	Wire		Signal		Measuring cond	lition	Reference value or waveform
Terminal	color	Signal name	input/ output	Ignition switch	Operation of	or condition	(Approx.)
45	V	Lock switch	Input	OFF	ON (lock)		0V
45	V	LOCK SWITCH	iliput	OH	OFF		Battery voltage
46	LG	Unlock switch	Input	OFF	ON (unlock)		0V
40	LG	Officer Switch	iliput	OFF	OFF		Battery voltage
47	GR	Front door switch LH	Input	OFF	ON (open)		0V
71	OI C	Tront door switch Err	mpat	011	OFF (closed)		Battery voltage
48	Р	Rear door switch LH	Input	OFF	ON (open)		0V
-10	•	rteal door owiter Err	прис	011	OFF (closed)		Battery voltage
49	L	Cargo lamp	Output	OFF	Any door open	(ON)	0V
40	1	Cargo lamp	Output	011	All doors closed	d (OFF)	Battery voltage
50	W	Off-road lamps relay	Output	ON	Off-road	ON	0V
	V V	On road lamps relay	Cutput	JIN	lamps switch	OFF	Battery voltage
51	0	Trailer turn signal (right)	Output	ON	Turn right ON		(V) 15 10 500 ms SKIA3009J
52	LG	Trailer turn signal (left)	Output	ON	Turn left ON		(V) 15 10 5 0 5 500 ms 5 SKIA3009J
55	W	Rear wiper output cir-	Output	ON	OFF		0
		cuit 1	Catput	0.1	ON		Battery voltage
56	R/Y	Battery saver output	Output	OFF ON	15 minutes afte switch is turned		0V
57	R/Y	Battery power supply	Input	OFF			Battery voltage Battery voltage
JI	IVI	Front door lock as-	πραι	OFF	OFF (neutral)	- 	0V
59	GR	sembly LH actuator	Output	OFF			
		(unlock)			ON (unlock)		Battery voltage
60	LG	Turn signal (left)	Output	ON	Turn left ON		(V) 15 10 500 ms

< ECU DIAGNOSIS INFORMATION >

	Wire		Signal		Measuring cond	dition	Reference value or waveform
Terminal	color	Signal name	input/ output	Ignition switch	Operation	or condition	(Approx.)
61	G	Turn signal (right)	Output	ON	Turn right ON		(V) 15 10 500 ms SKIA3009J
63	BR	Interior room/map	Output	OFF	Any door	ON (open)	0V
	DIX	lamp	Output	OH	switch	OFF (closed)	Battery voltage
65	V	All door lock actuators	Output	OFF	OFF (neutral)		0V
	•	(lock)		.	ON (lock)		Battery voltage
		Front door lock actua-			OFF (neutral)		0V
66	L	tor RH, rear door lock actuators LH/RH and back door lock actua- tor (unlock)	Output	OFF	ON (unlock)		Battery voltage
67	В	Ground	Input	ON	-	_	0V
					Ignition switch	ON	Battery voltage
		Power window power supply (RAP)	Output	_	Within 45 seconds after ignition switch OFF		Battery voltage
68	0				More than 45 seconds after ignition switch OFF		0V
					When front do open or power operates		0V
70	W	Battery power supply	Input	OFF	_		Battery voltage

Fail Safe

Fail-safe index

BCM performs fail-safe control when any DTC listed below is detected.

Display contents of CONSULT	Fail-safe	Cancellation
U1000: CAN COMM CIRCUIT	Inhibit engine cranking	When the BCM re-establishes communication with the other modules.

DTC Inspection Priority Chart

INFOID:0000000006835772

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

Priority	DTC
1	U1000: CAN COMM CIRCUIT
2	B2190: NATS ANTENNA AMP B2191: DIFFERENCE OF KEY B2192: ID DISCORD BCM-ECM B2193: CHAIN OF BCM-ECM

< ECU DIAGNOSIS INFORMATION >

Priority	DTC	
3	C1729: VHCL SPEED SIG ERR C1735: IGNITION SIGNAL	1
	 C1704: LOW PRESSURE FL C1705: LOW PRESSURE FR C1706: LOW PRESSURE RR C1707: LOW PRESSURE RL C1708: [NO DATA] FL C1709: [NO DATA] FR C1710: [NO DATA] RR C1711: [NO DATA] RL 	
	C1712: [CHECKSUM ERR] FL C1713: [CHECKSUM ERR] FR C1714: [CHECKSUM ERR] RR	ı
4	 C1715: [CHECKSUM ERR] RL C1716: [PRESSDATA ERR] FL C1717: [PRESSDATA ERR] FR C1718: [PRESSDATA ERR] RR C1719: [PRESSDATA ERR] RL 	
	C1720: [CODE ERR] FL C1721: [CODE ERR] FR C1722: [CODE ERR] RR C1723: [CODE ERR] RL	
	 C1724: [BATT VOLT LOW] FL C1725: [BATT VOLT LOW] FR C1726: [BATT VOLT LOW] RR C1727: [BATT VOLT LOW] RL 	(

DTC Index

NOTE:

Details of time display

CRNT: Displays when there is a malfunction now or after returning to the normal condition until turning ignition switch OFF → ON again.

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

CONSULT display	Fail-safe	Tire pressure monitor warning lamp ON	Reference page
No DTC is detected. further testing may be required.	_	_	_
U1000: CAN COMM CIRCUIT	_	_	BCS-27
B2190: NATS ANTENNA AMP	_	_	<u>SEC-18</u>
B2191: DIFFERENCE OF KEY	_	_	<u>SEC-21</u>
B2192: ID DISCORD BCM-ECM	_	_	<u>SEC-22</u>
B2193: CHAIN OF BCM-ECM	_	_	<u>SEC-24</u>
C1708: [NO DATA] FL	_	_	<u>WT-14</u>
C1709: [NO DATA] FR	_	_	<u>WT-14</u>
C1710: [NO DATA] RR	_	_	<u>WT-14</u>
C1711: [NO DATA] RL	_	_	<u>WT-14</u>
C1712: [CHECKSUM ERR] FL	_	_	<u>WT-16</u>
C1713: [CHECKSUM ERR] FR	_	_	<u>WT-16</u>
C1714: [CHECKSUM ERR] RR	_	_	<u>WT-16</u>
C1715: [CHECKSUM ERR] RL	_	_	<u>WT-16</u>

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CONSULT display	Fail-safe	Tire pressure monitor warning lamp ON	Reference page
C1716: [PRESSDATA ERR] FL	_	_	<u>WT-18</u>
C1717: [PRESSDATA ERR] FR	_	_	<u>WT-18</u>
C1718: [PRESSDATA ERR] RR	_	_	<u>WT-18</u>
C1719: [PRESSDATA ERR] RL	_	_	<u>WT-18</u>
C1720: [CODE ERR] FL	_	_	<u>WT-16</u>
C1721: [CODE ERR] FR	_	_	<u>WT-16</u>
C1722: [CODE ERR] RR	_	_	<u>WT-16</u>
C1723: [CODE ERR] RL	_	_	<u>WT-16</u>
C1724: [BATT VOLT LOW] FL	_	_	<u>WT-16</u>
C1725: [BATT VOLT LOW] FR	_	_	<u>WT-16</u>
C1726: [BATT VOLT LOW] RR	_	_	<u>WT-16</u>
C1727: [BATT VOLT LOW] RL	_	_	<u>WT-16</u>
C1729: VHCL SPEED SIG ERR	_	_	<u>WT-20</u>
C1735: IGNITION SIGNAL	_	_	_

< ECU DIAGNOSIS INFORMATION >

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

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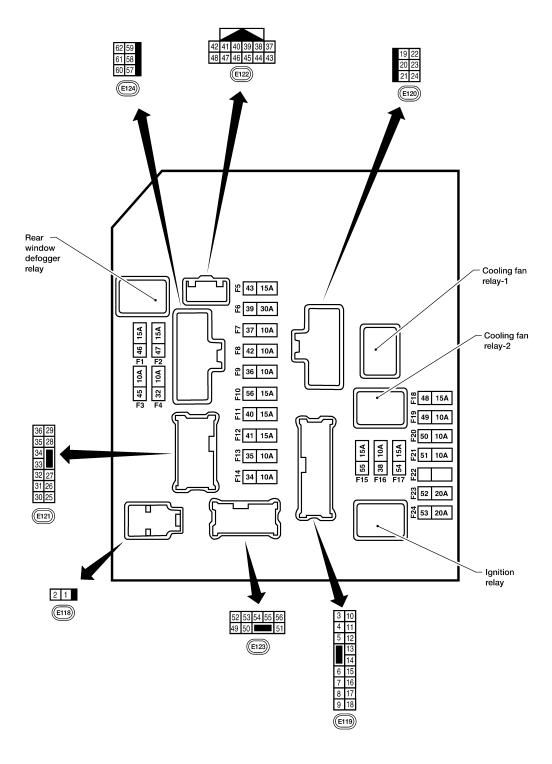
Reference Value

VALUES ON THE DIAGNOSIS TOOL

Monitor Item		Condition	Value/Status
MOTOR FAN REQ	Engine idle speed	Changes depending on engine coolant temperature, air conditioner operation status, vehicle speed, etc.	1, 2, 3, 4
A/C COMP DEC	A/C switch OFF		Off
A/C COMP REQ	A/C switch ON		On
TAIL&CLR REQ	Lighting switch OFF		Off
TAIL&CLR REQ	Lighting switch 1ST, 2ND, HI o	r AUTO (Light is illuminated)	On
HL LO REQ	Lighting switch OFF		Off
nl lo req	Lighting switch 2ND HI or AUT	O (Light is illuminated)	On
UL ULDEO	Lighting switch OFF		Off
HL HI REQ	Lighting switch HI		On
ED 500 D50	Linkting switch OND	Front fog lamp switch OFF	Off
FR FOG REQ	Lighting switch 2ND	Front fog lamp switch ON	On
		Front wiper switch OFF	Stop
FR WIP REQ	Ignition switch ON	Front wiper switch INT	1LOW
FR WIP REQ	Ignition switch ON	Front wiper switch LO	Low
		Front wiper switch HI	Hi
		Front wiper stop position	STOP P
WIP AUTO STOP	Ignition switch ON	Any position other than front wiper stop position	ACT P
		Front wiper operates normally	Off
WIP PROT	Ignition switch ON	Front wiper stops at fail-safe operation	BLOCK
ST DLV DEO	Ignition switch OFF or ACC		Off
ST RLY REQ	Ignition switch START		On
ICN DLV	Ignition switch OFF or ACC		Off
IGN RLY	Ignition switch ON		On
	Rear defogger switch OFF		Off
RR DEF REQ	Rear defogger switch ON		On
OIL D CW	Ignition switch OFF, ACC or er	Open	
OIL P SW	Ignition switch ON		Close
	Daytime light system requeste	d OFF with CONSULT-III.	Off
DTRL REQ	Daytime light system requeste	On	
	Not operated		Off
THFT HRN REQ	Panic alarm is activated Horn is activated with VEHIC TEM	CLE SECURITY (THEFT WARNING) SYS-	On
HODN CHIDD	Not operated		Off
HORN CHIRP	Door locking with keyfob (horn	chirp mode)	On

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Terminal Layout



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Physical Values

PHYSICAL VALUES

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< ECU DIAGNOSIS INFORMATION >

					Measuring condition		
Terminal	Wire color	Signal name	Signal input/ output	Igni- tion switch	Operation or condition	Reference value (Approx.)	
1	W	Battery power supply	Input	OFF	_	Battery voltage	
2	R	Battery power supply	Input	OFF	_	Battery voltage	
3	G	ECM rolay	Output		Ignition switch ON or START	Battery voltage	
3	G	ECM relay	Output	_	Ignition switch OFF or ACC	0V	
4	Р	ECM relay	Output		Ignition switch ON or START	Battery voltage	
7	F	LOW relay	Output	_	Ignition switch OFF or ACC	0V	
6	V	Throttle control motor	Output		Ignition switch ON or START	Battery voltage	
O	V	relay	Output	_	Ignition switch OFF or ACC	0V	
7	BR	ECM rolay control	Innut		Ignition switch ON or START	0V	
′	ВK	ECM relay control	Input		Ignition switch OFF or ACC	Battery voltage	
8	W/R	Fuse 54	Output		Ignition switch ON or START	Battery voltage	
0	VV/FC	ruse 54	Output	_	Ignition switch OFF or ACC	0V	
10	D/D	Fire 4F	Outout	ON	Daytime light system active	0V	
10	R/B	Fuse 45	Output	ON	Daytime light system inactive	Battery voltage	
11	Y	A/C compressor	Quitnut	ON or	A/C switch ON or defrost A/C switch	Battery voltage	
11	T	A/C compressor	Output START		A/C switch OFF or defrost A/C switch	0V	
12	W/G	Ignition switch sup-	lan.d		OFF or ACC	0V	
12	W/G	plied power	Input	_	ON or START	Battery voltage	
13	R	Fuel pump relay	Output		Ignition switch ON or START	Battery voltage	
13	IX	Fuel pullip relay	Output	_	Ignition switch OFF or ACC	0V	
1.1	\A\(\C	Fires 40	Outout		Ignition switch ON or START	Battery voltage	
14	W/G	Fuse 49	Output	_	Ignition switch OFF or ACC	0V	
15	\\//D	Fuco 50 (ABC)	Out to 14		Ignition switch ON or START	Battery voltage	
15	W/R	Fuse 50 (ABS)	Output	_	Ignition switch OFF or ACC	0V	
16	\A\(\C)	F::00 F1	04		Ignition switch ON or START	Battery voltage	
16	W/G	Fuse 51	Output	_	Ignition switch OFF or ACC	0V	
47	1440	F	0.10.1		Ignition switch ON or START	Battery voltage	
17	W/G	Fuse 55	Output	_	Ignition switch OFF or ACC	0V	
19	W	Starter motor	Output	START	_	Battery voltage	
20	BR	Cooling fan motor (low)	Output	ON or START	_	Battery voltage	 -
0.4	05	Ignition switch sup-	1		OFF or ACC	0V	
21	GR	plied power	Input	_	START	Battery voltage	
22	G	Battery power supply	Output	OFF	_	Battery voltage	
23	LG	Door mirror defogger	Output		When rear defogger switch is ON	Battery voltage	
23	LG	output signal	Output		When raker defogger switch is OFF	0V	_

< ECU DIAGNOSIS INFORMATION >

			Signal		Measuring con	dition							
Terminal	Wire color	Signal name	input/ output	Igni- tion switch	Operation or condition		Reference value (Approx.)						
24	Р	Cooling fan motor	Output		Conditions correct for cooling fan operation Conditions not correct for cooling fan operation		Battery voltage						
24	Р	(high)	Output	_			0V						
27	W/G	Fuse 38	Output		Ignition switch	ON or START	Battery voltage						
21	W/O	1 436 30	Output		Ignition switch	OFF or ACC	0V						
00	Б	LH front parking and	0	OFF	Lighting	OFF	0V						
28	R	front side marker lamp	Output	OFF	switch 1st po- sition	ON	Battery voltage						
					Lighting	OFF	0V						
29	G	Trailer tow relay	Output	ON	switch 1st po- sition	ON	Battery voltage						
20	D/D	F F2	0		Ignition switch	ON or START	Battery voltage						
30	R/B	Fuse 53	Output	_	Ignition switch	OFF or ACC	0V						
32	GR	Wiper low speed sig-	Output	ON or	Wiper switch OFF		Battery voltage						
32	GK	nal	Output	START	LO or INT		0V						
35	L	Wiper high speed sig-	Output	ON or	Wiper switch	OFF, LO, INT	Battery voltage						
00		nal	Catput	START	Tripor officer	HI	0V						
										Ignition switch	ON	(V) 6 4 2 0 2 ms JPMIA0001GB	
37	Y	Power generation command signal	Output	Output	Output	Output	Output	Output	Output	_	40% is set on ' "ALTERNATOF "ENGINE"		(V) 6 4 2 0 → 2ms JPMIA0002GE 3.8 V
					40% is set on "Active test," "ALTERNATOR DUTY" of "ENGINE"		(V) 6 4 2 0 → 2ms JPMIA0003GB						
38	В	Ground	Input	_	_	_	0V						
39	L	CAN-H		ON	_	_	_						
40	Р	CAN-L	_	ON	-	_	_						
42	GR	Oil pressure switch	Input	_	Engine running	9	Battery voltage						
14	O.C	5.1 prosoure switch	input		Engine stoppe	d	0V						

< ECU DIAGNOSIS INFORMATION >

			Signal					
Terminal	Wire color	Signal name	input/ output	Igni- tion switch	Operation or condition		Reference value (Approx.)	
43	G	Wiper auto stop signal	Input	ON or START	Wiper switch OFF, LO, INT		Battery voltage	
4.4	П	Daytime light relay	lant	ON	Daytime light s	system active	0V	
44	R	control (Canada only)	Input	ON	Daytime light s	system inactive	Battery voltage	
45	LG	Horn relay control	Input	ON	When door lock using keyfob (ks are operated OFF → ON)*	Battery voltage → 0V	
46	V	Fuel pump relay con-	lnnut		Ignition switch	ON or START	0V	
40	V	trol	Input		Ignition switch	OFF or ACC	Battery voltage	
47	0	Throttle control motor	11		Ignition switch	ON or START	0V	
47	0	relay control	Input		Ignition switch	OFF or ACC	Battery voltage	_
					Selector lever	in "P" or "N"	0V	
48	R	Starter relay (range switch)	Input	ON or START		any other posi-	Battery voltage	
		Front RH parking and			Lighting	OFF	0V	
49	GR	front side marker lamp	Output	OFF	switch 1st po- sition	ON	Battery voltage	
					Lighting	OFF	0V	
50	W	Front fog lamp (LH)	Output	ON or START	switch must be in the 2nd position (LOW beam is ON) and the front fog lamp switch	ON	Battery voltage	
					Lighting	OFF	0V	
51	٧	Front fog lamp (RH)	Output	ON or START	switch must be in the 2nd position (LOW beam is ON) and the front fog lamp switch	ON	Battery voltage	
52	Р	LH low beam head- lamp	Output	_	Lighting switch	in 2nd position	Battery voltage	
54	R	RH low beam head- lamp	Output	_	Lighting switch	in 2nd position	Battery voltage	
55	G	LH high beam head- lamp	Output	_	Lighting switch in 2nd position and placed in HIGH or PASS position		Battery voltage	
56	L	RH high beam head- lamp	Output	_	Lighting switch in 2nd position and placed in HIGH or PASS position		Battery voltage	
57	GR	Parking, license and tail lamps and off-road	Output	ON	Lighting switch 1st po-	OFF	0V	
J.	J. (lamp switch	Jacpac	0.4	sition	ON	Battery voltage	
59	В	Ground	Input	_	_		0V	
60	00	Rear window defog-	0	ON or	Rear defogger	switch ON	Battery voltage	
60	GR	ger relay	Output	START	Rear defogger	switch OFF	0V	
61	R/B	Fuse 32	Output	OFF	-	_	Battery voltage	

^{*:} When horn reminder is ON

< ECU DIAGNOSIS INFORMATION >

Fail Safe

CAN COMMUNICATION CONTROL

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

If No CAN Communication Is Available With ECM

Control part	Fail-safe in operation
Cooling fan	 Turns ON the cooling fan relay when the ignition switch is turned ON Turns OFF the cooling fan relay when the ignition switch is turned OFF

If No CAN Communication Is Available With BCM

Control part	Fail-safe in operation
Headlamp	 Turns ON the headlamp low relay when the ignition switch is turned ON Turns OFF the headlamp low relay when the ignition switch is turned OFF Headlamp (LH/RH) high relays OFF
Parking lampsLicense plate lampsTail lamps	 Turns ON the tail lamp relay when the ignition switch is turned ON Turns OFF the tail lamp relay when the ignition switch is turned OFF
Front wiper	 The status just before activation of fail-safe control is maintained until the ignition switch is turned OFF while the front wiper is operating at LO or HI speed. The wiper is operated at LO speed until the ignition switch is turned OFF if the fail-safe control is activated while the front wiper is set in the INT mode and the front wiper motor is operating.
Rear window defogger	Rear window defogger relay OFF
A/C compressor	A/C relay OFF
Front fog lamps (if equipped)	Front fog lamp relay OFF

IGNITION RELAY MALFUNCTION DETECTION FUNCTION

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

Ignition switch	Ignition relay	Tail lamp relay
ON	ON	_
OFF	OFF	_

NOTE:

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

FRONT WIPER CONTROL

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

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

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

NOTE:

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

STARTER MOTOR PROTECTION FUNCTION

< ECU DIAGNOSIS INFORMATION >

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

DTC Index

CONSULT-III display	Fail-safe	TIME	NOTE	Refer to
No DTC is detected. further testing may be required.	_	_	_	_
U1000: CAN COMM CIRCUIT	×	CRNT	1 – 39	PCS-14

NOTE:

The details of TIME display are as follows.

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

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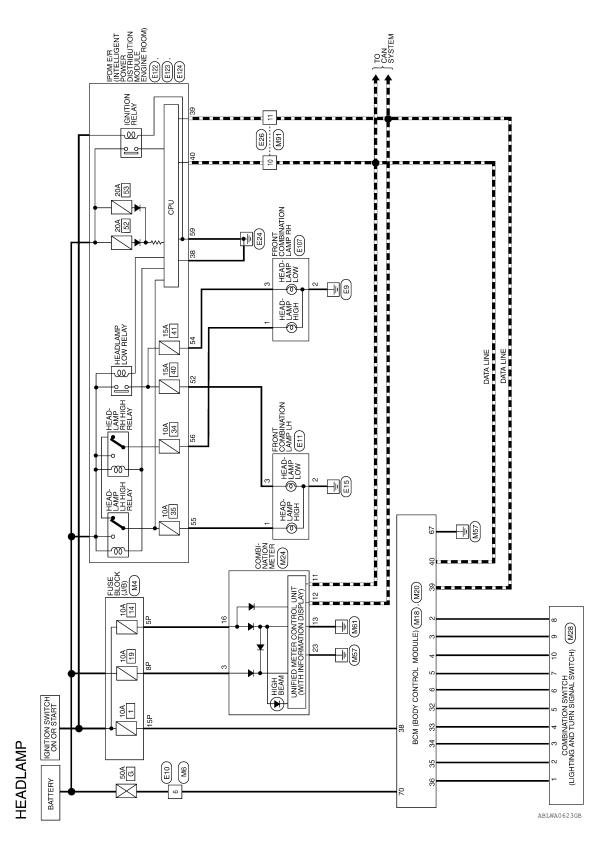
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WIRING DIAGRAM

HEADLAMP

Wiring Diagram

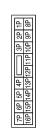


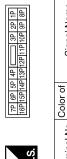
HEADLAMP CONNECTORS

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

Connector No. M6
Connector Name WIRE TO WIRE

Connector Color WHITE





Signal Name	-	_	_	
Color of Wire	M/G	R/Y	W/R	
Terminal No.	d9	48	15P	

Signal Name

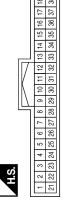
Color of Wire ≥

Terminal No.

0	BCM (BODY CONTROL MODULE)	BLACK	85 57 68 59 60 61 62 63 64 70 64 65 65 65 65 65 65 65	Signal Name	GND (POWER)	BAT (F/L)
, M20			56 57 58	Color of Wire	В	>
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	29	20

Signal Name	INPUT 3	INPUT 2	INPUT 1	OUTPUT 5	OUTPUT 4	OUTPUT 3	OUTPUT 2	OUTPUT 1	MS NOI	CAN-H	CAN-L
Color of Wire	>	Т	В	0	GR	១	BR	ГG	W/R	Τ	Ь
Terminal No.	4	5	9	32	33	34	35	36	38	39	40

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



Signal Name	INPUT 5	INPUT 4	
Color of Wire	Ь	SB	
Terminal No.	7	3	

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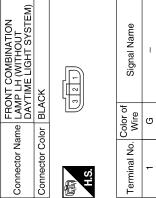
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Signal Name	INPUT 4	INPUT 5	OUTPUT 1	OUTPUT 2	OUTPUT 5	OUTPUT 4	OUTPUT 3
Color of Wire	GR	0	В	Г	Ь	SB	۸
Terminal No.	4	5	9	7	8	6	10

E11	Connector Name FRONT COMBINATION Connector Name LAMP LH (WITHOUT DAYTIME LIGHT SYSTE
Connector No.	Connector Name



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Connector No.	M28
Connector Name	Connector Name COMBINATION SWITCH
Connector Color	WHITE
	12 13 10 9 8 7

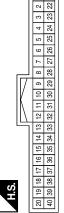


Signal Name	INPUT 1	INPUT 2	INPUT 3
Color of Wire	ГG	BR	g
Terminal No.	-	2	3

E10	Connector Name WIRE TO WIRE	WHITE	
Connector No.	Connector Name	Connector Color WHITE	

WIRE TO WIRE	IITE	ω ω ω ω	Signal Name	ı
	lor WHITE	- 4	Color of Wire	×
Connector Name	Connector Color	品S.	Terminal No.	9

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



Signal Name	BATTERY	CAN-L	CAN-H	GROUND	RUN START	POWER GND
Color of Wire	R/Υ	۵	_	GR	W/G	В
Terminal No.	3	F	12	13	16	23

	E TO WIRE	12	7 6 5 4	Signal Name	ı
M91	me WIR	or WHI	7 6 5 14 15 14	Color of Wire	۵
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	原 H.S.	Terminal No.	10

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Connector No.). E122	2
Connector Name		IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	olor WHITE	TE
咸 H.S.	42 41 48 47	42 41 40 39 38 37 48 47 46 45 44 43
Terminal No.	Color of Wire	Signal Name
38	В	GND (SIGNAL)
39	٦	CAN-H
40	Ь	CAN-L

CAN-		39
Signal N GND (SIG	Color of Wire B	Terminal No.
41 40 39 38 37 47 46 45 44 43	42 41	H.S.
ITE	lor WHITE	Connector Color
POWER DISTRIBU		Connector Name
IPDM E/R (INTELL	<u>B</u>	

,	FRONT COMBINATION LAMP RH	BLACK	1 2 8	Signal Name	1	1	1
. [0/				Color of Wire	Τ	В	В
COLLINGTON INC.	Connector Name	Connector Color	明 H.S.	Terminal No.	-	2	3

Connector No. E26
Connector Name WIRE TO WIRE

Connector Color WHITE

Signal Name	ı	ı	
Color of Wre	Ь	_	
Terminal No.	10	11	

	4	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)	CK	29 88 57 20 10 00 20 10 00	Signal Name	(BOWER)
	. E124		lor BLA		Color of Wire	В
	Connector No.	Connector Name	Connector Color BLACK	南 H.S.	Terminal No.	69
•						

Connector No.	or No.	E123	8	
Connector Name	or Name		IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)	
Connector Color	or Color	BROWN	WN	
H.S.		51 [SS SS SS SS SS SS SS S	
Terminal No.		Color of Wire	Signal Name	
52		Ь	H/LAMP LO LH	
54		<u>~</u>	H/LAMP LO RH	
55	_	g	H/LAMP HI LH	
26		7	H/LAMP HI RH	

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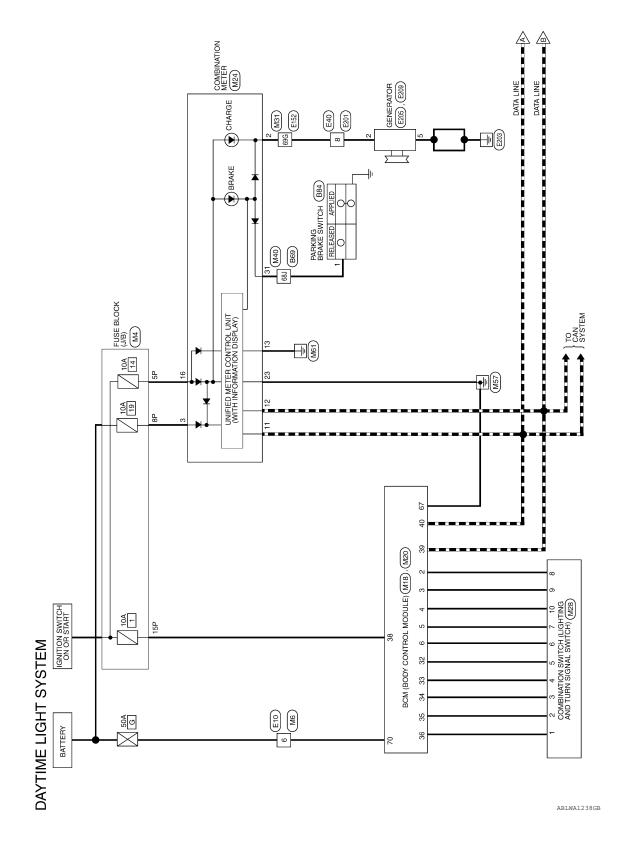
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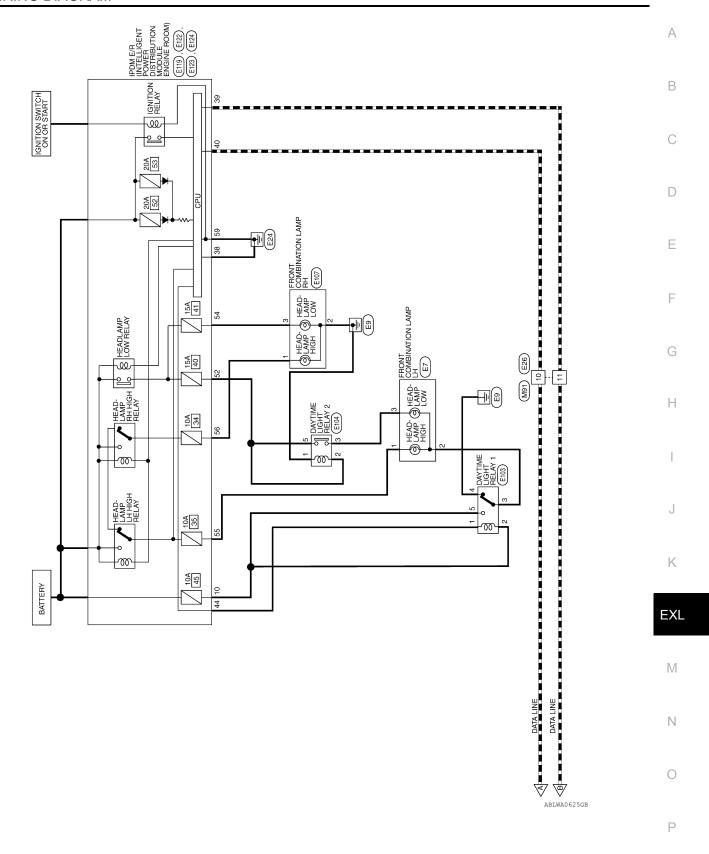
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DAYTIME LIGHT SYSTEM

Wiring Diagram





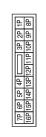
DAYTIME LIGHT SYSTEM CONNECTORS

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

Connector No. M6
Connector Name WIRE TO WIRE

Connector Color WHITE







Signal Nam	_	I	_
Color of Wire	M/G	R/Y	W/R
Terminal No.	5P	8P	15P

Signal Name

Color of Wire ≥

Terminal No. 9

M20	Connector Name BCM (BODY CONTROL MODULE)	BLACK
Connector No.	Connector Name	Connector Color BLACK

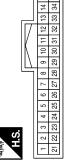


Terminal No. Color of Wire Signal Nam 67 B GND (POWE 70 W BAT (F/L)			
B ∧	Terminal No.	Color of Wire	Signal Nam
M	29	В	GND (POWE
	20	M	BAT (F/L)

Connector Name		BCM (BOD MODULE)
Connector Color	_	BLACK
咸南 H.S.	56 57 56	56 57 58 59 60 61 6 65 66 67 68
Terminal No.	Color of Wire	S
29	ш	ଅ
1	/4/	

Signal Name	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	>	_	ш	0	GR	g	BR	FG	W/R	_	Ь
Terminal No.	4	5	9	32	33	34	35	98	88	39	40

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



Signal Name	INPUT 5	INPUT 4	
Color of Wire	Ь	SB	
Terminal No.	2	3	

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			Α
			В
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			Е
			F
Connector No. M28 Connector Name COMBINATION SWITCH Connector Color WHITE 12 13 10	INPUT 4 INPUT 5 OUTPUT 1 OUTPUT 2 OUTPUT 5 OUTPUT 4	Signal Name	G
M28	2 E O E - G S >	Color of Wire P	
Connector No. Connector Name Connector Color HS. HS. 1 1 Color 2 E	0 4 0 0 0 0 0	Terminal No.	J
			К
M24 COMBINATION METER WHITE 10 12 11 10 9 7 6 5 4 3 2 2 3 3 2 3 3 3 3		M31 M31	EXL
	G B W/G	Connector No. M31 Connector Name WIRE TO WIRE Connector Color WHITE S6 46 36 36 36 36 36 36 36 36 36 36 36 36 36	Ν
Connector No. Connector Color H.S. 20 19 18 17 16 15 14 40 39 38 77 38 38 38 Terminal No. Color Perminal No. W.	11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Connector No. Connector Name Connector Color H.S. 116 216 616 616	0
		ABLIA1820GB	Р

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DAYTIME LIGHT SYSTEM

Connector No. F7 Connector Name LAMP LH (WITH DAYTIME LIGHT SYSTEM) Connector Color BLACK LIGHT SYSTEM) Connector Color of Signal Name 1 G - 2 B - 3 SB - 3 SB -		Connector No. E40 Connector Name WIRE TO WIRE Connector Color GRAY	Terminal No. Wire Signal Name 8 P –
Connector No. M91		Connector No. E26 Connector Name WIRE TO WIRE Connector Color WHITE	Terminal No. Wire Signal Name 10 P – 11 L –
Connector No. M40 Connector Name WIRE TO WIRE Connector Color WHITE 55 4 3 2 11 10 91 81 72 11 21 20 181 183 183 173 181 182 113 80 291 81 73 183 183 183 183 183 183 183 183 183 18	Terminal No. Wire Signal Name 68J G –	Connector No. E10 Connector Name WIRE TO WIRE Connector Color WHITE	Terminal No. Color of Signal Name 6 W

Revision: March 2012 **EXL-88** 2011 Xterra

DAYTIME LIGHT SYSTEM

< WIRING DIAGRAM >

Connector No	E107
COLLICCIO INC.	L10/
Connector Name	Connector Name FRONT COMBINATION LAMP RH
Connector Color BLACK	BLACK
H.S.	3 2 1

Vame			
Signal Name	I		1
Color of Wire	٦	В	ш
Terminal No.	-	2	3



3	Connector Name DAYTIME LIGHT RELAY 1	CK	<u>ε</u> α 4	Signal Name	ı	_	_	_	ı	
. E103	me DA	lor BLACK		Color of Wire	Œ	B/B	В	GR	B/B	
Connector No.	Connector Na	Connector Color	南 H.S.	Terminal No.	-	2	3	4	2	

Connector No.). E123	3
Connector Name		IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color		BROWN
南南 H.S.	29	55 54 53 52
Terminal No.	Color of Wire	Signal Name
52	Ъ	H/LAMP LO LH
54	ш	H/LAMP LO RH
55	5	H/LAMP HI LH
56	٦	H/LAMP HI RH

N	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)	믵	40 39 38 37 46 45 44 43	Signal Name	GND (SIGNAL)	CAN-H	CAN-L	DTRL RLY CONT
. E122		lor WHITE	42 41	Color of Wire	В	_	Ъ	Ж
Connector No.	Connector Name	Connector Color	「南南 H.S.	Terminal No.	38	39	40	44

Connector No. E119 PDM E/R (INTELLIGENT Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM) Connector Color WHITE	9 8 7 6 6 6 13 14 13 12 11 10	Color of Signal Name	
Connector Name	原面 H.S.	Terminal No.	10

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Revision: March 2012 **EXL-89** 2011 Xterra

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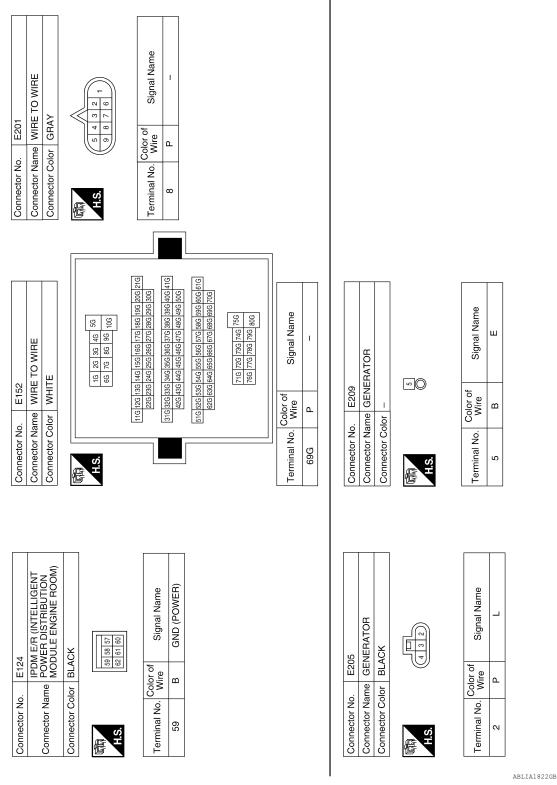
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Connector No. B84	Connector Name PARKING BRAKE SWITCH	Connector Color BLACK	H.S.	200[213]	Terminal No. Color of Signal Name	141J	Pis Distriction of the Control of th			
				-	12	5 5	10 60J			ΙĔ
	E TO WIRE	1	1. 2. 3. 4. 5. 6. 7. 8. 9. 10.	1143 153 163 173 183 193	24J 25J 26J 27J 28J 29J 3	J 34J 35J 36J 37J 38J 39J 40 J 44J 45J 46J 47J 48J 49J 50	1 541 551 561 571 581 591 601 1 641 651 661 671 681 691 701	11 721 731 740 751	76J 77J 78J 79J 80J	Signal Name
Connector No. B69	Connector Name WIRE TO WIRE	Connector Color WHITE	21 33 41	L12 102 108 108 107 1 08 105 1 UP 1 US 1 US 1 US 1	22J 23J 24J 25J 26J 27J 28J 29J 30J	31.) 32.) 33.) 34.) 35.) 36.) 37.) 38.) 39.) 40.) 41.) 42.) 43.) 44.) 45.) 46.) 47.) 48.) 49.) 50.)	51J 52J 53J 54J 55J 56J 57J 58J 59J 60J 61J 62J 63J 64J 65J 66J 67J 68J 69J 70J	713 723 733 743 753	76. 77. 78. 79. 80.	Color of Signal Name

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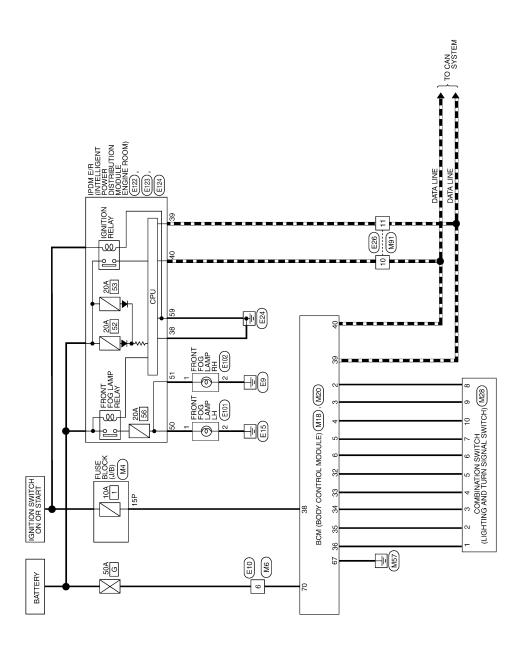
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FRONT FOG LAMP SYSTEM

Wiring Diagram



FRONT FOG LAMP

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FRONT FOG LAMP CONNECTORS

Connector No. M6
Connector Name WIRE TO WIRE

Connector Color WHITE

Connector Color WHITE	
(新	
7P 6P 5P 4P (M4 FUSE BLOCK (J/B) WHITE PRESE BLOCK (J/B) WHITE PRESE BLOCK (J/B) PRESE BLOCK (J/B) PRESE BLOCK (J/B)
	Connector No. M4 Connector Name FUSE BLOCK (J/B) Connector Color WHITE
Connector Name FUSE BLOCK (J/B)	

Signal Name

Terminal No. Color of Wire

0.	BCM (BODY CONTROL MODULE)	BLACK	56 57 58 59 60 61 62 63 64 65 66 67 68 69 70	Signal Name	GND (POWER)	BAT (F/L)
). M20			5657 56	Color of Wire	В	Μ
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	29	20

Signal Name	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	>	_	œ	0	GR	ŋ	BR	D D	W/R	Γ	Д
Terminal No.	4	5	9	32	33	34	35	36	38	68	40

				19 20	39 40			
	BCM (BODY CONTROL MODULE)	旦		10 11 12 13 14 15 16 17 18	30 31 32 33 34 35 36 37 38	Signal Name	INPUT 5	INPUT 4
. M18		lor WHITE		6 7 8 9	26 27 28 29	Color of Wire	Д	SB
Connector No.	Connector Name	Connector Color	原 H.S.	1 2 3 4 5	21 22 23 24 25	Terminal No.	2	က

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Revision: March 2012 EXL-93 2011 Xterra

FRONT FOG LAMP SYSTEM



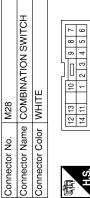
Signal Name	_	=
Color of Wire	Ь	
erminal No.	10	11

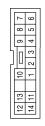




Signal Name	I	-
Color of Wire	Д	Τ
Terminal No.	10	11

Signal Name	OUTPUT 4	OUTPUT 3	
Color of Wire	SB	۸	
Terminal No.	6	10	







Signal Name	INPUT 1	INPUT 2	INPUT 3	INPUT 4	INPUT 5	OUTPUT 1	OUTPUT 2	OUTPUT 5
Color of Wire	LG	BR	g	GR	0	ш	T	Д
Terminal No.	-	2	3	4	5	9	2	8

101	EIOI	Connector Name FRONT FOG LAMP	BLACK	
Coppositor No	COILLIECTOI INO.	Connector Name	Connector Color BLACK	

Connector Nam		H.S.
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		[7	16	1
			9	15 16	l
뿚			2	13 14	l
₹			4		l
0				12	l
H	Щ			11	l
WIRE TO WIRE	WHITE		3	10 11 12	l
⋝	⋝		2	6	l
ше	or		-	8	
-	. 0	I -			



E26

E10

Connector No.

- 8	Color of Wire	Ь	
H.S.	Terminal No.	10	11

Signal Name

Color of Wire

Signal Name

≥ ∞

Œ	HS

WIRE TO WIRE	ITE	9	Signal Name	1
me WIF	or WHITE	- 4 2 2	Color of Wire	>
Connector Name	Connector Color	H.S.	Terminal No.	9
			'	_



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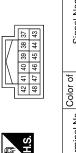
FRONT FOG LAMP SYSTEM

< WIRING DIAGRAM >

ᆲ Connector No. E123

Connector Name POWER DÌSTRIBUTION MODULE ENGINE ROO	N	66 55 54 53 52	Signal Name	FR FOG LAMP L	FR FOG LAMP F
MODU	BROWN	51 56 55	Color of Wire	W	^
Connector Name	Connector Color	同句 H.S.	Terminal No.	90	51

Connector No.	E122
Connector Name	Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color WHITE	WHITE



Signal Nam	'N9IS) GN9	H-NYO	CAN-L	
Color of Wire	В	7	Ь	
Terminal No.	38	68	40	

_						
	FRONT FOG LAMP RH	X		Signal Name	-	1
. = 102		lor BLACK		Color of Wire	^	В
Cornifector No.	Connector Name	Connector Color	H.S.	Terminal No.	1	2

Connector No.	. E124	4
Connector Name		IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color BLACK	lor BLA	CK
所 H.S.	29	25 88 22.
Terminal No.	Color of Wire	Signal Name
59	В	GND (POWER)

IPDM E/R (INTELLIGEN) POWER DISTRIBUTION MODULE ENGINE ROO	4CK	58 57 61 80	Signal Name	GND (POWER)
	r BL/	59	Color of Wire	В
Connector Name	Connector Color BLACK	向面 H.S.	Terminal No.	59

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EXL-95 2011 Xterra Revision: March 2012

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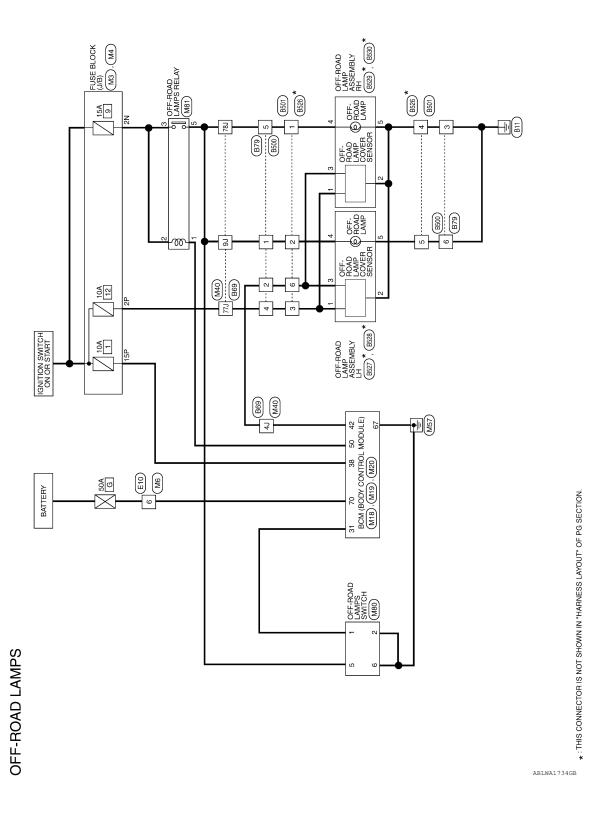
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OFF-ROAD LAMPS

Wiring Diagram



Connector Name WIRE TO WIRE

Connector No. M6

Connector Color WHITE

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Conn	Connector Name FUSE BLO	Connector Color
M3	Stor Name FUSE BLOCK (J/B)	WHILE
Connector No.	Connector Name	Connector Color

r No.	M3
r Name	or Name FUSE BLOCK (J/B)
r Color	r Color WHITE



	5]
2N 1N 5N 4N	
8 8	

Signal Name	1	
Color of Wire	W/R	
Terminal No.	2N	

		i
Signal Name	-	
lor of /ire	×	

Signal Name	I	
Color of Wire	Μ	
Terminal No.	9	

Signal Name	ı	ı
Color of Wire	M/G	W/R
minal No.	2P	15P

erminal No. Wire 2P W/G 15P W/R	Sign		
erminal No. 2P 15P	Color of Wire	M/G	W/R
F	Terminal No.	2P	15P

Signal Name	ı	
Color of Wire	W/R	
erminal No.	2N	

Connector No.	M20
Connector Name	Connector Name BCM (BODY CONTROL MODULE)
Connector Color BLACK	BLACK
H.S.	SG SG SG GG GG GG GG GG

Connector Na	
--------------	--

Connector	高 E.S.

Signal Name	GND (POWER)	BAT (F/L)
Color of Wire	В	Μ
Terminal No.	29	20

50 51 52 53 54 55 55	Signal Name	PCA OUTPUT	OFF ROAD LAMP OUTPUT
50 141 42	Color of Wire	٦	Μ
		-	

50 51 52 55 55 55 55 55 55			ľ
50	Color of Wire	٦	
H.S.	erminal No.	42	

H.S.

	Connector No. M19	Connector Name BCM (BODY CONTROL MODULE)	Connector Color WHITE		[科]	50 51 52 53 54 55
--	-------------------	--	-----------------------	--	-----	-------------------

Connector Name BCM (BODY CONTROL MODULE)

M18

Connector No.

WHITE

Connector Color

OFF B	Μ	90	
PCA	٦	42	
Sig	Color of Wire	Terminal No.	

OFF ROAD LAMP SW

IGN SW

W/R ۳

38 31

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Signal Name

Terminal No. Wire

OFF	×	50
PC/	L	42
Sig	Color of Wire	Terminal No.

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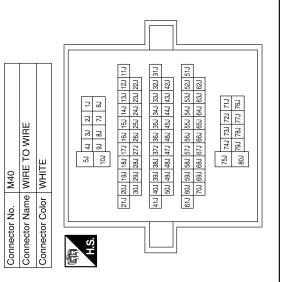
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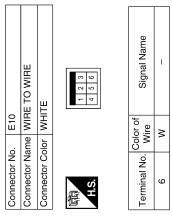
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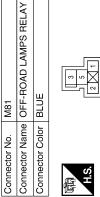
EXL-97 2011 Xterra Revision: March 2012

Connector No.	. M80	
Connector Na	me OFF	Connector Name OFF-ROAD LAMPS SWITCH
Connector Color	lor GRAY	\t
图 H.S.	9	6 5 4 3 2 1
Terminal No.	Color of Wire	Signal Name
-	ш	ı
2	В	ı
2	W/R	ı
9	В	1

Signal Name	-	1	-	_
Color of Wire	٦	W/R	W/G	W/R
Terminal No.	47	91	L77	787









Signal Name	ı	ı	-	1
Color of Wire	*	W/R	W/R	M/R
Terminal No.	-	2	3	5

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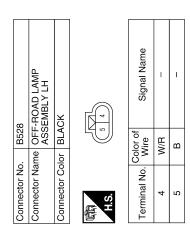
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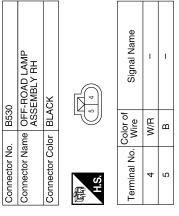
Connector No.	10. B69	Connector No. B69 Connector No. MIDE TO WIDE	Terminal No.	Color of Wire	Signal Name	Connec	Connector No.	B79	Connector No. B79	
Connector Color	Allie wir	WHITE	4	_	1		Connector Color		aniw 0.1.	
	_	1	6	W/R	1			_	1	_
·····································			L27	W/G	1			-		
H.S.		11 21 31 41 51	787	W/R	I	H.S.		3 4 5		
		60 70 80 90 100								Г
	11.0 12.0 11:	11.3 [12.3 [13.3 [15.3 [1				Terminal No.		Color of Wire	Signal Name	
	22.1 2	22J 23J 24J 25J 26J 27J 28J 29J 30J						M/R	1	
	31J 32J 3					2	<u>.</u>	Г	Î	
	427	42J 43J 44J 45J 46J 47J 48J 49J 50J				3	3	В	-	
	51J 52J 5	513 523 533 543 553 553 553 559 559 603 613				4		W/G	1	
	62J 6					5		M/R	1	
		75.1 75.1 75.1 75.1 75.1 75.1 75.1 75.1				9	·	В	1	
Connector No.	Jo. B500	00	Connector No.	No. B501		Connec	Connector No.	B526		
Connector N	lame WIF	Connector Name WIRE TO WIRE	Connector	Vame WIR	Connector Name WIRE TO WIRE	Connec	ctor Nam	e WIRE	Connector Name WIRE TO WIRE	
Connector Color WHITE	color WH	IITE	Connector Color	Solor GRAY		Connec	Connector Color	or GRAY	<u></u>	
				الله الله						
H.S.		6 5 4 3	H.S.	9		H.S.		4		
Terminal No.	Color of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name	Terminal No.	al No.	Color of Wire	Signal Name	
-	W/R	1	-	W/R	1	-		W/R	ı	
7	_	ı	2	W/R	ı	2		W/R	ı	
င	В	ı	3	M/G	1	3		M/G	I	
4	M/G	ı	4	В	ı	4		В	ı	
2	W/R	ı	5	В	1	5	15	В	ı	
9	В	1	9		1	9			1	

Revision: March 2012 EXL-99 2011 Xterra

Connector No.). B529	6
Connector Na	me OFF ASS	Connector Name OFF-ROAD LAMP ASSEMBLY RH
Connector Color BLACK	olor BLA	CK
是 H.S.		2 1
Terminal No.	Color of Wire	Signal Name
-	9/M	I
2	В	I



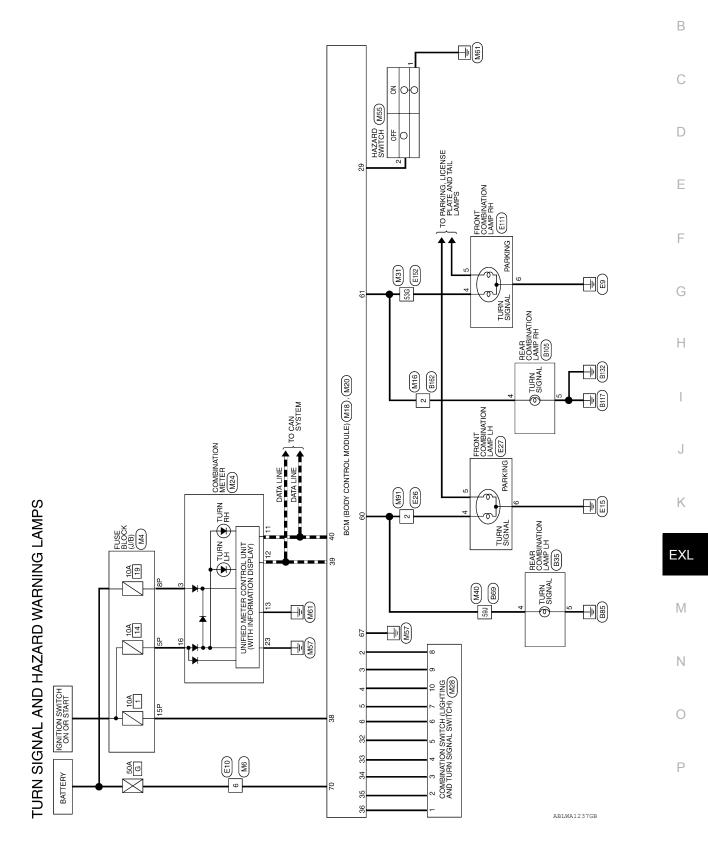
B527	OFF-ROAD LAMP ASSEMBLY LH	BLACK	2 1	of Signal Name	ı	1	ı
				Color of Wire	M/G	В	_
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	-	2	3



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Wiring Diagram

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Connector Name | WIRE TO WIRE Connector Color WHITE

Connector No. M16

TURN SIGNAL AND HAZARD WARNING LAMPS CONNECTORS

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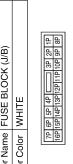
Connector Name WIRE TO WIRE

M6

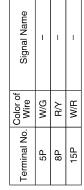
Connector No.

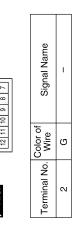
Connector Color WHITE

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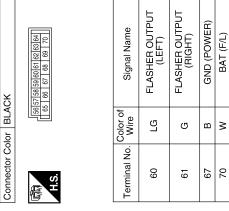


Signal Name

Color of Wire ≥

Terminal No. 9





Signal Name	OUTPUT 5	OUTPUT 4	OUTPUT 3	OUTPUT 2	OUTPUT 1	IGN SW	CAN-H	CAN-L
Color of Wire	0	GR	ŋ	BR	ГG	W/R	Γ	۵
Terminal No.	32	33	34	35	36	38	39	40

Terminal	5	32	33	34	35	36	38	39	40	
								39 40		ſ
MIIO	BCM (BODY CONTROL	MODÙLE)	WHITE				1	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40		
COLLINECTOR INC.	Connector Name		Connector Color WHITE		管	H.S.		21 22 23 24 25 26 27		

Signal Name	INPUT 5	INPUT 4	INPUT 3	INPUT 2	INPUT 1	HAZARD SW
Color of Wire	Ь	SB	>	Γ	В	G
Terminal No. Wire	2	ε	4	9	9	59

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Connector No.

< WIRING DIAGRAM >

WHITE Connector Color WHITE 10	ctor Na	me COMI	Connector Name COMBINATION METER		Connector Na	ame COM	Connector Name COMBINATION SWITCH	Terr	al No.	Wire	Signal Name
10	ctor Col	lor WHIT	Щ		Connector Co	olor WHIT	щ		6	SB	OUTPUT 4
1 12 12 11 10 8 2 6 5 4 3 2 1 1 1 1 1 1 1 1 1									10	^	OUTPUT
1 12 11 10 10 10 10 10	H.S.	L			明.S.	12 13	9 8 2				
1 LG	18 17 16 38 37 36	기위왕	11 10 9 8 7 6 5 4 3 2 31 30 29 28 27 26 25 24 23 22	12	Terminal No.	Color of	Signal Name				
Signal Name		olor of		1	-	Pe	INPUT 1				
P CAN-L	Terminal No.	Wire	Signal Name		2	BR	INPUT 2				
CAN-L	8	R/Y	BATTERY		3	ŋ	INPUT 3				
C	1	۵	CAN-L		4	GR	INPUT 4				
SS	12	_	CAN-H		5	0	INPUT 5				
NG	13	GR	GROUND		9	ш	OUTPUT 1				
M31	16	M/G	RUN START		7	_	OUTPUT 2				
W31 Terminal No. Wire S3G G WHITE S3G G G WHITE S3G G G G G G G G G G	23	В	POWER GND		8	۵	OUTPUT 5				
53G G 16 16 16 16 16 16 16 16 16 16 16 16 16 1	A settle	701/4/	LOW. OF		e i i i i i i i i i i i i i i i i i i i	Wire	olgriai Name				
SG 4G 3G 2G 1G 10G 9G 8G 7G 6G 30G 29G 27G 27G	nector Na	ame WIRE	E TO WIRE		53G	g	1				
	nector Co				500	5					
	1			Γ							
210 200 100 110	رن ن		56 46 36 26 16 106 96 86 76 66								
2.10 2000 1900 1600 170 1600 170 1600 170 1600 170 1600 170 1600 170 1600 170 170 1700 170 1700 17											
41G 40G 39G 38G 37G 37G 37G 37G 37G 37G 37G 37G 37G 37		21G 20G 19G	18G 17G 16G 15G 14G 13G 12G 11G 28G 27G 26G 25G 24G 23G 22G								
1 to decot seed seed 4706 4706 4806	1	700 700	750 700 700 700 700 700 700								
51G 80G 59G 57G 56G 54G 53G 52G 51G 70G 80G 67G 66G 67G 66G 67G 67G 67G 75G 74G 77G		50G 49G	48G 47G 46G 45G 44G 43G 42G								
776 776		619 609 593	580 570 566 559 546 539 526 519								
756 746 736 736 776 766 866 776 776 776 776 776 776 77		706 69G	68G 67G 66G 65G 64G 63G 62G								
756 746 776 776 776 776 776 776 776 776 77											
900 000			75G 74G 73G 72G 71G								
			908 / 90/ 90/ 90/ 908								
				71							
	4	V	×	<	J		3	=			3

< WIRING DIAGRAM >

Connector No. M55 Connector Name HAZARD SWITCH Connector Color WHITE Terminal No. Wire Signal Name 1 B - 2 G -	Connector No. E26 Connector Name WIRE TO WIRE
Terminal No. Wire Signal Name 59J G -	Connector No. E10 Connector Name WIRE TO WIRE Connector Color WHITE ##S Terminal No. Wire 6 W -
Connector No. M40 Connector Name WIRE TO WIRE Connector Color WHITE Su 41 30 20 11 10 9 81 77 61 15 14 13 12 11 30 20 20 20 20 27 20 25 24 23 22 411 40 39 38 37 38 35 34 43 42 21 611 60 39 88 57 86 55 84 83 82 51 70 99 88 57 86 55 84 83 82 51 71 80 89 88 57 86 55 84 83 82 51 71 80 89 88 57 86 55 84 83 82 51 72 75 74 72 72 72 72 72 72 72 72 72 72 72 72 72	Connector No. M91 Connector Name WIRE TO WIRE Connector Color WHITE H.S. 4 13 12 11 10 9 8 1 10 10 10 10 10 10

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< WIRING DIAGRAM >

							Connector No. B35	Collification Nating Light Collification Lawrence Collification Lawr		Terminal No. Color of Signal Name	5 B B C		
							<u> </u>	<u> </u>		<u> </u>			
	LAMP RH			Signal Name	1	1	Signal Name	ı					
	me FRONT LAMP R	or GRAY	9 4	Color of Wire	G G	В	Color of Wire	ŋ					
	Connector Name	Connector Color	所 H.S.	Terminal No.	t ro	9	Terminal No.	53G					
	FHON I COMBINATION LAMP LH			Signal Name	1	1	E152 WIRE TO WIRE		16 26 36 46 56 86 76 86 96 106	116 126 136 146 156 166 176 186 196 206 216 226 226 246 256 256 276 286 296 306 316 307	426 436 446 456 466 466 506	71G 72G 73G 74G 75G 75G	
1	ne FRONI LAMP I	or GRAY	9 4	Color of Wire	2 ~	8		_	16	11G 12G 13G 14 22G 23G 24G	51G 52G 53G 54C 62G 63G 64C	717	
	Connector Name	Connector Color	H.S.	Terminal No.	t 10	9	Connector No.	Connector Color	用.S.				
												ABLIA2854	GB

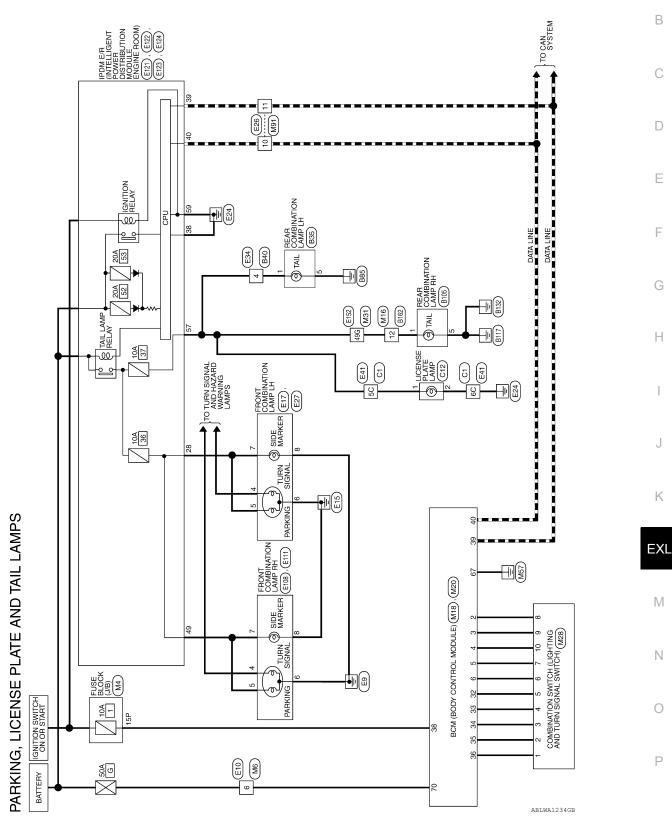
Connector No. B105 Connector Name REAR COMBINATION LAMP RH Connector Color WHITE	H.S.	Terminal No. Color of Signal Name					
Signal Name							
Terminal No. Wire 59J G							
VIRE	33 44 54	11.0 12.0 13.0 14.0 15.0 16.0 17.0 16.0 19.0 20.0	42.1 (32.) 44.1 (32.) (46.) 47.1 (48.) (49.) (50.) (51.) (52.) (53.) (54.) (56.) (57.) (58.) (59.) (60.) (61.) (62.) (62.) (63	81 734 80J	VIRE		Signal Name
Connector No. B69 Connector Name WIRE TO WIRE Connector Color WHITE	H.S. 60 72 80	11.1 12.1 13.1 14.1 15.1 23.1 24.1 25.3 13.1 32.1 33.1 33.1 33.1 34.1 35.3 13.1 35.3 1	421 431 441 453. 513 523 533 544 553. 624 633 644 653.		Connector No. B162 Connector Name WIRE TO WIRE Connector Color WHITE	H.S. 1 2 3 4 5 6 7 8 9 10 11 1	Terminal No. Wire S

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PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

Wiring Diagram

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GND (POWER)

BAT (F/L)

Signal Name

Color of Wire В ≥

Terminal No.

67

PARKING, LICENSE PLATE AND TAIL LAMPS CONNECTORS

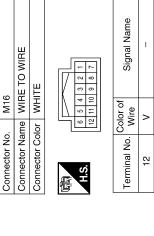
M4	Connector Name FUSE BLOCK (J/B)	WHITE	
Connector No.	Connector Name	Connector Color WHITE	

Connector No. M6
Connector Name WIRE TO WIRE

Connector Color WHITE

			Ī	4	₩ 8]
M4	or Name FUSE BLOCK (J/B)	WHITE		7P 6P 5P 4P 3P 2P	16P 15P 14P 13P 12P 11P 10P 9P 8P	
or No.	or Name	or Color WHITE	[[J/	16P	

P C	Signal Name	
7P 6P 5P 4P 16P 12P 12P 11P	Color of Wire	0//4/
H.S.	Terminal No.	2,7



4 6 0	Signal Name	1
	Color of Wire	Μ
	Terminal No.	9

		l
Signal Name	_	
Color of Wire	W	
Terminal No.	9	

M20	IOUTINOS VOCAS MODE	Collifector Indine Boyn (BOD) CONTROL MODULE)	BLACK		56 57 58 59 60 61 62 63 64
Connector No. M20	0000		Connector Color BLACK		
Signal Name	ò	OUTPUT 5	OUTPUT 4	OUTPUT 3	OUTPUT?
_					

32 32 33 34 35 36	Wire Wire GR	Signal Name OUTPUT 5 OUTPUT 4 OUTPUT 3 OUTPUT 2
39	W/R	IGN SW CAN-H CAN-L

ttor No stor No along I of 5 al	2000	(BOD) (ULE) 30 31 11 11 11 11 11 11 11 11 11 11 11 11	
3	SB	INPUT 4	
2	Ь	INPUT 5	
က	SB	INPUT 4	
4	>	INPUT 3	
2	_	INPUT 2	
9	ď	INPUT 1	

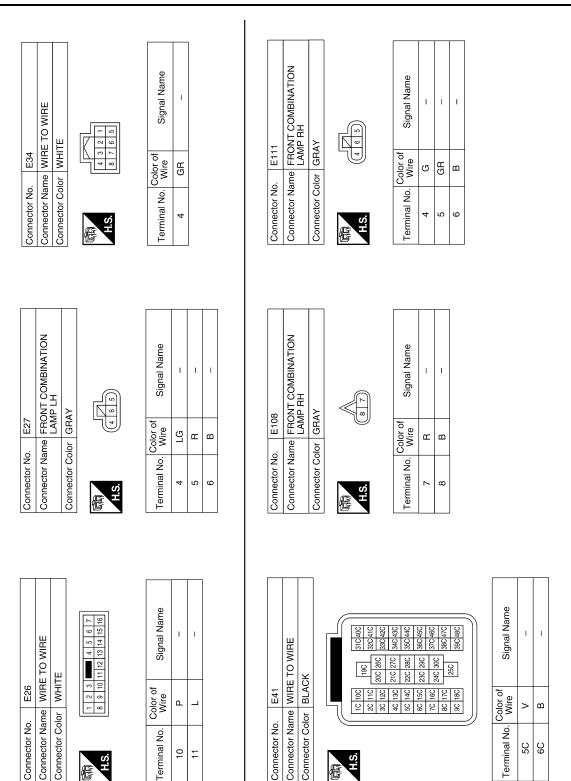
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Connector Name Conn	49G V – A		Connector No. E17 Connector Name FRONT COMBINATION LAMP LH Connector Color GRAY	Terminal No. Color of 7 R - 8 B
Connector Name COMBINATION SWITCH Connector Name Connector Color WHITE Connector Color WHITE Connector Color Connector Color Connector Color Connector Name Connector No. Wire Signal Name Connector No. Color of Connector No. Color of Co		6 176 116 16 16 16 16 16		
Connector Name COMBINATION SWITCH Connector Name Connector Color WHITE Connector Color WHITE Connector Color Connector Color Connector Color Connector Name Connector No. Wire Signal Name Connector No. Color of Connector No. Color of Co	TO WIRE	56 46 96 26 16 106 96 86 76 86 30 180 176 166 146 13 30 280 2770 286 256 246 25 30 280 2770 286 256 246 25 30 280 2770 286 256 246 25 30 280 2770 286 256 266 266 30 580 576 586 586 586 586 30 580 576 586 586 586 586 30 580 576 586 586 586 586 30 580 576 586 586 586 586 30 580 576 586 586 586 586 30 580 576 586 586 586 586 30 580 576 586 586 586 586 30 580 576 586 586 586 586	TO WIRE	
Connector Name COMBINATION SWITCH	ame WIRE	10 10 10 10 10 10 10 10		Color of Wire
	Connector N	<u>ج</u>	Connector N. Connector C.	H.S. Terminal No.
	BINATION SWITCH	Signal Name INPUT 1	OUTPUT 3	Signal Name
	ame COM.	8>	V M91 ame WIRE olor WHIT	U
ABLIA1829GB	Connector Not Connector Co	Terminal No. 2 2 3 3 5 6 6 6 6 6 9 9 9 9 9 9 9 9 9 9 9 9 9 9	Connector Nc Connector Con	Terminal No.
				ABLIA1829GB

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< WIRING DIAGRAM >



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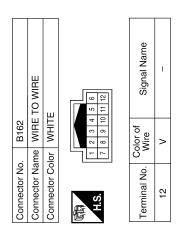
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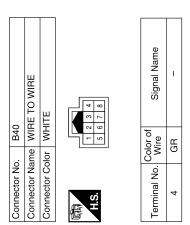
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Connector No. E123 Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM) Connector Color BROWN Signal Name A9 GR ILLUMINATION IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) Signal Name A9 GR ILLUMINATION	Connector No. B35 Connector Name REAR COMBINATION LAMP LH Connector Color WHITE Terminal No. Color of Signal Name 1 GR - 5 B - 5 B -	A B C D
Connector No. E122 IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) Connector Color WHITE	Connector No. E152 Connector Name WIRE TO WIRE Connector Name WIRE TO WIRE Connector Color WHITE Connector Color WHITE Connector Color WHITE Connector Color WHITE Connector Color Col	F G H I
Connector No. E121 Connector Name POWER DISTRIBUTION Connector Color BROWN Terminal No. Color of Signal Name 28 R ILLUMINATION	Connector No. E124 Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM) Connector Color BLACK E2 61 60 57 Terminal No. Wire Signal Name 57 GR TAIL LAMP 59 B GND (POWER)	K EXI

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Connector No.). B105		
Connector Name		REAR COMBINATION LAMP RH	
Connector Color	lor WHITE	Ш	
原 R.S.	<u>−</u> 6 8 4		
Terminal No.	Color of Wire	Signal Name	
-	>	ı	
Ľ	α	ı	



LICENSE PLATE LAMP WHITE
[[7]
Color of Wire

Connector No. C1	Connector Name WIRE TO WIRE	Connector Color BLACK	400 310 100 10 10
Connec	Connec	Connec	是 LS.

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< WIRING DIAGRAM > STOP LAMP Α Wiring Diagram INFOID:0000000006706656 В (A) :WITH AT ⟨DC) :WITH HILL DESCENT CONTROL AND HILL START ASSIST ⟨M⟩ :WITH MT С D Е ABS/TCS/VDC CONTROL UNIT F G Н STOP LAMP (RELEASED BATTERY **ф** sтор J Κ STOP (A) EXL \mathbb{N} Ν 0 STOP LAMP

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Connector No. E12 Connector Name STOP LAMP RELAY Connector Color BLUE		Connector No. E39	
Connector No. M31	Terminal No. Wire Signal Name 50G L –	Connector No. E38 Connector Name STOP LAMP SWITCH (WITH M/T) Connector Color BLACK L2 i Terminal No. Wire Signal Name 1 R/B 2 Y	
STOP LAMP CONNECTORS Connector No. M16 Connector Name WIRE TO WIRE Connector Color WHITE Terminal No. Wire Signal Name 11 L		Connector No. E34 Connector Name WIRE TO WIRE Connector Color WHITE Terminal No. Wire 3 Y	06660

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Connector No. E160 Connector Name FUSE BLOCK (J/B) Connector Color WHITE	Terminal No. Wire Signal Name 8Q R/B –		Connector No. B48 Connector Name WIRE TO WIRE Connector Color WHITE Terminal No. Color of Signal Name 6 R	A B C D
	2 200 21G 6 40G 41G 5 50G 61G 5 70G 61G			F
WHE TO WIRE WHITE 16 26 36 46 56 106 66 76 86 96 106	11G 12G 13G 14G 15G 15G 17G 18G 19G 20G 21G 22G 22G	Signal Name	WHITE WHITE WHITE WHO Signal Name Tree Signal Name	G H
Connector No. E152 Connector Name WIRE TO WIRE Connector Color WHITE TG 26 36 44 66 76 86 9	31G 22G 42G 51G 52G 51G 52G	Terminal No. Wire 50G L	Connector No. B40 Connector Name WIR Connector Color WHI LS 3 Y Nire 3 Y	J
	45 46 47 47 48 48 48 48 48 48			K
E125 ABS ACTUATOR AND ELECTRIC UNIT (CONTROL BLACK			B35 REAR COMBINATION LAMP LH WHITE or of Signal Name Y B - B - B	EX
nector No. nector Color	2 3 4 5 6 7 17 18 19 20 21 22 2 2 2 2 2 2 2		mector No. mector Name mector Color minal No. W 2 5 5	N
	<u> </u>		ABLIA0667GB	0 P

Revision: March 2012 **EXL-115** 2011 Xterra

Connector No.	B105		Connector No. B162	Connector No. D402
Connector Nar	me REAR (LAMP F	Connector Name REAR COMBINATION LAMP RH	Connector Name WIRE TO WIRE	Connector Name WIRE TO WIRE
Connector Color WHITE	or WHITE			
	1 8 4 5	2 0	H.S. 1 2 3 4 5 6 7 7 7 8 9 10 11 17 75	3
H.S.]	⊣ I	2	
Terminal No. Wire	Color of Wire	Signal Name	Terminal No. Wire Signal Name	me Color of Signal Name
2	7	I		C
5	В	I		

Connector No.). D650	20
Connector Name	ame WIF	WIRE TO WIRE
Connector Color WHITE	olor WF	IITE
咸南 H.S.	1-2	
Terminal No.	Color of Wire	Signal Name
2	В	1

Connector No.	D409	60
Connector Name WIRE TO WIRE	ıme WIF	RE TO WIRE
Connector Color	olor WHITE	11
原列 H.S.	-2	
Terminal No.	Color of Wire	Signal Name
2	В	ı

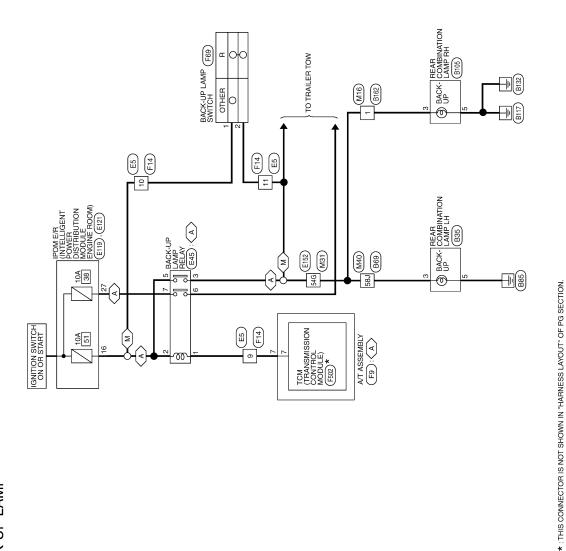
Connector No.). D403	33
Connector Name		HIGH-MOUNTED STOP LAMP
Connector Color WHITE	olor WH	ITE
H.S.	2 1	
Terminal No.	Color of Wire	Signal Name
1	В	1
2	В	1

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BACK-UP LAMP

Wiring Diagram

A SWITH A/T
WITH M/T



BACK-UP LAMP

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Revision: March 2012 **EXL-117** 2011 Xterra

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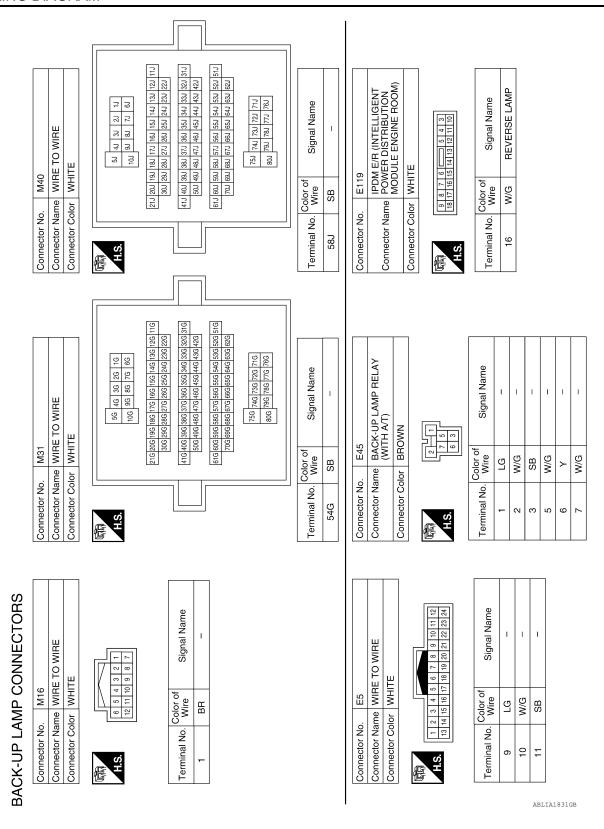
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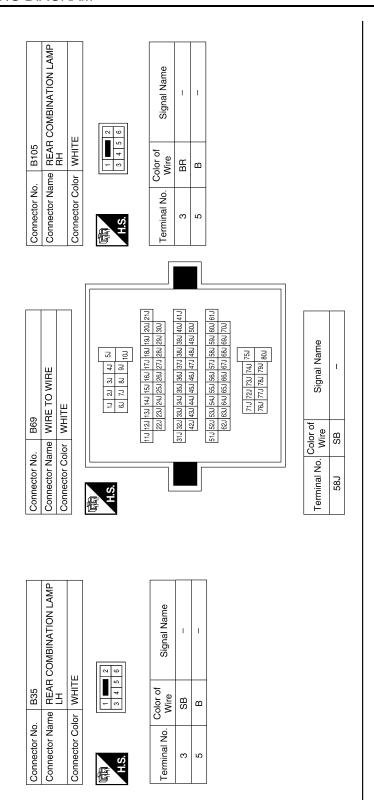
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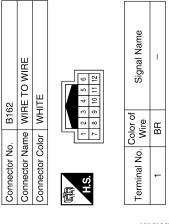
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Connector Name AT ASSEMBLY Connector Color GREEN FS 4 3 2 1 Terminal No. Wire Signal Name 7 LG Signal Name	Connector No. F502 Connector Name TCM (TRANSMISSION CONTECTOR GRAY Terminal No. Color of Signal Name 7 O REV LAMP RLY
Connector Name WIRE TO WIRE	Connector No. F69 Connector Name BACK-UP LAMP SWITCH Connector Color WHITE Terminal No. Wire Signal Name 1 W/G - 2 SB -
Connector No. E121 Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM) Connector Color BROWN Terminal No. Wire Signal Name 27 W/G T TOW REV LAMP	Connector No. F14 Connector Name WIRE TO WIRE Connector Color WHITE Connector Color WHITE Connector Color WHITE Connector Color WHITE Color of Color

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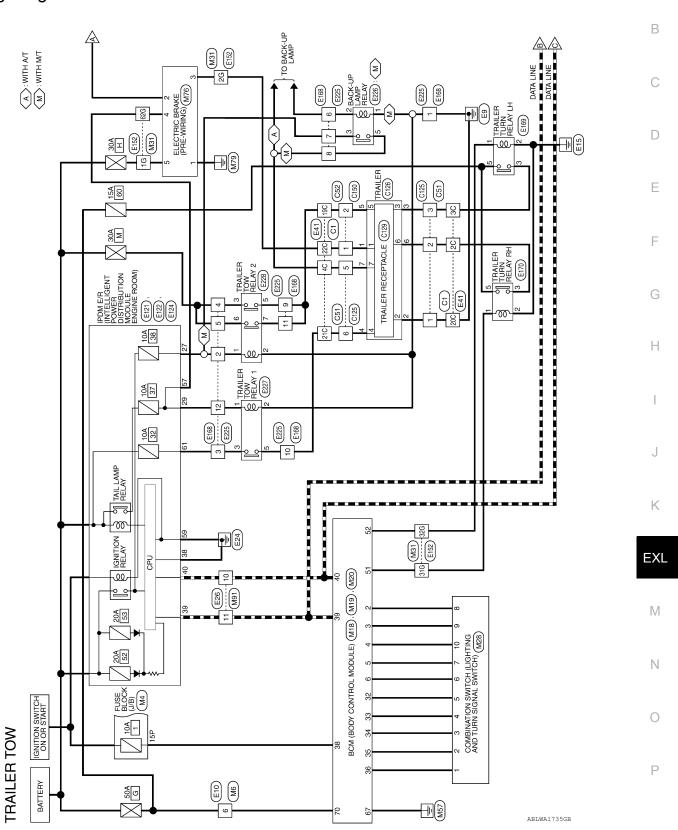
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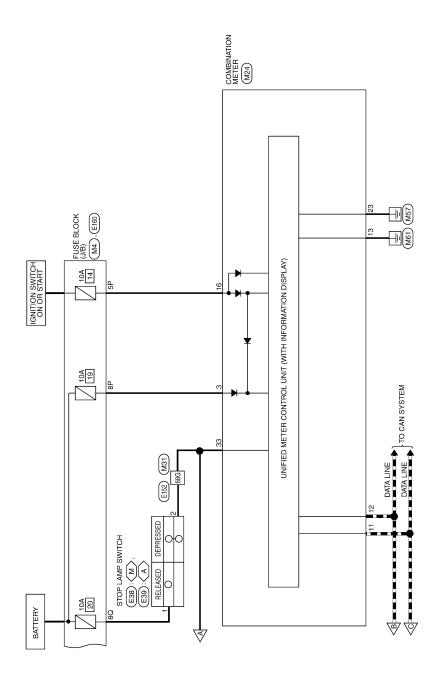
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TRAILER TOW

Wiring Diagram







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Connector Name BCM (BODY CONTROL MODULE)

M19

Connector No.

Connector Color WHITE

TRAILER FLASHER OUTPUT (RIGHT) TRAILER FLASHER OUTPUT (LEFT)

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Signal Name

Color of Wire

Terminal No.

TRAILER TOW CONNECTORS

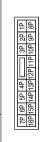
Connector No.	M4
Connector Name	Connector Name FUSE BLOCK (J/B)
Connector Color WHITE	WHITE

Connector Name WIRE TO WIRE

Connector No. M6

Connector Color WHITE

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Signal Name	Ι	I	_	
Color of Wire	M/G	R/Υ	W/R	
Terminal No.	5P	8P	15P	

Connector Name BCM (BODY CONTROL MODULE)

M18

Connector No.

Connector Color WHITE

Signal Name	1	1	_	
Color of Wire	9/M	Α/A	H/W	
inal No.	5P	3P	5P	

Signal Name

Color of Wire

Terminal No. 9

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Signal Name	OUTPUT 5	OUTPUT 4	OUTPUT 3	OUTPUT 2	OUTPUT 1	MS NDI	CAN-H	CAN-L
Color of Wire	0	GR	Э	BR	LG	W/R	7	Ь
Terminal No.	32	33	34	35	36	38	39	40

Signal Name	OUTPUT 5	OUTPUT 4	OUTPUT 3	OUTPUT 2	OUTPUT 1	IGN SW	CAN-H	CAN-L
Color of Wire	0	GR	В	BR	PT	W/B	٦	Ь
Terminal No.	32	33	34	35	36	38	39	40

1	_	_	1
	ន	40	
	19	39	l .
	8	38	
	1	37	
	9	98	
	5	32	
	14	34	
	1 ∞	33	
117	12	32	
IV	Ξ	31	
- 11	10	30	
II\	6	53	
	8	28	
	7	27	
	9	26	
	2	25	
	4	24	
	3	23 24	
<u>S.</u>	2	22	
悟	-	21	
		_	_

Signal Name	INPUT 5	INPUT 4	INPUT 3	INPUT 2	INPUT 1	
Color of Wire	۵	SB	>	_	В	
Terminal No. Wire	2	ဗ	4	5	9	

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Connector No. Connector Name		M20 BCM (BODY CONTROL MODULE) BLACK	Connector No. Connector Name Connector Color	a z	M24 COMBINATION METER WHITE	Conn	Connector No. Connector Name Connector Color	M28 ne COMBI or WHITE	Connector No. M28 Connector Name COMBINATION SWITCH Connector Color WHITE	
画 H.S.	5657	[56] 57 58 59 60 61 62 [63] 64 [65] 66 [67] 68 [69] 70	H.S.			(A)	Ø	12 13	10 9 8 7	
Terminal No.	Color of Wire	Signal Name	20 19 18 17 16 40 39 38 37 36	15 14 13 35 34 33	12 11 10 9 8 7 6 5 4 3 2 3 3 3 3 29 28 27 26 25 24 23 22		Terminal No.	Color of Wire	Signal Name	
29	В	GND (POWER)				1	-	PC	INPUT 1	
70	Μ	BAT (F/L)	Terminal No.	Color of Wire	Signal Name		2	BB	INPUT 2	
		1	m	. \			3	g	INPUT 3	
			1	-	I-NAC		4	GR	INPUT 4	
			12		CAN-H		2	0	INPUT 5	
			13	GB	GROUND		9	Œ	OUTPUT 1	
			16	M/G	RUN START		7	_	OUTPUT 2	
			23	В	POWER GND		8	۵	OUTPUT 5	
			33	<u>c</u>	BRAKE PEDAL SW		6	SB	OUTPUT 4	
			3	3			10	>	OUTPUT 3	
Connector No.	o. M31	Connector No. M31 Connector Name WIRE TO WIRE	Terminal No.	Color of Wire	Signal Name	Conn	Connector No.			
Connector Color	olor Wł	WHITE	16	0	ı	Con	Connector Name		ELECTRIC BRAKE (PRE-WIRING)	
			2G	BR	_	Conn	Connector Color	_	ш	
E			31G	0	_					7
E.S.		56 46 36 26 16	32G	LG	-			2	2 0	
		10G 9G 8G 7G 6G	62G	ш	-	SH	ιń	-	3 4 5	
	210	216 201 201 201 201 201 201 201 201 201 201	68G	PC	I					
		30G 29G 28G 27G 28G 25G 24G 23G 22G				Term	Terminal No.	Color of Wire	Signal Name	
	416						1	В	GROUND	
	_	50G 49G 48G 47G 46G 45G 44G 43G 42G					2	ГG	STOP	
	616	61G 60G 59G 58G 57G 56G 55G 54G 53G 52G 51G					3	BR	-	
	_	70G 69G 68G 67G 66G 65G 64G 63G 62G					4	ш	ILL (TAIL)	
		756 746 736 736 716					2	0	+B	
		80G 79G 77G 77G								

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TRAILER TOW

E26 WIRE TO WIRE WHITE 2 3	of Signal Name	E41 WIRE TO WIRE BLACK 10 100
nector No. nector Name nector Color	Terminal No. Color of Wire 10 P 11 L	mector No. Minal No. Wol. 2C O O O O O O O O O O O O O O O O O O O
E10 WIRE TO WIRE WHITE	Color of Signal Name Wire W	ame STOP LAMP SWITCH (WITH A/T) lor WHITE Color of Wire Signal Name Y - Y
M91 Connector No. WIRE TO WIRE Connector Name Connector Color Connector	re Signal Name Terminal No.	E38 Connector No. Signal Name Signal Name Connector Color Pk/B - 1 Fk/S Y - 1 Fk/S Y - 1 Fk/S Connector Name Connector Color Terminal No. Connector Terminal No. Connec
Connector No. Connector Name Connector Color Connector Color	Terminal No. Color of Wire 10 P 11 L	Connector No. Connector Color Terminal No. Vii

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Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM) Connector Color BLACK	(1) (2) (3) (3) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4	Terminal No. Wire Signal Name	57 GR TAIL LAMP	59 B GND (POWER)	מאור חלון איני איני איני איני איני איני איני אינ	Connector No. E160	و		-		80708040		30000	Terminal No. Wire Signal Name	8Q R/B –			
E122 IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) WHITE	0 39 38 37 5 45 44 3	Signal Name	GND (SIGNAL)	CAN-H	CAN-L	- -	Signal Name	ı	1	ı	ı	T	ı					
Connector No. E122 Connector Name POWEI MODUI Connector Color WHITE	H.S. 42 41 40 39	Terminal No. Wire	38 B	39 L	2	Color of	l erminal No. Wire	1G 0	2G BR	31G O	32G LG	62G R	98G LG					
ctor No. E121 IPDM E/R (INTELLIGENT ctor Name POWER DISTRIBUTION MODULE ENGINE ROOM) ctor Color BROWN	29 28 77 28 25 36 35 34 33 32 31 30	Color of Signal Name	W/G T TOW REV LAMP	G TRAILER RLY CONT		tor No. E152	tor Name WIRE TO WIRE	tor Color WHITE			1G 2G 3G 4G 5G	66 76 86 96 106		11G 12G 13G 14G 15G 16G 17G 18G 19G 20G 21G		31G 32C 33G 34G 35G 38G 37G 38B 38G 41G 41G 42C 43G 44G 45G 46G 47G 48G 49G 50G	51G 52G 53G 54G 55G 57G 58G 59G 60G 61G	71G 72G 73G 74G 75G 75G

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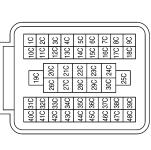
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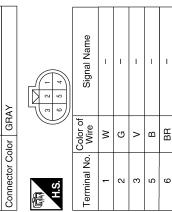
Terminal No. Color of Signal Name Color of Color of Signal Name Color of Color of Signal Name Color of Colo	H.S.		
No. Color of Signal Name Terminal No. Wire W/G		2 2 1	
1 LG		Color of Signal Name	lame
2 B 3 V 5 L Color of Terminal No. Wire 8 SB 9 L Color of 10 R 11 0 Color of 11 0 Color of 12 G Color of 13 Color of 14 Color of 15 Color o	-	0	
3 V 5 L 1 1 1 1 1 1 1 1 1	2	В	
Terminal No. Wire 8 SB 9 L 10 R 11 0 0 11 12 G 1	က	5	
Terminal No. Color of 7 W/G 9 L 9 L 10 R 11 0 0 11 0 12 G 12 12 G 12 12 12 G 12 12 12 G 12 12 12 12 12 12 12 12 12 12 12 12 12	22	-	
Terminal No. Color of 7 W/G 8 SB 9 L 10 R 11 0 Name		_	
Terminal No. Wire 7 W/G 8 SB 9 L 10 R 11 O 12 G			
Terminal No. Color of 7 W/G 8 SB 9 L 10 R 11 0 O 12 G			
Terminal No. Color of 7 W/G 8 SB 9 L 10 R 11 0 O 12 G			
Terminal No. Color of 7 W/G 8 8 SB 9 L 10 R 11 0 O 12 Mame			
Terminal No. Wire 7 W/G 8 SB 9 L 10 R 11 0 O			
Terminal No. Color of 7 W/G 8 SB 9 L 10 R 11 0 O 12 G			
Terminal No. Color of			
Terminal No. Color of 7 W/G 8 SB 9 L 10 R 11 O 12 G			
7 W/G 8 SB 9 L 10 R 11 O 12 G 12 G 12 13 14 15 15 15 15 15 15 15	Connector No.	E226	
WHITE 7 W/G 8 SB 8 8 SB 9 L 9 L 10 R or of fire Signal Name 12 G B - - G	Connector Nan	Connector Name BACK-UP LAMP RELAY	RELAY
8 SB 8 OF COT Signal Name 8 SB 9 L 10 R 11 O 11 O 12 G 12 G		(WITH M/T)	
1 2 3	Connector Color	or BLUE	
10 R 11 12 12 13 14 15			
11 0 Color of Signal Name B -	E	3	
Color of Signal Name Wire Signal Name B - G	H.S.	2 2	
a			
	Terminal No.	Color of Signal Name	lame
2 W/G = -	-	В	
	2	BR -	
4 GR -	က	- W/G	
	5	SB	
- RB 9			

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Signal Name	ı	1	ı	1	1	1	1	
Color of Wire	ŋ	>	>	^	В	н	BB	
Terminal No. Wire	2C	30	4C	19C	20C	21C	22C	

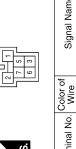




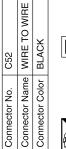
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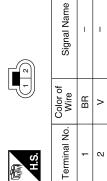
Signal Name	1	I	I	ı	ı	I
Color of Wire	M/G	В	GR		>	0
Terminal No. Wire	-	2	ဗ	5	9	7



Connector Name WIRE TO WIRE

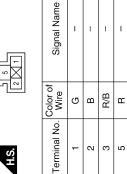
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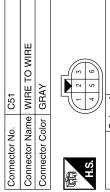
Connector No.



Connector No.	E227
Connector Name	Connector Name TRAILER TOW RELAY 1
Connector Color BLUE	BLUE







-	2 2 3	Signal Name	1	ı	1	1	1
בל הם הם		Color of Wire	В	ŋ	^	Y	ш
	南 H.S.	Terminal No. Wire	-	2	3	5	9

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	WIRE	
20	RE TO WIRE	4CK

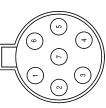


Signal Name	1	1
Color of Wire	œ	Т
Terminal No.	٦	2





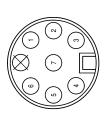
C129	Connector Name TRAILER RECEPTACLE	BLACK	
Connector No.	Connector Name	Connector Color BLACK	





	Signal Name	STOP/TURN LH	GROUND	ELECTRIC BRAKE	STOP/TURN RH	BATTERY	RUNNING LAMPS	BACK-UP LAMPS
	Color of Wire	ı	ı	-	ı	ı	1	1
H.S.	Terminal No.		2	3	4	5	9	7







Signal Name	_	ı	1	1	I	I	ı
Color of Wire	В	Α	>	BR	_	В	В
Terminal No. Wire	1	2	3	4	5	9	7

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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	Symptom		Inspection item
Headlamp does not switch to the high beam.	One side	Fuse Harness between IPDM E/R and the front combination lamp Front combination lamp (High beam relay) IPDM E/R	Headlamp (HI) circuit Refer to EXL-37, "Description".
	Both sides	Symptom diagnosis "BOTH SIDE HEADLAMPS DO N Refer to EXL-132, "Diagnosis Proc	
High beam indicator lamp is not turned ON. (Headlamp switches to the high beam.)		Combination meter BCM	Combination meter. Data monitor "HI-BEAM IND" BCM (HEAD LAMP) Active test "HEADLAMP"
	One side	Daytime light relay 2 Harness between IPDM, day- time light relay 2 and front com- bination lamp LH. Front combination lamp (Low beam)	Headlamp (LO) circuit Refer to <u>EXL-43</u> .
Headlamp does not switch to the low beam.	Both sides	Combination switch (lighting and turn signal switch) Harness between the combination switch (lighting and turn signal switch) and BCM BCM	Combination switch (lighting and turn signal switch) Refer to BCS-7.
		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 EXL-40, "Description".
	Both sides	Symptom diagnosis "BOTH SIDE HEADLAMPS (LO) A Refer to EXL-134, "Diagnosis Proc	
Headlamp does not turn OFF.	When the ignition switch is turned ON	BCM Combination switch (lighting and turn signal switch)	Combination switch (lighting and turn signal switch) Refer to BCS-7.

EXTERIOR LIGHTING SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

Symptom		Possible cause	Inspection item		
Daytime light system does not activate.		 Either high beam bulb Parking brake switch Combination switch (lighting and turn signal switch) BCM IPDM E/R Daytime light relay 1 Harness between IPDM E/R and daytime light relay 1. 	Daytime light system description. Refer to EXL-9, "System Description".		
	One side	 Off-road lamps bulb Harness between Off-road lamps relay and the Off-road lamp assembly 	Off-road lamps circuit Refer to <u>EXL-51</u> .		
Off-road lamps are not turned ON.	Both side	 Off-road lamps switch Fuse Off-road lamps relay Off-road lamp cover sensor BCM Harness between fuse block (J/B) and the Off-road lamp assembly 	Off-road lamps switch circuit Refer to EXL-46. Off-road lamp cover sensor circuit Refer to EXL-48. Off-road lamps circuit Refer to EXL-51.		
Off-road lamps are not turned OFF	Both side	 Off-road lamps relay BCM Harness between Off-road lamps relay and the BCM 	Off-road lamps circuit Refer to <u>EXL-51</u>		
Front fog lamp is not turned ON.	One side	 Front fog lamp bulb Harness between IPDM E/R and the front combination lamp Front combination lamp IPDM E/R 	Front fog lamp circuit Refer to EXL-54.		
	Both side	Symptom diagnosis "BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON" Refer to EXL-136, "Diagnosis Procedure".			
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 EXL-56.		
	Both sides	Symptom diagnosis "PARKING, LICENSE PLATE AND ON" Refer to EXL-135, "Diagnosis Proc	RKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED		
Turn signal lamp does not blink.	Indicator lamp is normal. (The applicable side performs the high flasher activation).	Harness between BCM and each turn signal lamp Turn signal lamp bulb	Turn signal lamp circuit Refer to EXL-59.		
	One side	Combination meter	_		
Turn signal indicator lamp	Both sides (Always)	Turn signal indicator lamp signalCombination meterBCM	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.		

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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

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

Diagnosis Procedure

INFOID:0000000006255357

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

Check the combination switch (lighting and turn signal switch). Refer to <u>BCS-34, "Diagnosis Procedure"</u>. <u>Is the combination switch (lighting and turn signal switch) normal?</u>

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

2.CHECK HEADLAMP (HI) REQUEST SIGNAL INPUT

®CONSULT-III DATA MONITOR

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

Monitor item	Condition	Monitor status	
l l	Combination switch (lighting	HI or PASS	ON
HL HI REQ	, , ,	Except for HI or PASS	OFF

Is the item status normal?

YES >> GO TO 3.

NO >> Replace BCM. Refer to BCS-53, "Removal and Installation".

3.HEADLAMP (HI) CIRCUIT INSPECTION

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

Is the headlamp (HI) circuit normal?

YES >> Replace IPDM E/R. Refer to PCS-29, "Removal and Installation of IPDM E/R".

NO >> Repair or replace the malfunctioning part.

DAYTIME LIGHT SYSTEM INOPERATIVE

< SYMPTOM DIAGNOSIS >

DAYTIME LIGHT SYSTEM INOPERATIVE

Description INFOID:0000000006824168

The daytime light system is inoperative even though the combination switch (lighting and turn signal switch) and parking brake switch are in the normal setting, also whenever engine is operating.

Diagnosis Procedure

INFOID:0000000006824169

NOTE:

Before performing the diagnosis, check that the following is normal.

- High beam lamp function
- · Parking brake warning lamp
- Engine operation status

${f 1.}$ COMBINATION SWITCH (LIGHTING AND TURN SIGNAL SWITCH) INSPECTION

Check the combination switch (lighting and turn signal switch). Refer to BCS-34, "Description".

Is the combination switch (lighting and turn signal switch) normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

2.CHECK DAYTIME LIGHT REQUEST SIGNAL INPUT

(P)CONSULT-III DATA MONITOR

- Parking brake switch is released.
- Start engine.
- Select "DTRL REQ" of IPDM E/R DATA MONITOR item.
- While operating the combination switch (lighting and turn signal switch), check the monitor status.

Monitor item	Condition	Monitor status	
DTRL REQ	combination switch (lighting and turn	1ST or OFF	ON
	signal switch)	Except for 1ST or OFF	OFF

Is the item status normal?

YES >> GO TO 3.

NO >> Replace BCM. Refer to BCS-53, "Removal and Installation".

3 DAYTIME LIGHT RELAY CIRCUIT INSPECTION

Check the daytime light relay circuit. Refer to EXL-44, "Diagnosis Procedure".

Is the daytime light relay circuit normal?

>> Replace IPDM E/R. Refer to PCS-29, "Removal and Installation of IPDM E/R". YES

NO >> Repair or replace the malfunctioning part. **EXL**

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BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

Description

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

Diagnosis Procedure

INFOID:0000000006255359

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

Check the combination switch (lighting and turn signal switch). Refer to <u>BCS-34, "Diagnosis Procedure"</u>. <u>Is the combination switch (lighting and turn signal switch) normal?</u>

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 combination switch (lighting and turn signal switch), check the monitor status.

Monitor item	Condition		Monitor status
HL LO REQ	Combination switch (lighting and turn signal switch)	2ND	ON
		OFF	OFF

Is the item status normal?

YES >> GO TO 3.

NO >> Replace BCM. Refer to BCS-53, "Removal and Installation".

3.HEADLAMP (LO) CIRCUIT INSPECTION

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

Is the headlamp (LO) circuit normal?

YES >> Replace IPDM E/R. Refer to PCS-29, "Removal and Installation of IPDM E/R".

NO >> Repair or replace the malfunctioning part.

PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON

Description INFOID:0000000006255360

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

Diagnosis Procedure

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

Check the combination switch (lighting and turn signal switch). Refer to <u>BCS-34, "Diagnosis Procedure"</u>. <u>Is the combination switch (lighting and turn signal switch) normal?</u>

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 combination switch (lighting and turn signal switch), check the monitor status.

Monitor item	Condition		Monitor status
TAIL & CLR	r iii a c i a c i i a c i i a c i i a c i i a c i i a c i a c i a c i a c i a c i a c i a c i a c i a c i a c i	1ST	ON
REQ		OFF	OFF

Is the item status normal?

YES >> GO TO 3.

NO >> Replace BCM. Refer to BCS-53, "Removal and Installation".

3.PARK LAMP CIRCUIT INSPECTION

Check the parking lamp circuit. Refer to EXL-56, "Description".

Is the tail lamp circuit normal?

YES >> Replace IPDM E/R. Refer to PCS-29, "Removal and Installation of IPDM E/R".

NO >> Repair or replace the malfunctioning part.

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Revision: March 2012 EXL-135 2011 Xterra

BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

Description INFOID:0000000006255362

The front fog lamps do not turn ON in any combination switch (lighting and turn signal switch) setting.

Diagnosis Procedure

INFOID:0000000006255363

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

Check the combination switch (lighting and turn signal switch). Refer to <u>BCS-34</u>, "<u>Diagnosis Procedure</u>". Is the combination switch (lighting and turn signal switch) normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

2.CHECK FRONT FOG LAMP REQUEST SIGNAL INPUT

(P)CONSULT-III DATA MONITOR

- 1. Select "FR FOG REQ" of IPDM E/R DATA MONITOR item.
- 2. With operating the combination switch (lighting and turn signal switch), check the monitor status.

Monitor item	Condition		Monitor status
FR FOG REQ	Combination switch (lighting and turn signal switch) (2ND)	ON	ON
		OFF	OFF

Is the item status normal?

YES >> GO TO 3.

NO >> Replace BCM. Refer to BCS-53, "Removal and Installation".

$3.\mathsf{front}$ fog LAMP CIRCUIT INSPECTION

Check the front fog lamp circuit. Refer to EXL-54, "Description".

Is the front fog lamp circuit normal?

YES >> Replace IPDM E/R. Refer to PCS-29, "Removal and Installation of IPDM E/R".

NO >> Repair or replace the malfunctioning part.

PRECAUTIONS

< PRECAUTION >

PRECAUTION

PRECAUTIONS

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

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

WARNING:

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the SR section.
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

WARNING:

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

Precaution for Work INFOID:0000000006835994

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

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ADJUSTMENT AND INSPECTION

< REMOVAL AND INSTALLATION >

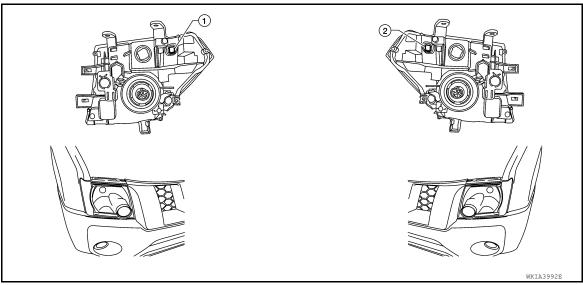
REMOVAL AND INSTALLATION

ADJUSTMENT AND INSPECTION HEADLAMP

HEADLAMP: Aiming Adjustment



INFOID:0000000006255365



1. Adjustment screw (passenger side) 2. Adjustment screw (driver side)

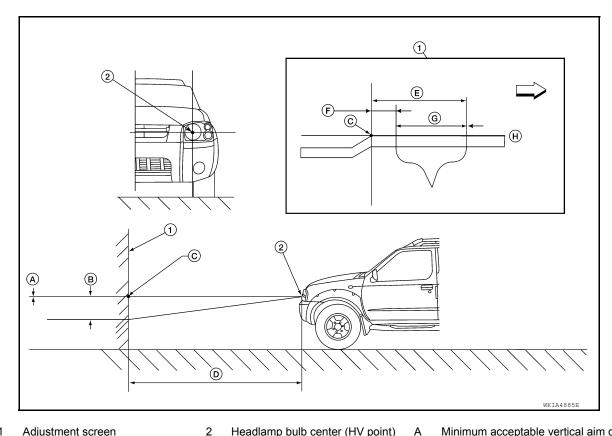
NOTE:

For headlamp aiming details, refer to the regulations in your area.

If vehicle front body has been repaired and/or the front combination lamp has been removed or replaced, check headlamp aiming.

- Before performing aiming adjustment, check the following:
- Confirm headlamp aiming switch is set to "0" (zero) position.
- 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

LOW BEAM AND HIGH BEAM



- Adjustment screen
 - Maximum acceptable vertical aim dimension (see aiming chart)
- Maximum aim evaluation distance F from vertical center on aiming screen 399mm (3° R).
- Horizontal aiming evaluation line.
- Headlamp bulb center (HV point)
- С H-V point
 - Minimum aim evaluation distance from vertical center on aiming screen 133 mm (1°R)
- < ☐ Right

- Minimum acceptable vertical aim dimension (see aiming chart)
- Distance of headlamp aiming screen D from vehicle 7.62 m (25 ft.)
- G Aim evaluation area

Aiming Chart

A (Minimum acceptable vertical aim dimension) -3.3 mm (0.13 in) 0.025° up B (Maximum acceptable vertical aim dimension) 36.6 mm (1.44 in) 0.275° down

NOTE:

- By regulation, no means for horizontal aim adjustment is provided from the factory; only vertical aim is adjustable.
- Basic illuminating area for evaluation and/or adjustment should be within range shown on aiming chart.
- Use adjustment screw to perform aiming adjustment.
 - Cover the opposite lamp and ensure fog lamps, if equipped, are turned off. **CAUTION:**

Do not tighten adjustment screw beyond specified torque or damage may occur.

Adjustment torque 1.67 N.m (17 kg-cm, 14.8 in-lb)

Adjust beam pattern until cut-off line (top edge of illumination area) is positioned at the specified height off ground. Measure cut-off line within distance J on H-line. See aiming chart.

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.

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ADJUSTMENT AND INSPECTION

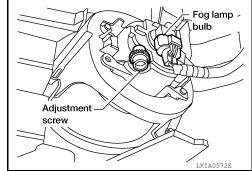
< REMOVAL AND INSTALLATION >

- · Place vehicle on level ground.
- 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.

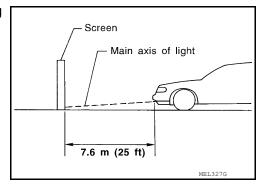
Adjust aiming in the vertical direction by turning the adjustment screw.

NOTE:

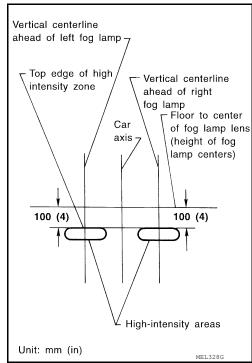
Use a Phillips screwdriver to adjust. Turn screw clockwise to raise pattern and counterclockwise to lower pattern.



1. Set the distance between the screen and the center of the fog lamp lens as shown.



- 2. Turn front fog lamps ON.
- Remove front portion of fender protector(s) for adjustment screw access. Refer to <u>EXT-22</u>, "Removal and Installation"
- Adjust front fog lamps using adjustment screw so that the top edge of the high intensity zone is 100 mm (4 in) below the height of the fog lamp centers as shown.
- When performing adjustment, if necessary, cover the headlamps and opposite fog lamp.



HEADLAMP

< UNIT REMOVAL AND INSTALLATION >

UNIT REMOVAL AND INSTALLATION

HEADLAMP

Bulb Replacement

CAUTION:

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

HEADLAMP

Removal

NOTE:

Reach through engine room for bulb replacement access.

- 1. Turn front headlamp switch OFF.
- Disconnect the electrical connector.
- Rotate the headlamp bulb retaining ring counterclockwise and remove.
- 4. Pull the headlamp bulb straight out from the headlamp assembly.

CAUTION:

Grasp only the plastic base when handling the bulb. Never touch the glass envelope.

Installation

Installation is in the reverse order of removal.

CAUTION:

After installing bulb, be sure to install the bulb socket and plastic cap securely to ensure watertightness.

FRONT TURN SIGNAL/PARKING LAMP

Removal

NOTE:

Reach through engine room for bulb replacement access.

- 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.

CAUTION:

After installing the bulb, be sure to install the bulb socket securely for watertightness.

FRONT SIDE MARKER LAMP

Removal

NOTE:

Reach through engine room for bulb replacement access.

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

Installation

Installation is in the reverse order of removal.

CAUTION:

After installing the bulb, be sure to install the bulb socket securely for watertightness.

Removal and Installation

FRONT COMBINATION LAMP

Removal

- Remove front portion of front fender protector. Refer to <u>EXT-22, "Removal and Installation"</u>.
- Remove the front fascia assembly. Refer to <u>EXT-15, "Removal and Installation"</u>.

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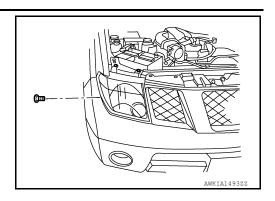
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Revision: March 2012 EXL-141 2011 Xterra

< UNIT REMOVAL AND INSTALLATION >

Remove the front combination lamp bolts.



Disconnect the front combination lamp connector and remove front combination lamp.

Installation

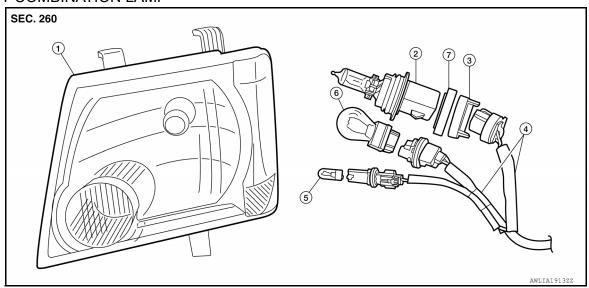
Installation is in the reverse order of removal.

Front combination lamp bolts : 6.0 Nm (0.61 kg-m, 53 in-lb)

Disassembly and Assembly

INFOID:0000000006255369

FRONT COMBINATION LAMP



- 1. Front combination lamp
- 4. Wiring harness assembly
- 7. Headlamp bulb sealing ring
- 2. Headlamp bulb
- 5. Front side marker lamp bulb
- 3. Headlamp bulb retaining ring
- 6. Front turn signal/parking lamp bulb

DISASSEMBLY

CAUTION:

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

Rotate headlamp bulb retaining ring counterclockwise and remove.
 CAUTION:

Grasp only the plastic base when handling headlamp bulb. Never touch the glass envelope.

- 2. Turn front turn signal/parking lamp bulb socket counterclockwise to unlock and remove socket.
- 3. Turn front side marker lamp bulb socket counterclockwise to unlock and remove socket.

ASSEMBLY

Installation is in the reverse order of removal.

CAUTION:

HEADLAMP

< UNIT REMOVAL AND INSTALLATION >

After installing bulb, be sure to install the bulb socket and plastic cap securely to ensure watertightness. Α В С D Е F G Н J Κ EXL M Ν 0 Р

FRONT FOG LAMP

Bulb Replacement

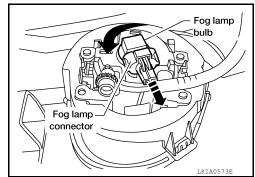
- 1. Remove front portion of fender protector. Refer to EXT-22, "Removal and Installation"
- 2. Disconnect fog lamp connector.
- 3. Turn the bulb counterclockwise to remove it.

WARNING:

Do not touch bulb by hand while it is lit or right after being turned off. Burning may result.

CAUTION:

- Do not touch the glass of bulb directly by hand. Keep grease and other oily substances away from it.
- 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.



Removal and Installation

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FRONT FOG LAMP

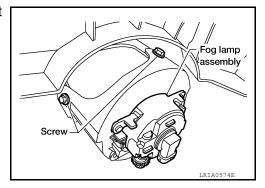
The fog lamp is a semi-sealed beam type which uses a replaceable halogen bulb.

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 front portion of fender protector. Refer to EXT-22, "Removal and Installation"
- Disconnect fog lamp connector.
- 3. Remove fog lamp screws and pull fog lamp rearward out of front bumper.



Installation

Installation is in the reverse order of removal.

LIGHTING & TURN SIGNAL SWITCH

< UNIT REMOVAL AND INSTALLATION >

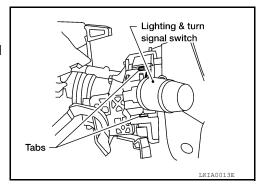
LIGHTING & TURN SIGNAL SWITCH

Removal and Installation

INFOID:0000000006255373

REMOVAL

- 1. Remove instrument lower panel LH. Refer to IP-13, "Removal and Installation".
- 2. Remove steering column covers.
- 3. Disconnect the lighting and turn signal switch connector.
- 4. While pressing tabs, pull lighting and turn signal switch toward driver door and release from the steering column.



INSTALLATION

Installation is in the reverse order of removal.

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HAZARD SWITCH

< UNIT REMOVAL AND INSTALLATION >

HAZARD SWITCH

Removal and Installation

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REMOVAL

- 1. Remove cluster lid C. Refer to IP-14, "Removal and Installation".
- 2. Remove the screws and remove the hazard switch.

INSTALLATION

Installation is in the reverse order of removal.

HIGH-MOUNTED STOP LAMP

< UNIT REMOVAL AND INSTALLATION >

HIGH-MOUNTED STOP LAMP

High-Mounted Stop Lamp

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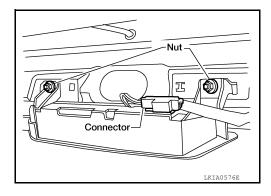
BULB REPLACEMENT

The high-mounted stop lamp bulbs are not serviceable.

REMOVAL AND INSTALLATION

Removal

- 1. Remove back door upper finisher. Refer to INT-26, "Removal and Installation".
- 2. Disconnect high-mounted stop lamp connector.
- 3. Remove nuts and remove high-mounted stop lamp.



Installation

Installation is in the reverse order of removal.

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LICENSE PLATE LAMP

< UNIT REMOVAL AND INSTALLATION >

LICENSE PLATE LAMP

Bulb Replacement

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LICENSE PLATE LAMP

Removal

- 1. Turn bulb socket counterclockwise and remove bulb socket.
- 2. Remove license plate lamp bulb.

Installation

Installation is in the reverse order of removal.

Removal and Installation

INFOID:0000000006255377

LICENSE PLATE LAMP

Removal

- 1. Disconnect license plate lamp harness connector.
- 2. Remove license plate lamp screw and remove license plate lamp.

Installation

Installation is in the reverse order of removal.

REAR COMBINATION LAMP

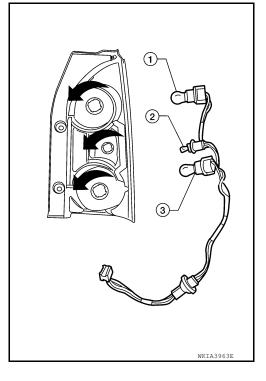
< UNIT REMOVAL AND INSTALLATION >

REAR COMBINATION LAMP

Bulb Replacement

REMOVAL В

- 1. Remove rear combination lamp. Refer to EXL-149, "Removal and Installation".
- 2. Rotate each bulb socket (1, 2, 3) counterclockwise to unlock it.
- 3. Pull bulb straight out away from socket to release.



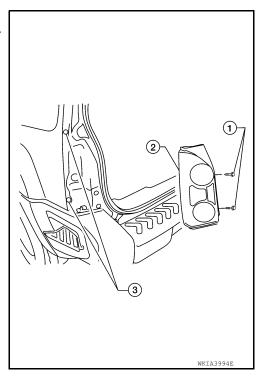
INSTALLATION

Installation is in the reverse order of removal.

Removal and Installation

REMOVAL

- 1. Remove rear combination lamp bolts (1).
- 2. Pull the lamp assembly (2) rearward to release from the rear combination lamp locators (3).
- 3. Disconnect the connector, then remove the rear combination lamp.



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REAR COMBINATION LAMP

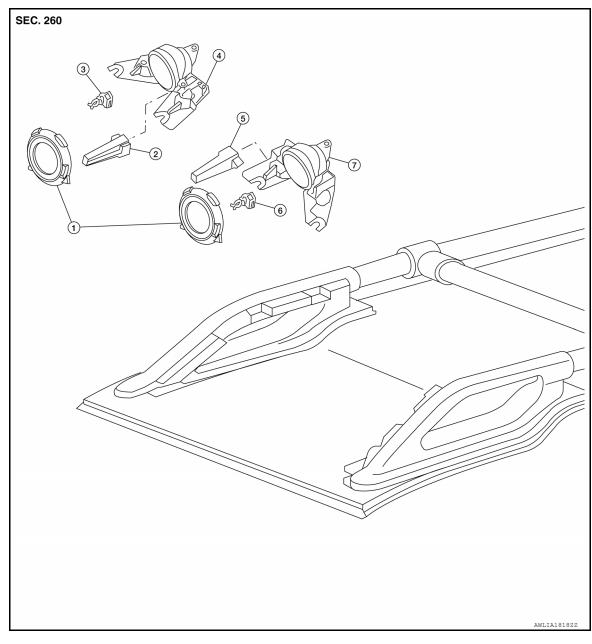
< UNIT REMOVAL AND INSTALLATION >

INSTALLATION

Installation is in the reverse order of removal.

OFF-ROAD LAMPS

Removal and Installation



- Off road lamp covers
- Off road lamp assembly RH
- Off road lamp assembly LH
- 2. Sensor cover RH
- 5. Sensor cover LH
- 3. Bulb
- 6. Bulb

OFF ROAD LAMPS

Removal

- 1. Remove the screws.
- Remove the off road lamp cover.
- 3. Disconnect the electrical connector and remove the off road lamp assembly.

Installation

Installation is in the reverse order of removal.

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OFF-ROAD LAMPS

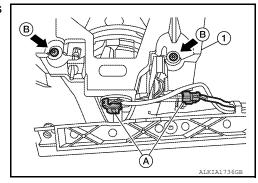
< UNIT REMOVAL AND INSTALLATION >

Disassembly and Assembly

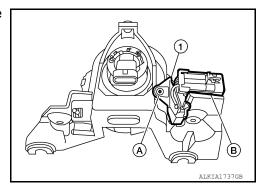
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Disassembly

- 1. Remove the off road lamp assembly. Refer to EXL-151, "Removal and Installation"
- 2. Disconnect the electrical connectors (A). Remove the screws (B) and remove the lamp assembly (1).



- 3. Remove the harness bracket.
- 4. Remove the screw (A). Unclip the electrical connector from the lamp assembly (B) and remove the lamp cover sensor (1).
- 5. Remove the off road lamp bulb.



Assembly

Assembly is in the reverse order of disassembly.

BULB SPECIFICATIONS

< SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

BULB SPECIFICATIONS

Headlamp INFOID:0000000006255382

Item	Wattage (W)*
Low/High	55/65

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

Exterior Lamp

Item Wattage (W)* Turn signal lamp/parking lamp 28/8 Front combination lamp Side marker 3.8 Stop/Tail lamp 27/8 Rear combination lamp Turn signal lamp 27 Back-up lamp 18 55 Front fog lamp License plate lamp 5 High-mounted stop lamp Off road lights 55

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