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# **BASIC INSPECTION**

## DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

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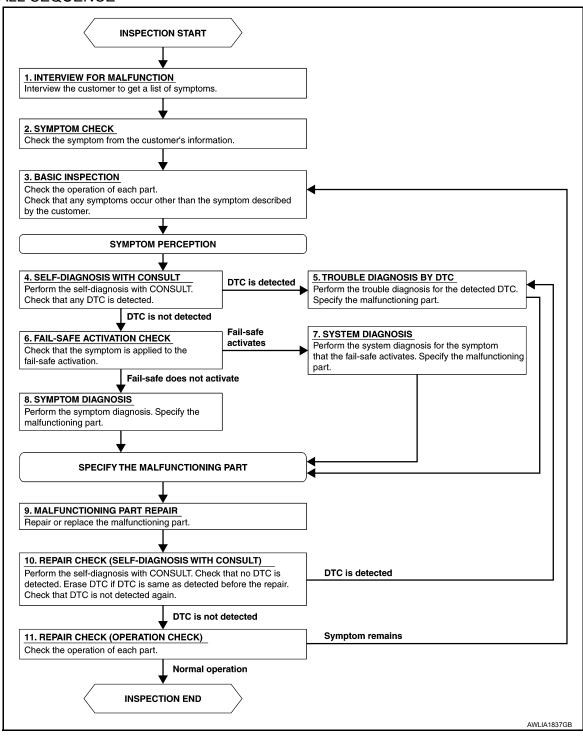
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#### **OVERALL SEQUENCE**



## **DIAGNOSIS AND REPAIR WORKFLOW**

#### < BASIC INSPECTION >

#### **DETAILED FLOW**

## 1.INTERVIEW FOR MALFUNCTION

Find out what the customer's concerns are.

#### >> GO TO 2

## 2.SYMPTOM CHECK

Verify the symptom from the customer's information.

#### >> GO TO 3

## 3.BASIC INSPECTION

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

#### >> GO TO 4

## 4. SELF-DIAGNOSIS WITH CONSULT

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

#### Is any DTC detected?

YES >> GO TO 5

NO >> GO TO 6

## 5. TROUBLE DIAGNOSIS BY DTC

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

#### >> GO TO 9

## 6. FAIL-SAFE ACTIVATION CHECK

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

#### Does the fail-safe activate?

YES >> GO TO 7

NO >> GO TO 8

## 7. SYSTEM DIAGNOSIS

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

#### >> GO TO 9

## 8.SYMPTOM DIAGNOSIS

Perform the symptom diagnosis. Refer to INL-68, "Symptom Table". Specify the malfunctioning part.

#### >> GO TO 9

## 9. MALFUNCTION PART REPAIR

Repair or replace the malfunctioning part.

#### >> GO TO 10

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

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

#### Is any DTC detected?

YES >> GO TO 5

## **DIAGNOSIS AND REPAIR WORKFLOW**

## < BASIC INSPECTION >

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

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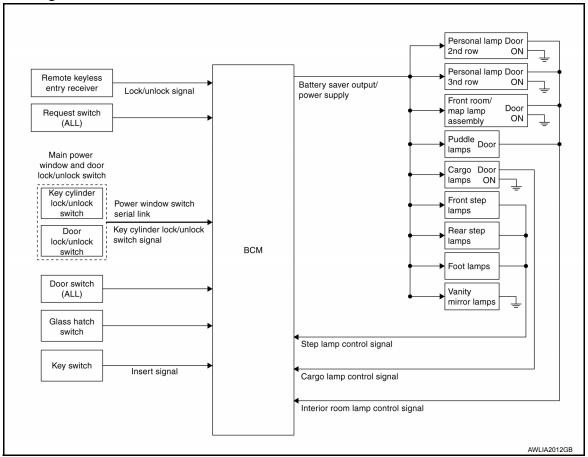
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## SYSTEM DESCRIPTION

## INTERIOR ROOM LAMP CONTROL SYSTEM

System Diagram

INFOID:0000000009822366



## System Description

INFOID:0000000009822367

#### OUTLINE

- Interior room lamps\* are controlled by the interior room lamp timer control function of the BCM.
   \*Front room/map lamps, personal lamp 2nd row, personal lamp 3rd row (when lamp switch is in DOOR position) and puddle lamps (if equipped).
- Cargo lamp is controlled by the cargo lamp control function of the BCM.
- Step lamps\* are controlled by the step lamp control function of the BCM.
  - \*Front step lamps, rear step lamps and foot lamps (if equipped).

The timer control functions of the BCM activate based on inputs from the remote keyless entry receiver, the key cylinder lock/unlock switch, the door switches, the key switch and lock solenoid (without Intelligent Key) or the key switch and ignition knob switch (with Intelligent Key).

#### ROOM LAMP TIMER OPERATION

When the interior room lamp switch is in the DOOR position and when all conditions below are met, the BCM begins timer control (maximum 30 seconds) for interior room lamp ON/OFF.

- When the front door LH is unlocked [with Intelligent Key (with Intelligent Key), key fob (without Intelligent Key), main power window and door lock/unlock switch, or front door lock assembly LH (key cylinder switch)].
- When a door opens → closes and the key is not inserted in the ignition switch.

Timer control is cancelled under the following conditions.

- When the front door LH is locked [with Intelligent Key (with Intelligent Key), key fob (without Intelligent Key), main power window and door lock/unlock switch, or front door lock assembly LH (key cylinder switch)].
- A door is opened (door switch turns ON).
- Ignition switch is turned ON.

Interior lamp operational settings can be changed with the function setting of CONSULT.

#### INTERIOR LAMP BATTERY SAVER CONTROL

If an interior lamp is left ON and does not turn OFF even when the doors are closed, the BCM turns off power to the interior lamps automatically to save the battery 10 minutes after the ignition switch is turned OFF. The BCM controls power and ground to all interior lamps.

After the battery saver system turns the lamps OFF, the lamps will illuminate again when

- a signal is received from an Intelligent Key (with Intelligent Key), key fob (without Intelligent Key), or main
  power window and door lock/unlock switch, or when the front door lock assembly LH (key cylinder switch) is
  locked or unlocked
- · a door is opened or closed
- the key is removed from or inserted into the ignition switch.

The Interior lamp battery saver control time period can be changed with the function setting of CONSULT.

## Component Parts Location

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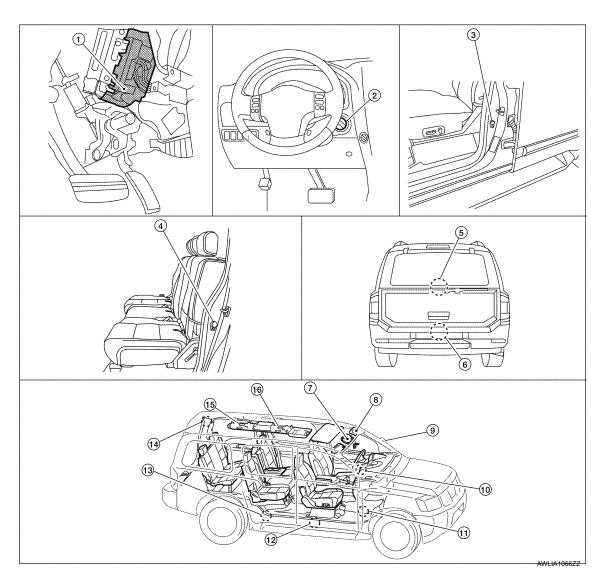
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- BCM M18, M19, M20 (view with instru- 2. ment lower panel LH removed)
- Key switch and ignition knob switch M12 (with Intelligent Key) Key switch and key lock solenoid M27 (without Intelligent Key)
  - 5. Glass hatch ajar switch D707
- Front door switch LH B8
   Front door switch RH B108

Rear door switch LH B18 5. Glass hatch Rear door switch RH B116  Back door switch D502 (without power back door)
 Back door latch (door ajar switch)
 D503 (with power back door)

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## INTERIOR ROOM LAMP CONTROL SYSTEM

#### < SYSTEM DESCRIPTION >

Front room/map lamp assembly R102
 Vanity lamp LH R3

 Vanity lamp LH R8

 Use of lamp lamp assembly R102
 Vanity lamp LH R8
 Vanity lamp RH R8
 Door mirror LH (puddle lamp) D107 (if equipped)
 Front step lamp LH D11
 Front step lamp RH D109

14. Cargo lamp B153

- 13. Rear step lamp LH D206 Rear step lamp RH D306
- 16. Personal lamp 2nd row R203

# **Component Description**

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15. Personal lamp 3rd row R205

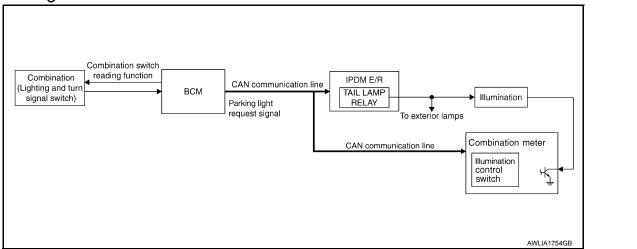
Part name	Description		
BCM	Provides power and ground and controls timer functions for the interior room lamps, step lamps and cargo lamp.		
Key switch and ignition knob switch (with Intelligent Key)	Describes have in institute at the DOM		
Key switch and key lock solenoid (without Intelligent Key)	Provides key in ignition status to the BCM.		
Door switches	Provides door OPEN/CLOSED status to the BCM.		
Glass hatch switch	Provides glass hatch OPEN/CLOSED status to the BCM.		
Back door latch (with power back door)	Provides back door OPEN/CLOSED status to the BCM.		
Back door switch (without power back door)	- Provides back door Open/GLOSED status to the BCM.		
Power window and door lock/unlock switch RH	Provides door lock/unlock position switch RH status to the BCM.		
Main power window and door lock/unlock switch [front door lock assembly LH (key cylinder switch)]	Provides door lock/unlock position switch LH status to the BCM.		

#### **ILLUMINATION CONTROL SYSTEM**

#### < SYSTEM DESCRIPTION >

## ILLUMINATION CONTROL SYSTEM

## System Diagram



## System Description

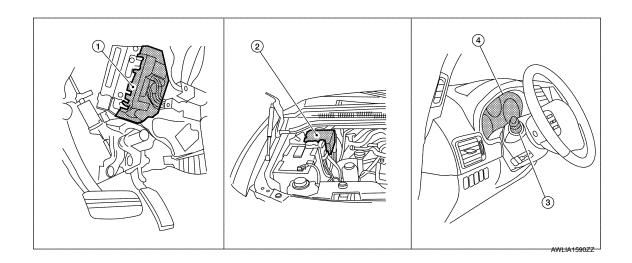
The illumination lamps operation is dependent upon the position of the combination switch (lighting and turn signal switch). When the combination switch (lighting and turn signal switch) is placed in the 1ST or 2ND position (or if the auto light system is activated) the BCM (body control module) receives input requesting the parking 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 tail lamp relay coil. When energized, this relay directs power to the parking and illumination lamps, which then illuminate.

#### BATTERY SAVER CONTROL

When the combination switch (lighting and turn signal switch) is in the 1ST or 2ND position and the ignition switch is turned from ON or ACC to OFF, the battery saver control feature is activated. Under this condition, the illumination lamps remain illuminated for 10 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 illumination lamps are turned off after a 30 seconds delay. When the combination switch (lighting and turn signal switch) is turned from OFF to 1ST or 2ND position (or if auto light system is activated) after illumination lamps have been turned off by the battery saver control, the illumination lamps illuminate again.

## **Component Parts Location**

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## **ILLUMINATION CONTROL SYSTEM**

#### < SYSTEM DESCRIPTION >

- BCM M18, M20 (view with instrument 2. IPDM E/R E122, E123, E124 lower panel LH removed)
  - Combination meter (illumination control switch) M23, M24

3. Combination switch (lighting and turn signal switch) M28

## **Component Description**

INFOID:0000000009822373

Part name	Description			
BCM	The BCM monitors the lighting switch position with the combination switch reading function. The BCM requests, via CAN communication, that the IPDM E/R activate the tail lamp relay.			
IPDM E/R	The IPDM E/R activates the tail lamp relay based on inputs received from the BCM via the CAN communication network.			
Combination meter (illumination control switch)	The illumination control switch is a part of the combination meter. The combination meter controls illumination intensity by varying ground to the illumination lamps based on the illumination control switch position.			
Combination switch (lighting and turn signal switch)	The combination switch provides input to the BCM about the lighting switch position.			

## **DIAGNOSIS SYSTEM (BCM)**

## < SYSTEM DESCRIPTION >

# DIAGNOSIS SYSTEM (BCM)

**COMMON ITEM** 

COMMON ITEM: CONSULT Function (BCM - COMMON ITEM)

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#### **APPLICATION ITEM**

CONSULT performs the following functions via CAN communication with BCM.

Direct Diagnostic Mode	Description
ECU Identification	The BCM part number is displayed.
Self Diagnostic Result	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	<ul> <li>The vehicle specification can be read and saved.</li> <li>The vehicle specification can be written when replacing BCM.</li> </ul>
CAN Diag Support Mntr	The result of transmit/receive diagnosis of CAN communication is displayed.

#### SYSTEM APPLICATION

BCM can perform the following functions.

		Direct Diagnostic Mode						
System	Sub System	ECU Identification	Self Diagnostic Result	Data Monitor	Active Test	Work support	Configuration	CAN Diag Support Mntr
Door lock	DOOR LOCK		×	×	×	×		
Rear window defogger	REAR DEFOGGER			×	×			
Warning chime	BUZZER			×	×			
Interior room lamp timer	INT LAMP			×	×	×		
Remote keyless entry system	MULTI REMOTE ENT			×	×	×		
Exterior lamp	HEADLAMP			×	×	×		
Wiper and washer	WIPER			×	×	×		
Turn signal and hazard warning lamps	FLASHER			×	×			
Air conditioner	AIR CONDITIONER			×				
Intelligent Key system	INTELLIGENT KEY			×				
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				×			

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## **DIAGNOSIS SYSTEM (BCM)**

## < SYSTEM DESCRIPTION >

## **INT LAMP**

# INT LAMP : CONSULT Function (BCM - INT LAMP)

INFOID:0000000009822375

## **DATA MONITOR**

Monitor Item [Unit]	Description
IGN ON SW [On/Off]	Indicates condition of ignition switch ON position.
KEY ON SW [On/Off]	Indicates condition of key switch.
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.
KEY CYL LK-SW [On/Off]	Indicates condition of lock signal from door key cylinder switch.
KEY CYL UN-SW [On/Off]	Indicates condition of unlock signal from door key cylinder switch.
CDL LOCK SW [On/Off]	Indicates condition of lock signal from door lock and unlock switch.
CDL UNLOCK SW [On/Off]	Indicates condition of unlock signal from door lock and unlock switch.
I-KEY LOCK* [On/Off]	Indicates condition of lock signal from Intelligent Key.
I-KEY UNLOCK* [On/Off]	Indicates condition of unlock signal from Intelligent Key.
KEYLESS LOCK** [On/Off]	Indicates condition of lock signal from keyfob.
KEYLESS UNLOCK** [On/Off]	Indicates condition of unlock signal from keyfob.

<sup>\*:</sup> with Intelligent Key

#### **ACTIVE TEST**

Test Item	Description
IGN ILLUM	This test is able to check ignition keyhole illumination operation [On/Off].
INT LAMP	This test is able to check interior room lamp operation [On/Off].
STEP LAMP TEST	This test is able to check step lamp operation [On/Off].
LUGGAGE LAMP TEST	This test is able to check cargo lamp operation [On/Off].

## **WORK SUPPORT**

Support Item	Setting		Description
SET I/L D-UNLCK INTCON	Off		Interior room lamp timer function OFF.
SET I/L D-UNLOK INTOON	On*		Interior room lamp timer function ON.
	MODE7	0 sec.	
ROOM LAMP ON TIME SET	MODE6	5 sec.	
	MODE5	4 sec.	
	MODE4	3 sec.	Sets the interior room lamp gradual brightening time.
	MODE3	2 sec.	
	MODE2*	1 sec.	
	MODE1	0.5 sec.	

<sup>\*\* :</sup> without Intelligent Key

## **DIAGNOSIS SYSTEM (BCM)**

## < SYSTEM DESCRIPTION >

Support Item	Sett	ting	Description	
ROOM LAMP OFF TIME SET	MODE7	0 sec.		
	MODE6	5 sec.		
	MODE5	4 sec.		
	MODE4	3 sec.	Sets the interior room lamp gradual dimming time.	
	MODE3	2 sec.		
	MODE2*	1 sec.		
	MODE1	0.5 sec.		

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

## **BATTERY SAVER**

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

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## **DATA MONITOR**

Monitor Item [Unit]	Description
IGN ON SW [On/Off]	Indicates condition of ignition switch ON position.
KEY ON SW [On/Off]	Indicates condition of key switch.
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.
KEY CYL LK SW [On/Off]	Indicates condition of lock signal from door key cylinder switch.
KEY CYL UN SW [On/Off]	Indicates condition of unlock signal from door key cylinder switch.
CDL LOCK SW [On/Off]	Indicates condition of lock signal from door lock and unlock switch.
CDL UNLOCK SW [On/Off]	Indicates condition of unlock signal from door lock and unlock switch.
I-KEY LOCK* [On/Off]	Indicates condition of lock signal from Intelligent Key.
I-KEY UNLOCK* [On/Off]	Indicates condition of unlock signal from Intelligent Key.
KEYLESS LOCK** [On/Off]	Indicates condition of lock signal from keyfob.
KEYLESS UNLOCK** [On/Off]	Indicates condition of unlock signal from keyfob.

<sup>\*:</sup> with Intelligent Key

## **ACTIVE TEST**

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

## **WORK SUPPORT**

Support Item	Setting		Description
ROOM LAMP TIMER SET	MODE2	60 min	Sets the interior room lamp battery saver timer operating
NOOM LAW TIMEN SET	MODE1*	10 min	time.

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

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<sup>\*\* :</sup> without Intelligent Key

## POWER SUPPLY AND GROUND CIRCUIT

#### < DTC/CIRCUIT DIAGNOSIS >

# DTC/CIRCUIT DIAGNOSIS

# POWER SUPPLY AND GROUND CIRCUIT

**BCM** 

BCM : Diagnosis Procedure

INFOID:0000000009822377

Regarding Wiring Diagram information, refer to BCS-46, "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	Pottory newer gunnly	22 (15A)	
70	Battery power supply	F (50A)	
11	Ignition ACC or ON	4 (10A)	
38	Ignition ON or START	59 (10A)	

#### Is the fuse blown?

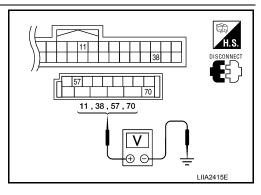
YES >> Replace the blown fuse or fusible link after repairing the affected circuit.

NO >> GO TO 2

# 2. CHECK POWER SUPPLY CIRCUIT

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

Connector	Term	inals	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
M20 -	70	Ground	Battery power supply	Ignition switch OFF	Battery voltage



#### Is the measurement value normal?

YES >> GO TO 3

NO >> Repair or replace harness.

3. CHECK GROUND CIRCUIT

## **POWER SUPPLY AND GROUND CIRCUIT**

## < DTC/CIRCUIT DIAGNOSIS >

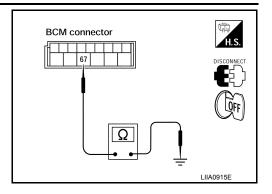
Check continuity between BCM harness connector and ground.

В	СМ		Continuity
Connector	Terminal	Ground	Continuity
M20	67		Yes

## Does continuity exist?

YES >> Inspection End.

NO >> Repair or replace harness.



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#### BATTERY SAVER OUTPUT/POWER SUPPLY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

## BATTERY SAVER OUTPUT/POWER SUPPLY CIRCUIT

Description INFOID.000000009822378

Provides the battery saver output/power supply. Also cuts the power supply when the interior room lamp battery saver is activating.

## Component Function Check

INFOID:0000000009822379

## 1. CHECK BATTERY SAVER OUTPUT/POWER SUPPLY FUNCTION

## (P)WITH CONSULT

- 1. Turn ignition switch ON.
- 2. Turn each interior room lamp ON.
- Front room/map lamp assembly
- Vanity lamps
- Personal lamp 2nd row
- Personal lamp 3rd row
- Cargo lamp
- 3. Open the driver door to turn ON the step lamps and puddle lamps.
- Front step lamps
- Rear step lamps
- Foot lamps (if equipped)
- Puddle lamps (if equipped)
- 4. Select "BATTERY SAVER" of BCM (BATTERY SAVER) active test item.
- 5. While operating the test item, check that each interior room lamp turns ON/OFF.

OFF : Interior room lamp OFF
ON : Interior room lamp ON

#### Is the inspection result normal?

YES >> Battery saver output/power supply circuit is normal.

NO >> Refer to INL-16, "Diagnosis Procedure".

## Diagnosis Procedure

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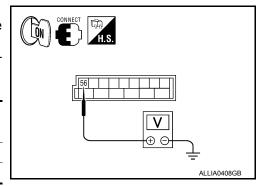
Regarding Wiring Diagram information, refer to INL-39, "Wiring Diagram".

# 1. CHECK BATTERY SAVER OUTPUT/POWER SUPPLY OUTPUT

#### (II) WITH CONSULT

- Turn ignition switch ON.
- Select "BATTERY SAVER" of BCM (BATTERY SAVER) active test item.
- 3. While operating the test item, check voltage between BCM connector M20 terminal 56 and ground.

(+)		(-)	Test item	Voltage	
Connector	Terminal	(-)	BATTERY SAVER	voltage	
M20 56		Ground	OFF	0V	
			ON	Battery voltage	



#### Is the inspection result normal?

YES >> GO TO 2

NO >> Replace BCM after making sure battery saver output/power supply circuit is not shorted to voltage. Refer to <u>BCS-54</u>, "Removal and Installation".

## 2.CHECK BATTERY SAVER OUTPUT/POWER SUPPLY OPEN CIRCUIT

## **BATTERY SAVER OUTPUT/POWER SUPPLY CIRCUIT**

#### < DTC/CIRCUIT DIAGNOSIS >

- Turn ignition switch OFF.
- 2. Disconnect the following connectors.
- BCM M20
- Ignition keyhole illumination
- Front step lamp LH
- Front step lamp RH
- Door mirror LH (with puddle lamps) (if equipped)
- Door mirror RH (with puddle lamps) (if equipped)
- Rear step lamp LH
- Rear step lamp RH
- Foot lamp LH (if equipped)
- Foot lamp RH (if equipped)
- Front room/map lamp assembly
- Vanity lamp LH
- Vanity lamp RH
- Cargo lamp
- Personal lamp 2nd row
- Personal lamp 3rd row
- 3. Check continuity between BCM connector M20 terminal 56 and each interior room lamp connector.

ВСМ		Each interior	room lamp		Continuity
Connector	Terminal	Connector		Terminal	Continuity
		Ignition keyhole illumination	M150	1	
		Front step lamp LH	D11	1	
		Front step lamp RH	D109	1	
		Door mirror LH (with puddle lamps) (if equipped)	D4	12	
M20 56	Door mirror RH (with puddle lamps) (if equipped)	D107	12		
	Rear step lamp LH	D206	1		
	Rear step lamp RH	D306	1	Yes	
	Foot lamp LH (if equipped)	M99	1		
	Foot lamp RH (if equipped)	M100	1		
	Front room/map lamp assembly	R102	6		
	Vanity lamp LH	R3	1		
	Vanity lamp RH	R8	1		
	Cargo lamp	B153	2		
		Personal lamp 2nd row	R203	3	
		Personal lamp 3rd row	R205	3	

#### Is the inspection result normal?

YES >> GO TO 3

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NO >> Repair the harness or connectors.

3.CHECK BATTERY SAVER OUTPUT/POWER SUPPLY SHORT CIRCUIT

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## BATTERY SAVER OUTPUT/POWER SUPPLY CIRCUIT

## < DTC/CIRCUIT DIAGNOSIS >

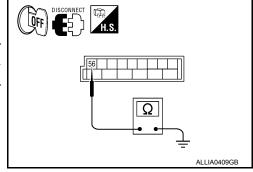
Check continuity between BCM connector M20 terminal 56 and ground.

Connector	Terminal	_	Continuity
M20	56	Ground	No

## Is the inspection result normal?

YES >> Check that each interior room lamp has no internal short circuit.

NO >> Repair the harness or connectors.



#### INTERIOR ROOM LAMP CONTROL CIRCUIT

#### < DTC/CIRCUIT DIAGNOSIS >

## INTERIOR ROOM LAMP CONTROL CIRCUIT

Description INFOID:0000000009822381

Controls the following interior room lamps (ground side) by PWM signal

- Puddle lamps (if equipped)
- Front room/map lamp assembly
- Personal lamp 2nd row
- · Personal lamp 3rd row

#### NOTE:

PWM signal control period is approximately 250 Hz (in the gradual brightening/dimming).

## Component Function Check

#### •

#### **CAUTION:**

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

- Battery saver output/power supply
- Front room/map lamp bulbs
- Personal lamp bulbs
- Puddle lamp bulbs (if equipped)

## $1.\mathsf{CHECK}$ INTERIOR ROOM LAMP CONTROL FUNCTION

#### (P)WITH CONSULT

- 1. Place the front room/map lamp assembly switch in the DOOR position.
- 2. Turn ignition switch ON.
- 3. Select "INT LAMP" of BCM (INT LAMP) active test item.
- While operating the test item, check that each interior room lamp turns ON/OFF (gradual brightening/dimming).

ON : Interior room lamp gradual brightening

OFF : Interior room lamp gradual dimming

#### Is the inspection result normal?

YES >> Interior room lamp control circuit is normal.

NO >> Refer to INL-19, "Diagnosis Procedure".

## Diagnosis Procedure

Regarding Wiring Diagram information, refer to INL-39, "Wiring Diagram".

# 1. CHECK INTERIOR ROOM LAMP CONTROL OUTPUT

#### WITH CONSULT

- 1. Switch the front room/map lamp assembly switch to DOOR.
- 2. Turn ignition switch ON.
- 3. Select "INT LAMP" of BCM (INT LAMP) active test item.
- While operating the test item, check voltage between BCM connector M20 terminal 63 and ground.

(+)		(-)	INT LAMP	Voltage
Connector	Terminal	(-)	IIVI EAWII	vollage
M20 63		Ground	ON	0V
		Giodila	OFF	Battery voltage

# CONNECT H.S. ALLIA0410GB

#### Is the inspection result normal?

YES >> Interior room lamp control circuit is operating normally.

Fixed ON>> GO TO 3

Fixed OFF>> GO TO 2

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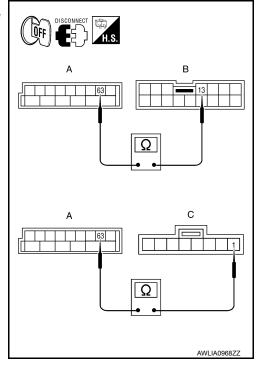
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# $\overline{2.}$ CHECK INTERIOR ROOM LAMP CONTROL OPEN CIRCUIT

- 1. Turn ignition switch OFF.
- Disconnect BCM connector M20, door mirror connectors (if equipped with puddle lamps) and front room/map lamp assembly connector.
- Check continuity between BCM connector M20 (A) terminal 63 and the door mirror connectors (B) terminal 13 and front room/ map lamp assembly connector R102 (C) terminal 1.

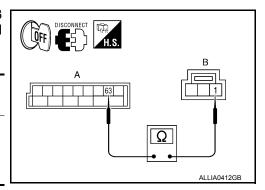
BCM		Interio	Continuity		
Connector	Terminal	Component	Connector	Terminal	Continuity
		Door mirror LH (if equipped with puddle lamps)	D4 (B)	13	
M20 (A)	63	Door mirror RH (if equipped with puddle lamps)	D107 (B)	13	Yes
		Front room/map lamp	R102 (C)	1	

4. Reconnect the front room/map lamp assembly connector.



 Check continuity between BCM connector M20 (A) terminal 63 and the 2nd and 3rd row personal lamp connectors (B) terminal 1.

ВСМ		Interior room lamp			Continuity
Connector	Terminal	Component	Connector	Terminal	Continuity
Μ20 (Δ)	63	Personal lamp 2nd row	R203 (B)	1	Yes
M20 (A) 63	Personal lamp 3rd row	R205 (B)	1	163	



#### Is the inspection result normal?

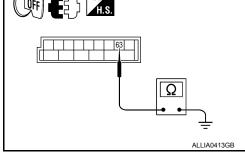
- YES >> Check interior room lamps for an open. If OK, replace BCM. Refer to <u>BCS-54, "Removal and Installation"</u>. If NG, replace interior room lamp. Refer to <u>INL-72, "Removal and Installation"</u> or <u>EXL-141, "Removal and Installation"</u>.
- NO >> Repair the harness or connectors.

## 3.CHECK INTERIOR ROOM LAMP CONTROL SHORT CIRCUIT

- 1. Turn ignition switch OFF.
- Disconnect BCM connector M20, door mirror connectors (if equipped with puddle lamps) and 2nd and 3rd row personal lamp connectors.
- 3. Switch the front room/map lamp assembly switch to ON position.
- Check continuity between BCM connector M20 terminal 63 and ground.

Connector	Terminal	_	Continuity
M20	63	Ground	No

uity



Is the inspection result normal?

## INTERIOR ROOM LAMP CONTROL CIRCUIT

## < DTC/CIRCUIT DIAGNOSIS >

YES >> Check interior room lamps for a short circuit. If OK, replace BCM. Refer to <u>BCS-54</u>, "Removal and <u>Installation"</u>. If NG, replace interior room lamp. Refer to <u>INL-72</u>, "Removal and <u>Installation"</u> or <u>EXL-141</u>, "Removal and <u>Installation"</u>.

NO >> Repair the harness or connectors.

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## STEP LAMP CIRCUIT

#### < DTC/CIRCUIT DIAGNOSIS >

## STEP LAMP CIRCUIT

Description INFOID:000000009822384

Controls the front and rear step lamps and the foot lamps (if equipped) (ground side) to turn the lamps ON and OFF.

## Component Function Check

INFOID:0000000009822385

#### **CAUTION:**

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

- Battery saver output/power supply
- Front step lamp bulbs
- Rear step lamp bulbs
- Foot lamp bulbs (if equipped)

## 1. CHECK STEP LAMP OPERATION

#### (P)WITH CONSULT

- 1. Turn ignition switch ON.
- 2. Select "STEP LAMP TEST" of BCM (INT LAMP) active test item.
- While operating the test item, check that the front step lamps, rear step lamps and foot lamps (if equipped) turn ON/OFF.

ON: Step lamp ON
OFF: Step lamp OFF

#### Is the inspection result normal?

YES >> Step lamp circuit is normal.

NO >> Refer to INL-22, "Diagnosis Procedure".

## Diagnosis Procedure

INFOID:0000000009822386

Regarding Wiring Diagram information, refer to INL-39, "Wiring Diagram".

## 1. CHECK STEP LAMP OUTPUT

#### (P)WITH CONSULT

- 1. Turn ignition switch ON.
- Select "STEP LAMP TEST" of BCM (INT LAMP) active test item.
- 3. While operating the test item, check voltage between BCM connector M20 terminal 62 and ground.

Connector	Terminal		STEP LAMP TEST	Voltage
M20	62	Ground	ON	0V
IVIZU	62		OFF	Battery voltage

# CONNECT ALLIA0414GB

#### Is the inspection result normal?

YES >> Step lamp control circuit is operating normally.

Fixed ON>> GO TO 3
Fixed OFF>> GO TO 2

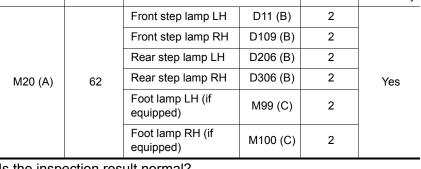
2.CHECK STEP LAMP OPEN CIRCUIT

## STEP LAMP CIRCUIT

#### < DTC/CIRCUIT DIAGNOSIS >

- Turn ignition switch OFF.
- 2. Disconnect BCM connector M20 and front step lamp, rear step lamp and foot lamp connectors (if equipped).
- Check continuity between BCM connector M20 (A) terminal 62 and step lamp connectors (B) terminal 2 and foot lamp connectors (C) terminal 2.

Connector	Terminal	Connector	•	Terminal	Continuity
	62	Front step lamp LH	D11 (B)	2	
		Front step lamp RH	D109 (B)	2	
		Rear step lamp LH D206 (B)		2	
M20 (A)		Rear step lamp RH		2	Yes
, ,		Foot lamp LH (if equipped)	M99 (C)	2	
		Foot lamp RH (if equipped)	M100 (C)	2	



#### Is the inspection result normal?

YES >> Check step lamp or foot lamp for an open. If OK, replace BCM. Refer to BCS-54, "Removal and Installation". If NG, replace step lamp or foot lamp. Refer to INL-72. "Removal and Installation".

NO >> Repair harness or connectors.

# 3.CHECK STEP LAMP SHORT CIRCUIT

- Turn ignition switch OFF.
- Disconnect BCM connector M20, front step lamp, rear step lamp and foot lamp connectors (if equipped).
- Check continuity between BCM connector M20 terminal 62 and ground.

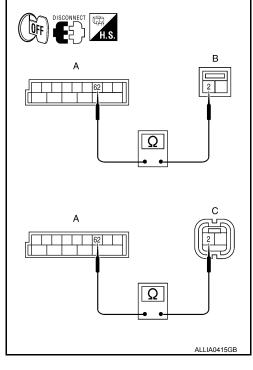
Connector	Terminal	_	Continuity
M20	62	Ground	No

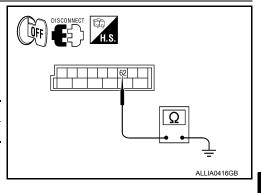
#### Is the inspection result normal?

YES >> Check step lamp or foot lamp for a short circuit. If OK, replace BCM. Refer to BCS-54, "Removal and Installa-

tion". If NG, replace step lamp or foot lamp. Refer to INL-72, "Removal and Installation".

NO >> Repair the harness or connectors.





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## **CARGO LAMP CONTROL CIRCUIT**

#### < DTC/CIRCUIT DIAGNOSIS >

## CARGO LAMP CONTROL CIRCUIT

Description INFOID:000000009822387

Controls the cargo lamp (ground side) to turn the cargo lamp ON and OFF.

## Component Function Check

INFOID:0000000009822388

INFOID:0000000009822389

#### **CAUTION:**

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

- Battery saver output/power supply
- Cargo lamp bulb
- 1. CHECK CARGO LAMP OPERATION

#### (P)WITH CONSULT

- Turn ignition switch ON.
- 2. Select "LUGGAGE LAMP TEST" of BCM (INT LAMP) active test item.
- While operating the test item, check that cargo lamp turns ON/OFF.

ON : Cargo lamp ON OFF : Cargo lamp OFF

## Is the inspection result normal?

YES >> Cargo lamp circuit is normal.

NO >> Refer to <a href="INL-24">INL-24</a>, "Diagnosis Procedure".

## Diagnosis Procedure

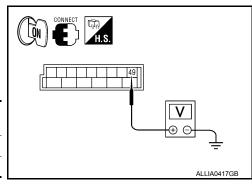
Regarding Wiring Diagram information, refer to INL-39, "Wiring Diagram".

## 1. CHECK CARGO LAMP OUTPUT

#### (P)WITH CONSULT

- 1. Turn ignition switch ON.
- 2. Select "LUGGAGE LAMP TEST" of BCM (INT LAMP) active test item.
- 3. While operating the test item, check voltage between BCM connector M19 terminal 49 and ground.

Connector	Terminal	_	LUGGAGE LAMP TEST	Voltage
M19	49	Ground	ON	0V
IVITS	49	Ground	OFF	Battery voltage



#### Is the inspection result normal?

YES >> Cargo lamp control circuit is operating normally.

Fixed ON>> GO TO 3

Fixed OFF>> GO TO 2

# 2.CHECK CARGO LAMP OPEN CIRCUIT

#### CARGO LAMP CONTROL CIRCUIT

#### < DTC/CIRCUIT DIAGNOSIS >

- Turn ignition switch OFF.
- 2. Disconnect BCM connector M19 and cargo lamp connector.
- Check continuity between BCM connector M19 (A) terminal 49 and cargo lamp connector B153 (B) terminal 1.

BCM		Cargo lamp		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M19 (A)	49	B153 (B)	1	Yes

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#### Is the inspection result normal?

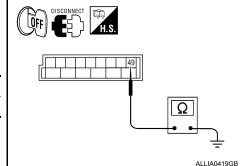
YES >> Check cargo lamp for an open. If OK, replace BCM. Refer to BCS-54, "Removal and Installation". If NG, replace cargo lamp. Refer to INL-77. "Removal and Installation".

NO >> Repair harness or connectors.

# 3.CHECK CARGO LAMP SHORT CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM connector M19 and cargo lamp connector.
- Check continuity between BCM connector M19 terminal 49 and ground.

Connector	Terminal	_	Continuity
M19	49	Ground	No



#### Is the inspection result normal?

YES >> Check cargo lamp for a short circuit. If OK, replace BCM. Refer to BCS-54, "Removal and Installation". If NG, replace cargo lamp. Refer to INL-77, "Removal and Installation".

NO >> Repair harness or connectors.

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**INL-25** Revision: August 2013 2014 Armada NAM

#### IGNITION KEYHOLE ILLUMINATION CONTROL CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

## IGNITION KEYHOLE ILLUMINATION CONTROL CIRCUIT

Description INFOID:000000009822390

Controls the ignition keyhole illumination (ground side) to turn the ignition keyhole illumination ON and OFF.

## Component Function Check

INFOID:0000000009822391

#### **CAUTION:**

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

- Battery saver output/power supply circuit
- Ignition keyhole illumination bulb
- $1.\mathsf{check}$  ignition keyhole illumination operation

#### (P)WITH CONSULT

- 1. Turn the ignition switch ON.
- Select "IGN ILLUM" of BCM (INT LAMP) active test item.
- While operating the test item, check that the ignition keyhole illumination turns ON/OFF

ON : Ignition keyhole illumination ON OFF : Ignition keyhole illumination OFF

#### Is the inspection result normal?

YES >> Ignition keyhole illumination circuit is normal. NO >> Refer to INL-26, "Diagnosis Procedure".

## Diagnosis Procedure

INFOID:0000000009822392

Regarding Wiring Diagram information, refer to <a href="INL-39">INL-39</a>. "Wiring Diagram".

# 1. CHECK IGNITION KEYHOLE OUTPUT

#### (P)WITH CONSULT

- 1. Turn ignition switch ON.
- Select "IGN ILLUM" of BCM (INT LAMP) active test item.
- While operating the test item, check voltage between BCM connector M18 terminal 1 and ground.

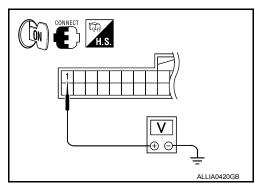
Connector	Terminal	_	IGN ILLUM	Voltage
M18	1	Ground	ON	0V
IVITO	'	Ground	OFF	Battery voltage

## Is the inspection result normal?

YES >> Ignition keyhole illumination circuit is operating normally. Fixed ON>> GO TO 3

Fixed OFF>> GO TO 2

2. CHECK IGNITION KEYHOLE ILLUMINATION OPEN CIRCUIT

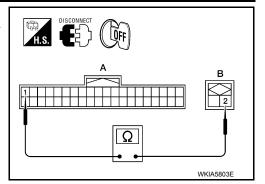


#### IGNITION KEYHOLE ILLUMINATION CONTROL CIRCUIT

#### < DTC/CIRCUIT DIAGNOSIS >

- 1. Turn ignition switch OFF.
- Disconnect BCM connector M18 and ignition keyhole illumination connector.
- 3. Check continuity between BCM connector M18 (A) terminal 1 and ignition keyhole illumination connector M150 (B) terminal 2.

ВСМ		Ignition keyhole illumination		Continuity
Connector	Terminal	Connector Terminal		Continuity
M18 (A)	1	M150 (B)	2	Yes



#### Is the inspection result normal?

YES >> Check the ignition keyhole illumination for an open. If OK, replace BCM. Refer to <u>BCS-54</u>, <u>"Removal and Installation"</u>. If NG, replace ignition keyhole illumination.

NO >> Repair harness or connectors.

# 3.check ignition keyhole illumination short circuit

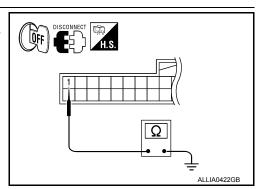
- 1. Turn ignition switch OFF.
- 2. Disconnect BCM connector M18 and ignition keyhole illumination connector.
- 3. Check continuity between BCM connector M18 terminal 1 and ground.

Connector	Terminal	_	Continuity
M18	1	Ground	No

#### Is the inspection result normal?

YES >> Check the ignition keyhole illumination for a short circuit. If OK, replace BCM. Refer to <u>BCS-54</u>, "Removal and <u>Installation"</u>. If NG, replace ignition keyhole illumination.

NO >> Repair harness 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
- · Check Intelligent Key relative signal strength
- · Confirm vehicle Intelligent Key antenna signal strength
- · Test remote keyless entry keyfob relative signal strength

#### VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
ACC ON CW	Ignition switch OFF or ON	Off
ACC ON SW	Ignition switch ACC	On
AIR COND SW	A/C switch OFF	Off
AIR COIND SW	A/C switch ON	On
AIR PRESS FL	Front left tire air pressure value	kPa, kg/cm <sup>2</sup> , psi
AIR PRESS FR	Front right tire air pressure value	kPa, kg/cm <sup>2</sup> , psi
AIR PRESS RL	Rear left tire air pressure value	kPa, kg/cm <sup>2</sup> , psi
AIR PRESS RR	Rear right tire air pressure value	kPa, kg/cm <sup>2</sup> , psi
AUTO LIGHT SW	Lighting switch OFF	Off
AUTO LIGHT SW	Lighting switch AUTO	On
BACK DOOD SW	Back door closed	Off
BACK DOOR SW	Back door opened	On
BRAKE SW	Brake pedal released	Off
DRAKE SW	Brake pedal applied	On
BLICKI E SW	Seat belt buckle unfastened	Off
BUCKLE SW	Seat belt buckle fastened	On
BUZZER	Buzzer in combination meter OFF	Off
BUZZEK	Buzzer in combination meter ON	On
CARGO LAMP SW	Cargo lamp switch OFF	Off
CARGO LAIVIF 3VV	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 SW	Press door lock/unlock switch to the UNLOCK side	On
DOOR SW-AS	Front door RH closed	Off
DOOR 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

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Monitor Item	Condition	Value/Status
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
FAIN OIN SIG	Blower motor fan switch ON	On
FR FOG SW	Front fog lamp switch OFF	Off
FR FOG SW	Front fog lamp switch ON	On
ED WASHED 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
50 W/D50 LII	Front wiper switch OFF	Off
FR WIPER HI	Front wiper switch HI	On
	Front wiper switch OFF	Off
FR WIPER INT	Front wiper switch INT	On
	Any position other than front wiper stop position	Off
FR WIPER STOP	Front wiper stop position	On
	When hazard switch is not pressed	Off
HAZARD SW	When hazard switch is pressed	On
	Headlamp switch OFF	Off
HEAD LAMP SW1	Headlamp switch 1st	On
	Headlamp switch OFF	Off
HEAD LAMP SW2	Headlamp switch 1st	On
	High beam switch OFF	Off
HI BEAM SW	High beam switch HI	On
	ID registration of front left tire incomplete	YET
ID REGST FL1	ID registration of front left tire complete	DONE
	ID registration of front right tire incomplete	YET
ID REGST FR1	ID registration of front right tire complete	DONE
	ID registration of rear left tire incomplete	YET
ID REGST RL1	ID registration of rear left tire complete	DONE
	ID registration of rear right tire incomplete	YET
ID REGST RR1	ID registration of rear right tire complete	DONE
	Ignition switch OFF or ACC	Off
IGN ON SW	Ignition switch ON	On
	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
THE VOLUME	LOCK button of Intelligent Key is not pressed	Off
I-KEY LOCK <sup>1</sup>	LOCK button of Intelligent Key is not pressed	On
	PANIC button of Intelligent Key is not pressed	Off
I-KEY PANIC <sup>1</sup>		
	PANIC button of Intelligent Key is pressed	On Off
I-KEY PW DWN <sup>1</sup>	UNLOCK button of Intelligent Key is not pressed	Off
I-MET EAA DAAM	UNLOCK button of Intelligent Key is pressed for greater than 3 seconds and driver's window operating in DOWN direction	On

#### < ECU DIAGNOSIS INFORMATION >

Monitor Item	Condition	Value/Status
	UNLOCK button of Intelligent Key is not pressed	Off
I-KEY UNLOCK <sup>1</sup>	UNLOCK button of Intelligent Key is pressed	On
KEY CYLLK CW	Door key cylinder LOCK position	Off
KEY CYL LK-SW	Door key cylinder other than LOCK position	On
14E) ( O) (   1   1   O) ( )	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
VEVI 500 L 00V2	LOCK button of key fob is not pressed	Off
KEYLESS LOCK <sup>2</sup>	LOCK button of key fob is pressed	On
	PANIC button of key fob is not pressed	Off
KEYLESS PANIC <sup>2</sup>	PANIC button of key fob is pressed	On
	UNLOCK button of key fob is not pressed	Off
KEYLESS UNLOCK <sup>2</sup>	UNLOCK button of key fob is pressed	On
LIQUE ON TOTAL	Lighting switch OFF	Off
LIGHT SW 1ST	Lighting switch 1st	On
OIL DDECC CW	Ignition switch OFF or ACC     Engine running	Off
OIL PRESS SW	Ignition switch ON	On
	Bright outside of the vehicle	Close to 5V
OPTICAL SENSOR	Dark outside of the vehicle	Close to 0V
	Other than lighting switch PASS	Off
PASSING SW	Lighting switch PASS	On
	Return to ignition switch to LOCK position	Off
PUSH SW <sup>1</sup>	Press ignition switch	On
	Rear window defogger switch OFF	Off
REAR DEF SW	Rear window defogger switch ON	On
	Rear washer switch OFF	Off
RR WASHER SW	Rear washer switch ON	On
	Rear wiper switch OFF	Off
RR WIPER INT	Rear wiper switch INT	On
	Rear wiper switch OFF	Off
RR WIPER ON	Rear wiper switch ON	On
	Rear wiper stop position	Off
RR WIPER STOP	Other than rear wiper stop position	On
	Rear wiper stop position	Off
RR WIPER STP2	Other than rear wiper stop position	On
		Off
TURN SIGNAL L	Turn signal switch OFF Turn signal switch LH	On
	Turn signal switch OFF	Off
TURN SIGNAL R	Turn signal switch RH	On
VEHICLE SPEED	While driving	Equivalent to speedometer reading
	Low tire pressure warning lamp in combination meter OFF	Off
WARNING LAMP	Low tire pressure warning lamp in combination meter ON	On

1: With Intelligent Key

## < ECU DIAGNOSIS INFORMATION >

2: With remote keyless entry system

## **Terminal Layout**



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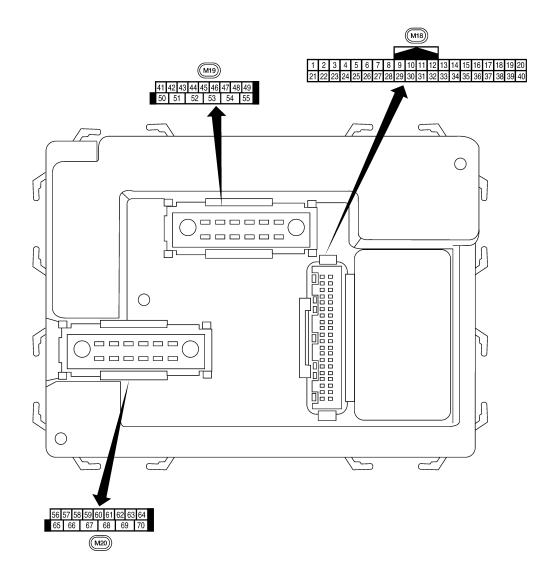
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Physical Values

			Signal		Measuring condition	
Terminal	Wire color	Signal name	input/ output	Ignition switch	Operation or condition	Reference value or waveform (Approx.)
1	BR/W	Ignition keyhole illumi-	Output	OFF	Door is locked (SW OFF)	Battery voltage
1	DR/W	nation	Output	OFF	Door is unlocked (SW ON)	0V
2	SB	Combination switch input 5	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 6 4 2 0 
3	G/Y	Combination switch input 4	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 6 4 2 0 
4	Y	Combination switch input 3	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 6 4 2 0 
5	G/B	Combination switch input 2				(V)
6	٧	Combination switch input 1	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	6 4 2 0 +-5ms SKIA5292E
	D (0	0, 1, 1, 1, 1		055	Brake pedal depressed	Battery voltage
9	R/G	Stop lamp switch	Input	OFF	Brake pedal released	0V
10	G	Hazard lamp flash	Input	OFF	ON (opening or closing)	0V
	G	riazaru iampiliasii	input	OFF	OFF (other than above)	Battery voltage
11	0	Ignition switch (ACC or ON)	Input	ACC or ON	Ignition switch ACC or ON	Battery voltage
12	R/L	Front door switch RH	Input	OFF	ON (open)	0V
· <u>-</u>		Transcription (1)	pat	J. 1	OFF (closed)	Battery voltage
13	GR	Rear door switch RH	Input	OFF	ON (open)	0V
15	L/W	Tire pressure warning check connector	Input	OFF	OFF (closed)	Battery voltage 5V
18	Р	Remote keyless entry receiver and optical sensor (ground)	Output	OFF	_	0V

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	Wire		Signal	Measuring condition		Reference value or waveform	
Terminal color Signal name		Signal name	input/ output	Ignition switch	Operation or condition	(Approx.)	
19	V/W	Remote keyless entry receiver (power sup- ply)	Output	OFF	Ignition switch OFF	(V) 6 4 2 0 +-50 ms	
20	G/W	Remote keyless entry receiver (signal)	Input	OFF	Stand-by (keyfob buttons released)	(V) 6 4 2 0 +	
		· · · · · · · · · · · · · · · · · · ·			When remote keyless entry receiver receives signal from keyfob (keyfob buttons pressed)	(V) 6 4 2 0 + + 50 ms	
21	G	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.	
22	W/V	BUS	_	_	Ignition switch ON or power window timer operates	(V) 15 10 5 0 200 ms	
23	G/O	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 $\rightarrow$ ON)	Just after turning ignition switch ON: Pointer of tester should move for approx. 1 second, then return to battery voltage.	
	Y/L	Rear wiper auto stop switch 2	Input	ON	Rise up position (rear wiper arm on stopper)	0V	
26					A Position (full clockwise stop position)	0V	
					Forward sweep (counterclockwise direction)	Fluctuating	
					B Position (full counterclock- wise stop position)	Battery voltage	
					Reverse sweep (clockwise direction)	Fluctuating	
27	W/R	Compressor ON sig-	Input	ON	A/C switch OFF	5V	
Z1 VV/I		nal	прис	ON	A/C switch ON	0V	

	Wire		Signal		Measuring condition	Reference value or waveform	
Terminal	color	Signal name	input/ output	Ignition switch	Operation or condition	(Approx.)	
28 L/R		Front blower monitor	Input	ON	Front blower motor OFF	Battery voltage	
					Front blower motor ON	0V	
29	W/B	Hazard switch	Input	OFF	ON	0V	
29 W/B		Tiazaiù Switcii	Input	OI F	OFF	5V	
32	R/G	Combination switch output 5	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 6 4 2 0 *** 5ms SKIA5291E	
33	R/Y	Combination switch output 4	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 6 4 2 0 ***5ms	
34	L	Combination switch output 3	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 6 4 2 0 ***5ms	
35	O/B	Combination switch output 2				(V)	
36	R/W	Combination switch output 1	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	6 4 2 0 *********************************	
. 4	B/R	Key switch and ignition knob switch	Input	OFF	Intelligent Key inserted	Battery voltage	
37 <sup>1</sup>	D/K				Intelligent Key removed	0V	
072	D/D	Key switch and key lock solenoid	Input	OFF	Key inserted	Battery voltage	
37 <sup>2</sup>	B/R			OFF	Key removed	0V	
38	W/L	Ignition switch (ON)	Input	ON	_	Battery voltage	
39	L	CAN-H	_	_	_	_	
40	Р	CAN-L	_	_	_	_	
41	GR/R	Rear window defogger switch	Input	ON	Rear window defogger switch ON	0V	
					Rear window defogger switch OFF	5V	
42	GR	Glass hatch ajar switch	Input	ON	Glass hatch open	0	
					Glass hatch closed	Battery	

	Wire	Signal name	Signal input/ output	Measuring condition		Reference value or waveform	
Terminal	color			Ignition switch	Operation or condition	(Approx.)	
		Back door switch			ON (open)	0V	
43 R/B	(without power back door) or back door latch (door ajar switch) (with power back door)	Input	OFF	OFF (closed)	Battery voltage		
		Rear wiper auto stop switch 1	Input	ON	Rise up position (rear wiper arm on stopper)	0V	
					A Position (full clockwise stop position)	Battery voltage	
44	0				Forward sweep (counterclockwise direction)	Fluctuating	
					B Position (full counterclockwise stop position)	0V	
					Reverse sweep (clockwise direction)	Fluctuating	
47	SB	Front door switch LH	Input	OFF	ON (open)	0V	
					OFF (closed)	Battery voltage	
48 R/Y	R/Y	Rear door switch LH	Input	OFF	ON (open)	0V	
	101				OFF (closed)	Battery voltage	
49 R	Ω	Cargo lamp	Output	OFF	Any door open (ON)	0V	
	- 1				All doors closed (OFF)	Battery voltage	
51	Y/B	Trailer turn signal (right)	Output	ON	Turn right ON	(V) 15 10 5 0 	
52	G/B	Trailer turn signal (left)	Output	ON	Turn left ON	(V) 15 10 500 ms SKIA3009J	
		Rear wiper output cir- cuit 2	Input	ON	Rise up position (rear wiper arm on stopper)	0V	
54					A Position (full clockwise stop position)	0V	
	Υ				Forward sweep (counterclockwise direction)	0V	
					B Position (full counterclockwise stop position)	Battery voltage	
					Reverse sweep (clockwise direction)	Battery voltage	
55	SB	Rear wiper output cir- cuit 1	Output	ON	OFF	0	
					ON	Battery voltage	

## < ECU DIAGNOSIS INFORMATION >

	Wire		Signal	Measuring condition			Reference value or waveforn	
Terminal color		Signal name	input/ output	Ignition switch	Operation or condition		(Approx.)	
56 R/G		Battery saver output	Output	OFF	10 minutes after ignition switch is turned OFF		0V	
				ON	_		Battery voltage	
57	Y/R	Battery power supply	Input	OFF	_		Battery voltage	
50	\\//D	Optical sensor	Input	ON	When optical sensor is illumi- nated		3.1V or more	
58 W/R		Optical serisor	Πραι		When optical sensor is not illuminated		0.6V or less	
	_	Front door lock as-			OFF (neutral)		0V	
59	G	sembly LH actuator (unlock)	Output	OFF	ON (unlock)		Battery voltage	
60	G/B	Turn signal (left)	Output	ON	Turn left ON		(V) 15 10 50 500 ms SKIA3009J	
61	G/Y	Turn signal (right)	Output	ON	Turn right ON		(V) 15 10 5 0 500 ms	
62	R/W	Step lamp LH and RH	Output	OFF	ON (any door open) OFF (all doors closed)		0V  Battery voltage	
63		Interior room/map lamp	Output	OFF	Any door	ON (open)	0V	
	L				switch	OFF (closed)	Battery voltage	
		All door lock actuators			OFF (neutral)		0V	
65	V	(lock)	Output	OFF	ON (lock)		Battery voltage	
		Front door lock actua-			OFF (neutral)		0V	
66	G/Y	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	
68	W/L	Power window power supply (RAP)	Output	_	Within 45 seconds after ignition switch OFF		Battery voltage	
					More than 45 seconds after ignition switch OFF		0V	
					When front door LH or RH is open or power window timer operates		0V	
69	W/R	Power window power supply	Output	_	_		Battery voltage	
70	W/B	Battery power supply	Input	OFF	_		Battery voltage	

<sup>1:</sup> With Intelligent Key system

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### **BCM (BODY CONTROL MODULE)**

### < ECU DIAGNOSIS INFORMATION >

2: With remote keyless entry system

Fail Safe

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### 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

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 B2013: STRG COMM 1 B2552: INTELLIGENT KEY B2590: NATS MALFUNCTION	
3	C1729: VHCL SPEED SIG ERR     C1735: IGNITION SIGNAL	
4	C1708: [NO DATA] FL C1709: [NO DATA] FR C1710: [NO DATA] RR C1711: [NO DATA] RR C1711: [NO DATA] RL C1712: [CHECKSUM ERR] FL C1713: [CHECKSUM ERR] FR C1714: [CHECKSUM ERR] RR C1715: [CHECKSUM ERR] RR C1716: [PRESSDATA ERR] FL C1717: [PRESSDATA ERR] FR C1718: [PRESSDATA ERR] RR C1719: [PRESSDATA ERR] RR C1719: [PRESSDATA ERR] RL C1720: [CODE ERR] FL C1721: [CODE ERR] FR C1722: [CODE ERR] RR C1723: [CODE ERR] RR C1724: [BATT VOLT LOW] FL C1726: [BATT VOLT LOW] RR C1727: [BATT VOLT LOW] RR C1727: [BATT VOLT LOW] RR	

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.

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### **BCM (BODY CONTROL MODULE)**

### < ECU DIAGNOSIS INFORMATION >

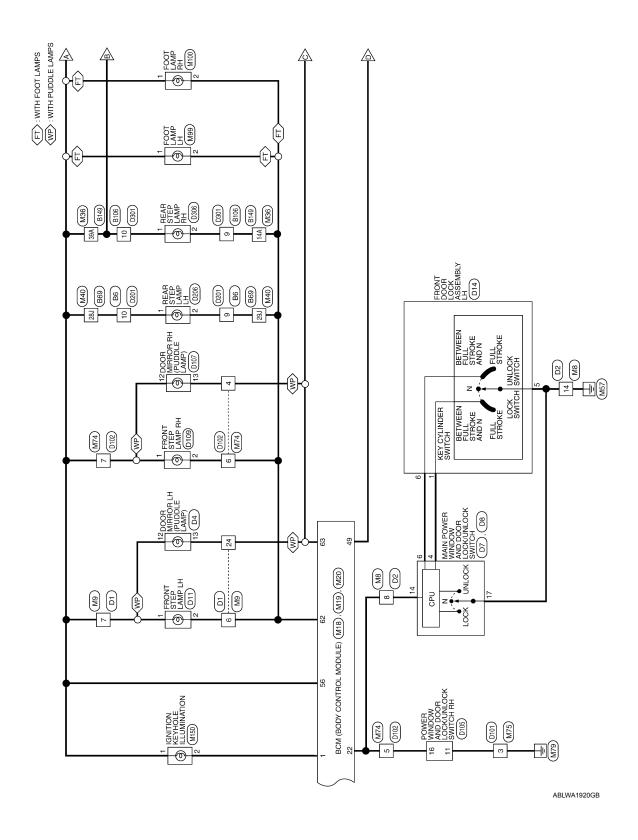
CONSULT display	Fail-safe	Intelligent Key warning lamp ON	Tire pressure monitor warning lamp ON	Reference page
No DTC is detected. further testing may be required.	_	_	_	_
U1000: CAN COMM CIRCUIT	_	_	_	BCS-29
B2013: STRG COMM 1	_	_	_	<u>SEC-30</u>
B2190: NATS ANTENNA AMP	_	_	_	SEC-33 (with I- Key), SEC-140 (without I-Key)
B2191: DIFFERENCE OF KEY	_	_	_	SEC-36 (with I- Key), SEC-143 (without I-Key)
B2192: ID DISCORD BCM-ECM	_	_	_	SEC-37 (with I- Key), SEC-144 (without I-Key)
B2193: CHAIN OF BCM-ECM	_	_	_	SEC-39 (with I- Key), SEC-146 (without I-Key)
B2552: INTELLIGENT KEY	_	_	_	SEC-41
B2590: NATS MALFUNCTION	_	_	_	<u>SEC-42</u>
C1708: [NO DATA] FL	_	_	_	<u>WT-13</u>
C1709: [NO DATA] FR	_	_	_	<u>WT-15</u>
C1710: [NO DATA] RR	_	_	_	<u>WT-15</u>
C1711: [NO DATA] RL	_	_	_	<u>WT-15</u>
C1712: [CHECKSUM ERR] FL	_	_	_	<u>WT-15</u>
C1713: [CHECKSUM ERR] FR	_	_	_	<u>WT-15</u>
C1714: [CHECKSUM ERR] RR	_	_	_	<u>WT-15</u>
C1715: [CHECKSUM ERR] RL	_	_	_	<u>WT-15</u>
C1716: [PRESSDATA ERR] FL	_	_	_	<u>WT-17</u>
C1717: [PRESSDATA ERR] FR	_	_	_	<u>WT-15</u>
C1718: [PRESSDATA ERR] RR	_	_	_	<u>WT-15</u>
C1719: [PRESSDATA ERR] RL	_	_	_	<u>WT-15</u>
C1720: [CODE ERR] FL	_	_	_	<u>WT-15</u>
C1721: [CODE ERR] FR	_	_	_	<u>WT-15</u>
C1722: [CODE ERR] RR	_	_	_	<u>WT-15</u>
C1723: [CODE ERR] RL	_	_	_	<u>WT-15</u>
C1724: [BATT VOLT LOW] FL	_	_	_	<u>WT-15</u>
C1725: [BATT VOLT LOW] FR	_	_	_	<u>WT-15</u>
C1726: [BATT VOLT LOW] RR	_	_	_	<u>WT-15</u>
C1727: [BATT VOLT LOW] RL	_	_	_	<u>WT-15</u>
C1729: VHCL SPEED SIG ERR	_	_	_	<u>WT-19</u>
C1735: IGN_CIRCUIT_OPEN	_	_	_	WT-20

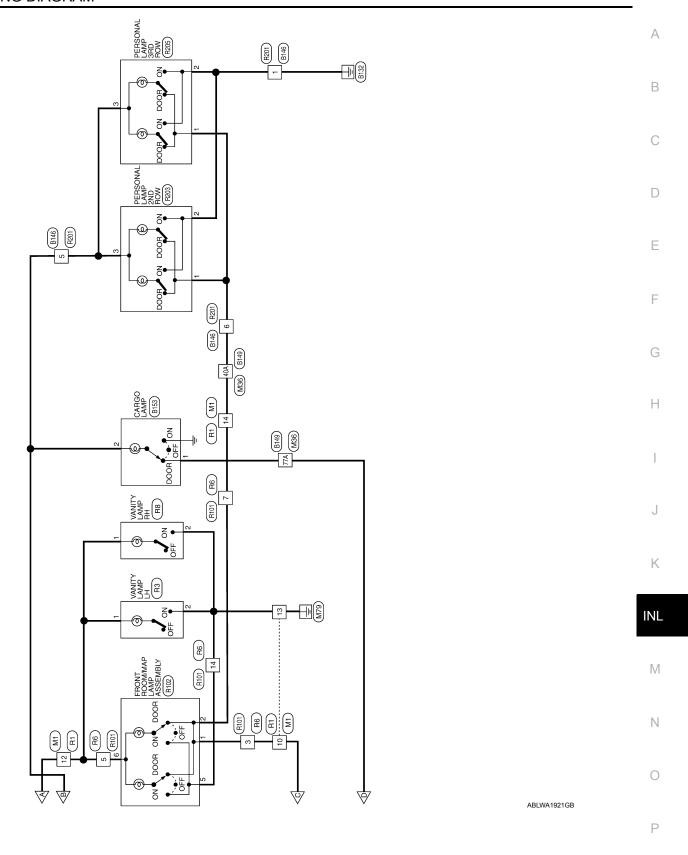
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### **WIRING DIAGRAM**

### INTERIOR ROOM LAMP CONTROL SYSTEM

Wiring Diagram INFOID:0000000009822399 В : WITH INTELLIGENT KEY SYSTEM WITHOUT POWER BACK DOOR WITHOUT INTELLIGENT KEY SYSTEM WITH POWER BACK DOOR С 7 6 8 8 BACK DOOR LATCH (DOOR AJAR SWITCH) (DS03) D405 D  $\stackrel{\scriptstyle \succeq}{}$ Е BACK DOOR SWITCH (D502) D401 F FRONT DOOR SWITCH RH (B108) FUSE BLOCK (J/B) (M3), (M4) M20 Н BCM (BODY CONTROL MODULE) (M18), (M19), 15A 22 SWITCH RH KEY SWITCH AND KEY LOCK SOLENOID (KEY SWITCH) J 26A 10A GLASS HATCH AJAR SWITCH Κ D701 2 INL KEY SWITCH AND IGNITION KNOB SWITCH (KEY SWITCH) REAR DOOR SWITCH LH (B18) (8) 10A M BATTERY Ν FRONT DOOR SWITCH LH B8 INTERIOR ROOM LAMP 0 IGNITION SWITCH ON OR START E152 10A - Tile Р ABLWA1919GB





) IGNITION

Connector Name FUSE BLOCK (J/B)

Connector No. M4

Connector Color WHITE

# INTERIOR ROOM LAMP CONNECTORS

Connector No.	M1
Connector Name	Sonnector Name WIRE TO WIRE
Connector Color WHITE	WHITE

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



3 2 1	16 15 14 13 12 11 10 9 8	Signal Name	_	_	-	ı	
7 6 5 4	5 15 14 13	Color of Wire	٦	R/G	В	Œ	
L III	ψ. •	Terminal No. Wire	10	12	13	14	

of Signal Nam	I			
Color of Wire	Д			
Terminal No. Wire	13P			
		1		
Terminal No. Wire Signal Name	ı			
Color of Wire	H/Y			
Terminal No.	N١			
ne				

Connector No. M12	Connector Name KEY SWITCH AND IGNI	Connector Color GRAY	(F) (1 2 3 4 5 6 ) (1 2 3 4 5 6 )	Terminal No. Wire Signal Name	>
Connector No. M9	Connector Name WIRE TO WIRE	Connector Color BROWN	H.S. (11 10 9 8 7 7 50 10 10 11 17 16 15 14 13 12 H.S.	Terminal No. Wire Signal Name	Wa
Connector No. M8	Connector Name WIRE TO WIRE	Connector Color WHITE	7 6 5 4	Terminal No. Wire Signal Name	- N/W

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R/W R/G

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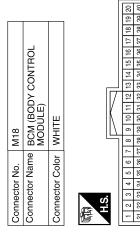
### < WIRING DIAGRAM >

M20	Connector Name BCM (BODY CONTROL MODULE)	BLACK	55 57 58 59 60 61 62 63 64 65 66 67 68 69 70
Connector No.	Connector Name	Connector Color BLACK	

	Signal Name	BATTERY SAVER OUTPUT	BAT (FUSE)	STEP LAMP OUTPUT	ROOM LAMP OUTPUT	GND (POWER)	BAT (F/L)
	Color of Wire	R/G	Y/R	B/W	٦	В	M/B
H.S.	Terminal No.	56	25	79	69	<b>4</b> 9	02

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

Signal Name	GLASS HATCH SW	BACK DOOR SW	DOOR SW (DR)	DOOR SW (RL)	LUGGAGE LAMP OUTPUT
Color of Wire	GR	B/B	SB	R/Y	В
Terminal No.	42	43	47	48	49



Signal Name	KEY BING OLITPLIT	DOOR SW (AS)	DOOR SW (RR)	ANTI-PINCH SERIAL LINK (RX, TX)	KEY SW	IGN SW	CAN-H	CAN-L
Color of	wire BR/W	P/L	GR	N/W	B/R	M/L	٦	Д
Terminal No With	-	. 12	13	22	37	38	39	40

2	KEY SWITCH AND KEY LOCK SOLENOID	ITE	3 2 2 1	Signal Name	1
. M27		lor WHITE		Color of Wire	Ь
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	ဗ

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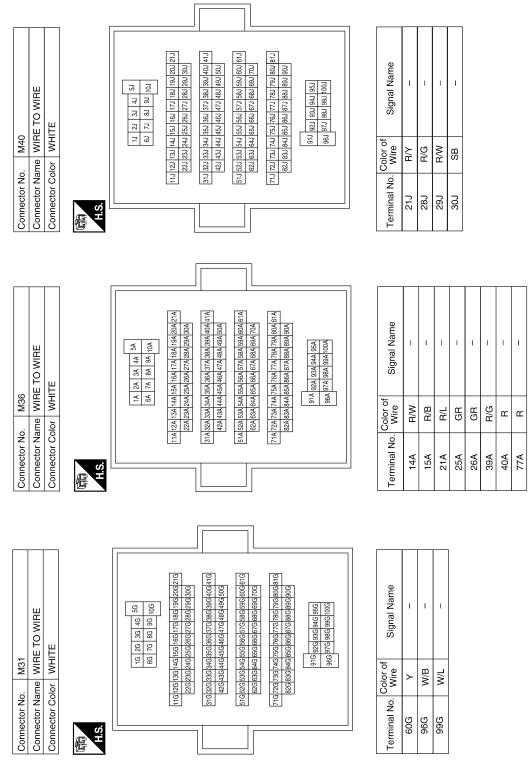
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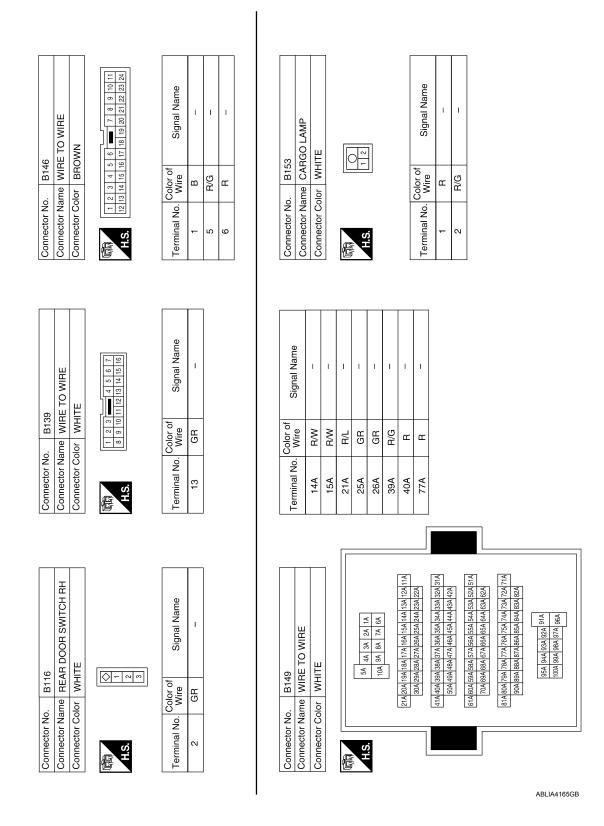
				A
AMP LH	Signal Name			В
Connector No. M99 Connector Name FOOT LAMP LH Connector Color BROWN	Color of Wire R/G R/W			D
Connector No. Connector Name Connector Color	Terminal No. 1			Е
				F
	Signal Name -	40LE	Signal Name	G
Connector No. M75 Connector Name WIRE TO WIRE Connector Color WHITE    4 3     2 1   1   1   2   1   1   1   1   1		M150 IGNITION KEYHOLE ILLUMINATION WHITE		Н
Connector No. M75 Connector Name WIRI Connector Color WHI	No. Wire B		Color of Wire R/G BR/W	I
Connector No. Connector Colc	Terminal No.	Connector No. Connector Name Connector Color	Terminal No.	J
				К
1RE	Signal Name		Signal Name	INL
me WIRE TO WIRE lor BROWN    8   7   6   6   4   3   2     20   19   18   17   16   15   14   13   12   11		M100 FOOT LAMP BROWN		M
ctor No.	Color of Wire 4 L L 5 W/V 6 R/W 7 R/G	ctor No.	Color of Wire 1 B/G 2 B/W	N
Conne Conne Conne	Termii , , ,	Conne	Temi.	ABLIA4162GB

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Color of Signal Name Connector No. B6 Wire Signal Name Connector Nama WIBE TO WIBE	Y Connector Color WHITE	_	- M	H.S. 100 9 8 7 6 5 4 3 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Terminal No. Wire	9 R/W	10 R/G			B18 Connector No. B43	Connector Name REAR DOOR SWITCH LH Connector Name WIRE TO WIRE	or WHITE Connector Color WHITE	T 6 5 4	<u> </u>	Color of Signal Name Terminal No. Wire
Terminal No.	909	596	966							Connector No.	Connector Na	Connector Color	原 H.S.		Terminal No.
Connector No. E152	Allor WHITE			56 46 36 26 16 106 96 86 76 66	30G29G28G27G26G25G24G23G22G		41G40G39G37G36G37G36G35G34G33G32G31G 50G49G48G47G46G45G44G43G42G	81G 80G 79G 77G 76G 75G 74G 73G 72G 71G 90G 85G 84G 84G 84G 85G 84G 85G 87G 87G 84G 84G 84G 83G 87G	100G 99G 98G 97G	). B8	Connector Name FRONT DOOR SWITCH LH	olor WHITE		v (6)	Color of Signal Name
Connector No.	Connector Color			H.S.						Connector No.	connector Na	Connector Color	H.S.		Terminal No.

Connector No.   B48   Connector No.   Connec	o S S	213 R/Y = -	B/W	30J SB –	13 <u>3</u> 123 113 201 201 201	200 [Zw]	32.3 37.3	553   52.0  57.1 63.1 [52.1]	733 [72] 71.] 83J 82J					Connector Name WIRE TO WIRE Connector Color WHITE	1 2 3	me Color of Signal Name Signal Name	
B48   WINE TO   WHITE   WHIT	Connector No. B69 Connector Name WIRE TO WIRE	Connector Color WHITE		U	21.J 20J 19J 18J 17J 16J 15J 14J 15J 14J 15J 14J 15J 14J	200 200 200 200 200 200 200 200 200 200	41.) 40.) 38.) 38.) 37.) 36.) 35.) 34.) 55.0 48.) 48.) 48.) 47.) 46.) 45.) 44.)	61J 60J 59J 58J 57J 56J 56J 55J 54J 56J 55J 54J 57J 56J 55J 54J	181 860 789 788 77.0 761 75.0 75.0 75.0 75.0 75.0 75.0 75.0 75.0	65, 94, 93, 93, 91	199 LTP L89 L89 L99 L001		Connector No. B108	Connector Name FRONT DOOR SW  Connector Color WHITE	ď	Color of Wire	2 R/L –
	Connector No. B48 Connector Name WIRE TO WIRE	Connector Color WHITE		Ú	Color of Wire		R/W						Connector No. B106	-	10 8 10 8 1	Terminal No. Wire	9 R/W

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### < WIRING DIAGRAM >

	E TO WIRE	31	9 2 1	Signal Name	1	ı	ı	1
R6	me WIRE	or WHIT	16 15 14 13 12 11	Color of Wire	_	B/G	æ	В
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	H.S.	Terminal No. Wire	ဧ	2	7	14
3	Connector Name VANITY LAMP LH	VHITE	2	of Signal Name	1	ı		
o. R3	ame V.	olor		Color	R/G	В		
Connector No.	Connector N	Connector Color WHITE	原 H.S.	Terminal No. Wire	-	2		
					Ī	1		
	RE TO WIRE	IITE	4 5 6 7 111 12 13 14 15 16	Signal Name	ı	ı	ı	ı
. R1	me WIF	lor Wh	8 9 10	Color of Wire	_	B/G	В	æ
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	赋 H.S.	Terminal No. Wire	10	12	13	14

22	Connector Name FRONT ROOM/MAP LAMP ASSEMBLY	ΑΥ	5 4 3 2 1	Signal Name	ı	1	ı	
. R102	me FR	lor GRAY	9 2 8	Color of Wire	_	В	В	
Connector No.	Connector Na	Connector Color	H.S.	Terminal No. Wire	1	2	5	
R101	Connector Name WIRE TO WIRE		10 11 12 13 14 15 16	of Signal Name	ı	ı	ı	
	ame W	N JOIC	8 9 10	Color o Wire	_	R/G	<u>~</u>	
Connector No.	connector Na	Connector Color WHILE	研.H.S.	Terminal No. Wire	3	5	7	

						_
	VANITY LAMP RH	TE		Signal Name	ı	1
88		or WHITE		Color of Wire	R/G	В
Connector No.	Connector Name	Connector Color	所 H.S.	Terminal No.	-	2

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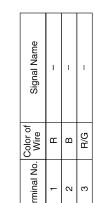
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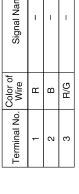
Revision: August 2013 INL-49 2014 Armada NAM

Connector No. R205	Connector Name PERSONAL LAMP 3RD ROW	Connector Color WHITE
Connec	Connec	Connec
	Connector Name PERSONAL LAMP 2ND ROW	Connector Color WHITE

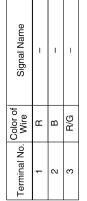
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Connector No.





Signal Name	ı	ı	1	
Color of Wire	н	В	R/G	
Terminal No. Wire	-	2	3	



Connector Name   WIRE TO WIRE	BROWN	7	Signal Name	-	-	ı
me WII	_	11 10 9 8 7 24 23 22 21 20	Color of Wire	В	R/G	а
Connector Na	Connector Color	H.S.	Terminal No.	1	2	9

DOOR MIRROR LH (WI' AUTOMATIC DRIVE POSITIONER)	WHITE	12   1   14   15   16   3   4   5   6   7   8   9	Signal Name	-	_
	_	10 11 11 1	Color of Wire	R/G	-
Connector Name	Connector Color	际 H.S.	Terminal No.	12	13

r No. D2 r Name WIRE TO WIRE r Color WHITE
--------------------------------------------

D2	e WIRE TO WIRE	r WHITE	2 3
Connector No.	Connector Name	Connector Color	H.S.

Signal Name	1	1
Color of Wire	LG/W	В
Terminal No.	8	14

Connector Name WIRE TO WIRE  Connector Color BROWN    1 2 3 4 5 6	Connector No.	2	ابا	_	5										
Connector Color BHOWN    1   2   3   4   5   6	Connector	. Na	ŭ	<u></u>	Ž	R	Ĕ	0	₹	핓					
1 2 3 4 5 6 <b>6 7</b> 7 8 12 13 14 15 16 17 18 19 20 2	Connector	ပိ	<u>ē</u>		BB	Ó	l €	_							
1 2 3 4 5 6															]
1 2 3 4 5 6			li	li	li	li		۲	۲,	li		li	li		_
12 13 14 15 16 17 18 19 20 2		-	2	က	4	2	9	ч		7	8	6	10	Ξ	
ê	SH	12	13	14	15	16	17	18	19	20	21	22	23	24	

Signal Name	_	ı	1
Color of Wire	B/W	R/G	_
Terminal No. Wire	9		24

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### < WIRING DIAGRAM >

	А
Signal Name  Signal Name  WIRE  Signal Name  Signal Name	В
	С
	D
Connector No.  Connector Name  Connector No.  Connector No.  Connector No.  Connector No.  Connector Color  Terminal No.  M.S.  Terminal No.  Color  Terminal No.  Termina	Е
	F
Name Name	G
MAIN POWER WINDOW AND DOOR LOCKUNLOCK SWITCH WHITE  D101  WHRE TO WIRE WHITE  WHITE  S   10   10   10   10   10   10   10   1	Н
	I
Connector No. Connector Name Connector No. Connector Name Connector Name Connector Name Connector Name Connector Name Connector Color Terminal No. 3	J
	K
D7  MAIN POWER WINDOW SWITCH  WHITE  WHITE  LOCK  LOCK  LOCK  LOCK  LINK  ANTI PINCH SERIAL  LINK  ANTI PINCH SERIAL  LINK  ANTI PINCH SERIAL  LINK  ANTI PINCH SERIAL  LINK  ASSEMBLY LH  BLACK  Signal Name  1  2 3 4 5 6 0	INL
D7   MAIN POWER WINDOW   SWITCH   WHITE   Signal Name   LOCK   Signal Name   LINK   SERIAL   LINK   LINK   SERIAL   LINK   SERIAL   LINK   SERIAL   LINK	M
	N
Connector Name Connector Name 6	0
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Connector Name WIRE TO WIRE Connector Color WHITE

Connector Name REAR STEP LAMP LH

Connector Name | WIRE TO WIRE Connector Color WHITE

Connector Color WHITE

2 1

Signal Name

Color of Wire W.W B/G

Terminal No.

Signal Name

Color of Wire

Terminal No.

Signal Name

Color of Wire R/W R/G

Terminal No.

9 6

B/G B/W

N

9 6

Connector No.	D105		Connector No.	D107		Connector No.	. D109		
Connector Name DOOR LOCK/U SWITCH RH	POWE!	R WINDOW AND LOCK/UNLOCK SH RH	Connector Na	DOOF Ime AUTC POSI	Connector Name AUTOMATIC DRIVE POSITIONER)	Connector Name FRONT Connector Color WHITE	me FRON	FRONT STEP LAMP RH WHITE	
Connector Color WHITE	r WHITE		Connector Color	lor WHITE	щ	é			
H.S.	2 3 4 5 6 9 10 11 12 13 14 15	13 14 15 16	明.S.	101112	6 6 7 8 9	H.S.			
Terminal No. Wire	color of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name	
=	В	GND	12	R/G	ı	-	B/G	1	
16	LG/W	ANTI PINCH SERIAL LINK	13		ı	2	M/A	1	
Connector No.	D201		Connector No.	D206		Connector No.	. D301		
									_

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### < WIRING DIAGRAM >

Connector Name WIRE TO WIRE Connector Color WHITE	[10] 9   8   7   6   5   4   3   2   1   1   1   1   1   1   1   1   1	Terminal No. Wire Signal Name  14 B - 15 R/W - 15	Connector No. D503 Connector Name BACK DOOR LATCH Connector Color WHITE	H.S. (4   5   6   7   8	Terminal No. Wire Signal Name 7 R/W -
Connector Name WIRE TO WIRE  Connector Color WHITE	H.S.	Terminal No. Wire Signal Name  14 B - 15 R/W	Connector No. D502 Connector Name BACK DOOR SWITCH Connector Color WHITE	H.S.	Terminal No. Wire Signal Name  1 B 3 RW
Connector No. D306 Connector Name REAR STEP LAMP RH Connector Color WHITE	H.S.	Terminal No. Wire Signal Name  1 R/G -	Connector No. D501 Connector Name WIRE TO WIRE Connector Color WHITE	H.S. H.S. 18   14   15   16   17   18   9   10   11   12   13   14   15   16   17   18	Terminal No. Wire Signal Name  14 B

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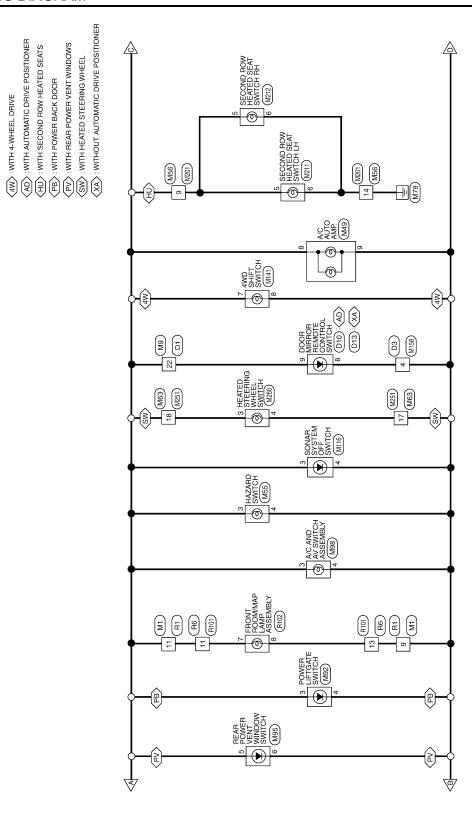
	RE TO WIRE	ITE	11   12   13   14   15   16	Signal Name	1
.   070	me WIF	lor WH	8 9 10	Color of Wire	GR
Connector No. D701	Connector Name WIRE TO WIRE	Connector Color WHITE	H.S.	Terminal No. Wire	13
	VIRE		8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Signal Name	
. D606	Connector Name WIRE TO WIRE	lor WHITE	16 15 14 13 12 11 10		GR
Connector No. D606	Connector Na	Connector Color WHITE	H.S.	Terminal No. Wire	13
			<u> </u>	Name	
D602	Connector Name WIRE TO WIRE	WHITE	7 6 5 4 6 6 1 1 10 9	or of Signal Name	П
Connector No.	Name	Connector Color WHITE	7 6 15	Terminal No. Wire	GR
ctor	ector	ector	E H	ninal N	13

7	GLASS HATCH AJAR SWITCH	CK		Signal Name	ı
		lor BLACK		Color of Wire	GB
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	

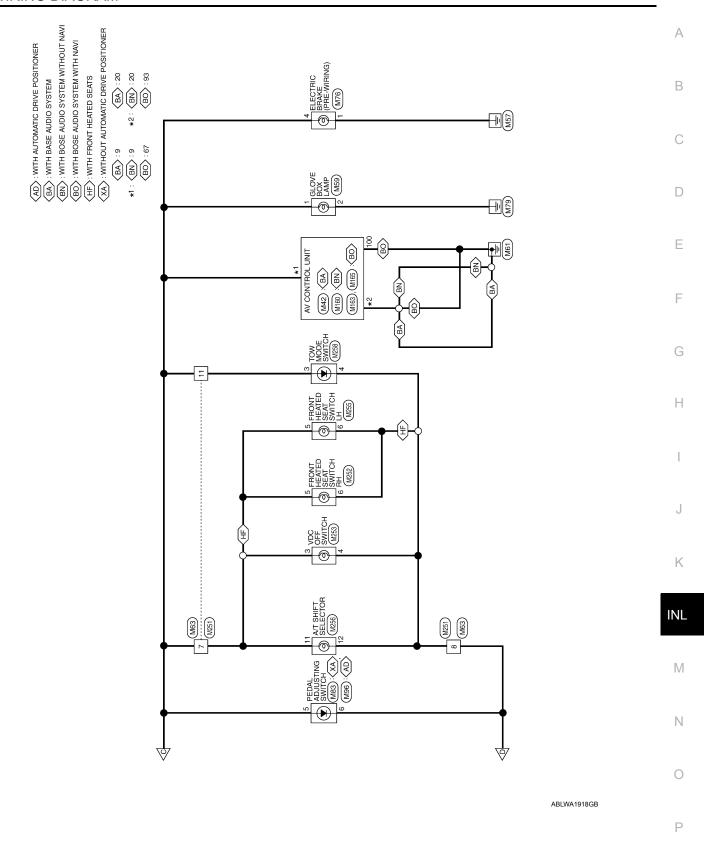
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### **ILLUMINATION** Α Wiring Diagram INFOID:0000000009822400 В С D COMBINATION METER (M23), (M24) FUSE BLOCK (J/B) (M4), (M39) Е 10A F JNIFIED METER CONTROL UNIT (WITH INFORMATION 10A METER ILLUMINATION G CAN SYSTEM 13 JOINT CONNECTOR-M11 (MTD) Н M31 (E152) 10A 36 J \*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT" OF PG SECTION. S IGNITION S RELAY Κ INL 20A 53 , (M20) JOINT CONNECTOR-M10 (M175) 20A 52 BCM (BODY CONTROL MODULE) (M18). 1 2 3 4 5 6 7 10 3 6 COMBINATION SWITCH (LIGHTING AND TURN SIGNAL SWITCH) (M28) M IGNITION SWITCH ON OR START Ν 10A ILLUMINATION 0 E152 M31 50A BATTERY Р

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Connector Name | WIRE TO WIRE Connector Color BROWN

Connector No.

## ILLUMINATION CONNECTORS



Connector Name | FUSE BLOCK (J/B)

Connector No.

Connector Color WHITE



Signal Name	_	
Color of Wire	BR	
Terminal No.	6	

7 6 5 4 3 2 1	24 23 22 21 20 19 18 17 16 15 14 13 12	Signal Name	1
10 9 8	23 22 21	Color of Wire	B/L
三	H.S.	Terminal No. Wire	22

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

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

Signal Name	-	1	
Color of Wire	BR	B/L	
rminal No.	6	11	

Connector No.	). M20	
Connector Name		BCM (BODY CONTROL MODULE)
Connector Color	olor BLACK	4CK
原南 H.S.	56 57	56 57 58 59 60 61 62 63 64    65  66  67  68  69  70
Terminal No.	Color of Wire	Signal Name
29	В	GND (POWER)
02	M/B	BAT (F/L)

Signal Name	INPUT 5	INPUT 4	INPUT 3	INPUT 2	INPUT 1	OUTPUT 5	OUTPUT 4	OUTPUT 3	OUTPUT 2	OUTPUT 1	IGN SW	CAN-H	CAN-L
Color of Wire	SB	G/Y	Υ	G/B	۸	R/G	R/Υ	T	O/B	R/W	M/L	٦	Ь
Terminal No.	2	3	4	2	9	32	33	34	32	36	38	39	40

				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
				18	88
	١. ا			17	37
	ᅵᅵ			16	36
	≝			15	35
	Ż			14	34
	ဗ			13	33
	l≿⊟		117	12	32
	ᇢᅋ		I	11	31
	®∃	Ш		10	30
$\infty$	BCM (BOD MODULE)	둗			23
ΣIM	⊠ĕ	⋝		8	28
_	Ф	_		7	27
ď	띭	응		9	56
ž	ž	ŏ		5	22
ō	Ď	ŏ		4	24
ec	ec	ec	(Ġ	3	23
Ē	Ē	Ē	H.S.	2	22
Connector No.	Connector Name BCM (BODY CONTROL MODULE)	Connector Color WHITE	Œ <sup>™</sup>	-	21

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Connector No. M28 Connector Name COMBINATION SWITCH Connector Color WHITE	2 3 4 5 6 7	Signal Name	ı	ı	ı	ı	1	1	ı	ı	ı	1
M28 ne COM or WHIT	11 10	Color of Wire	W/A	O/B	_	₽Ÿ	B/G	^	G/B	SB	5⁄	>
Connector No. M28 Connector Name COMBII	(12) H.S.	Terminal No.	-	2	က	4	2	9	7	80	6	10
		2 1	1 2 2									
Connector No. M24 Connector Name COMBINATION METER Connector Color WHITE		11 10 9 8 7 6 5 4 3 31 30 30 32 27 36 25 30 33	01 00 23 20 21 20 20 24 20		Signal Name	BATTERY	GND	CAN-H	CAN-L	RUN/START		
M24 ne COMI		15 14 13 12	3	Solor of	Wire	Y/R	В		Ф	O/L		
Connector No. M24 Connector Name COMBI	H.S.	20 19 18 17 16 1	00 00 00		Terminal No.	80	6	11	12	24		
Connector No. M23 Connector Name COMBINATION METER Connector Color WHITE	44 43 42 41 50 49 48 47				Signal Name	ILL LED CON OUTPUT	ILL GND					
me COM	46 45 4			Color of	Wire	BR	В					
Connector No. M23 Connector Name COMBI	原 H.S.				Terminal No.	20	52					

22 83 34 S	Signal Name	I	1
24 25	Color of Wire	BB	>
H.S.	Terminal No.	33	34
	S. 32 28 28 38 38 38 38 38 38 38 38 38 38 38 38 38	24 25 26 27 31 32 33 34 Solor of Wire	

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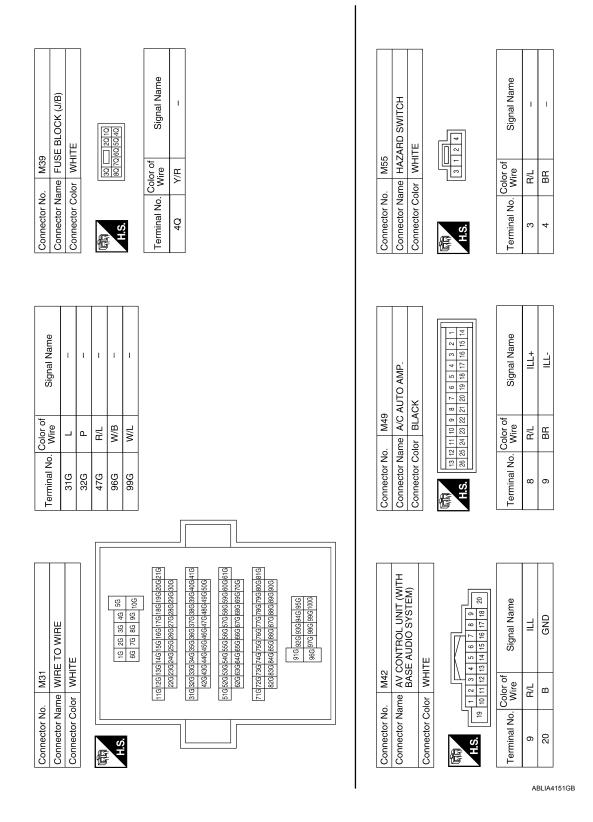
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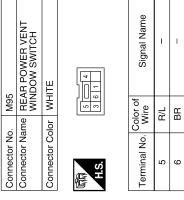
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	Connector No. M63 Connector Name WIRE TO WIRE Connector Color BROWN	H.S. 11 12 13 14 15 16 17 18 19 20	Terminal No.         Color of Wire         Signal Name           7         R/L         -           8         BR         -           11         R/L         -           17         BR         -           40         DA	Connector No. M83	nector Name	5 6 4 2 1 3 Golor of	Terminal No. With Signal Name	BB
Connector Name	59 LOVE BOX LAMP ROWN			08	ESISTOR LACK	1		
TO WIRE  E  Signal Name		H.S.			Connector Name Ric			
	WIRE	2 13 14 15 16	Signal Name		ELECTRIC BRAKE (PRE-WIRING) WHITE	ro.	Signal Name	1 1

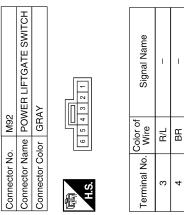
Revision: August 2013 INL-61 2014 Armada NAM

	Connector Name (WITH AUTOMATIC DRIVE POSITIONER)	
96W	PEDAL ADJUS (WITH AUTON POSITIONER)	BROWN
Connector No. M96	Connector Name	Connector Color BROWN

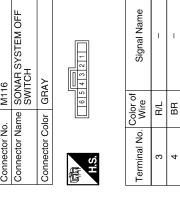
POSITIONER)	NMC	3   0   1   1   2   1   1   1   1   1   1   1	Signal Name	ı	1
<u>~</u>	lor Bł	\(\overline{1}\)	Color o	R/L	aa
	Connector Color BROWN	(南) H.S.	Terminal No. Wire	2	g



2 9



Connector No. M116	Connector Name SONAR SYSTEM OFF SWITCH	Connector Color GRAY	
Conne	Conne	Conne	



)2	Connector Name COMBINATION SWITCH	AY	14 15 16 17 18 19 20 21	Signal Name
. M102	me COI	lor GR	141516	Color of Wire
Connector No.	Connector Na	Connector Color GRAY	品.S.	Terminal No.

0

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		Connector Name A/C AND AV SWITCH ASSEMBLY	TE	6 8 10 12 14 16	7 9	Signal Name	1	1
	. INISO	me A/C ASS	lor WH	4	1 3	Color of Wire	P/L	BR
24 200000	COLINECTOR INC.	Connector Na	Connector Color WHITE			Terminal No.	င	4

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160 / CONTROL UNIT // STEM, WITHOUT NAVI) HITE 	Signal Name ILL GND	175 LUE LUE R 7 6 6 4 3 2 1 8 7 16 15 14 13 12 11 10	Signal Name	1 1 1
11001-11		<del>-   -   -  </del>    ∞ ÷		
1160 WITH BOSE AUDIO WITH BOSE AUDIO WHITE  Of Signal Nam  Of Sign				
TO WIRE  E  1	Signal Name	DNTROL UNIT (WITH NAVI)  E  S S S S S S S S S S S S S S S S S	Signal Name MR OUTPUT	
WIND BE WIND B	Wire BR		color of Wire R/L	
AVECANTROL UNIT (WITH WITH ENDING Signal Name   Signal N				
AY  AY  AY  AY  A   S   E   7   B	Signal Na	3 CONTROL UNIT (WITH NAVI) H NAVI) ITE  7 98  01  03  106 106 11 113 115 117 119 115 117 119 115 117 119 115 117 119 115 117 119 115 117 119 115 117 119 115 117 119 115 117 119 115 117 119 115 117 119 115 117 119 115 117 119 115 117 119 115 117 119 115 117 119 115 117 119 115 117 119 115 117 119 115 117 119 115 117 119 115 117 119 115 117 119 115 117 119 115 117 119 115 117 119 115 117 119 115 117 119 115 117 119 115 117 119 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 115 117 117		GND
M14	Color of Wire R/L BR		Color of Wire B	8
onnector No onnector Na Onnector Na Onnector Na Onnector Co	erminal No. 7	onnector No.	erminal No.	100

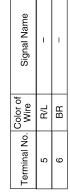
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	Connector No.	M211
	Connector Name	Connector Name   SECOND ROW HEATED
		SEAT SWITCH LH
7	Connector Color   WHITE	WHITE

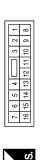
Signal Name	I	ı
Color of Wire	B/L	В
nal No.		













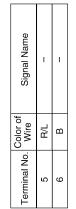
-		51	LOWER OF LOWER
В		M251	11/4/
_			
14		nector No.	- I A + +

51	WIRE TO WIRE	BROWN	16   15   14   13   12   11   10	Signal Name	-	-	-	Ι	
). M251			9 7 6 19 19 17 16	Color of Wire	B/L	BR	B/L	BB	
Connector No.	Connector Name	Connector Color	9 8 8 8 8	Terminal No.	2	8	11	17	

Connector No.		M176	12	<b> </b>								
Connector Name JOINT CONNECTOR-M11	ame	9	≝	<u></u>	18	ź	Ĭ	5	16	<b>₹</b>	Ξ	
Connector Color BLUE	olor	岡	5	ш								
Ą		П	П	П	П	П	П	П	П	П		_
	$\neg$	6	80	7	9	5	4	က	2	1		
H.S.	8	20 19 18 17 16 15 14 13 12 11	18	17	16	15	4	13	12	Ξ	9	
	_	1	1	1	1	1	1	1	1	1	1	

	Signal Name	I	_	I	-	_	1
	Color of Wire	_	_	٦	۵	Ь	Ь
T	Terminal No. Wire	-	2	4	10	11	13

Sonnector No.   M212	Connector Name SECOND ROW HEATED SEAT SWITCH RH	Connector Color BROWN	
Connector	Connector	Connector	



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						⊢ ¬(v)				
M256 A/T SHIFT SFI FCTOR	X		Signal Name			E122 IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)	39 38 37 45 44 43	Signal Name	GND (SIGNAL)	CAN-H
			Color of Wire R/L BR				42 41 40 39 48 47 46 45	4   4   4   4   4   4   4   4   4   4		
Connector No.	Connector Color	研 H.S.	Terminal No.			Connector No.	S.H.S.			
				]	ſ					
T HEATED SEAT	SWITCH LH WHITE	<u> </u>	Signal Name			M260 HEATED STEERING WHEEL SWITCH WHITE	□ © □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	Signal Name	1	1
	_	5 4	Color of Wire R/L BR	-			- 0 0	Color of Wire	B/L	BB
Connector No.	Connector Color	山.S.	Terminal No. 5			Connector No. Connector Name Connector Color	H.S.	Terminal No.	8	4
				]					Г	Γ
M253 VDC OFF SWITCH		3 2 1	Signal Name			M258 TOW MODE SWITCH GRAY	3 2 1 1	Signal Name	1	ı
o. M253		6 8	Color of Wire R/L BR			<del> </del>	0 5 4 3	Color of Wire	R/L	BB
Connector No.	Connector Color	H.S.	Terminal No.			Connector No. Connector Name Connector Color	H.S.	Terminal No.	က	4

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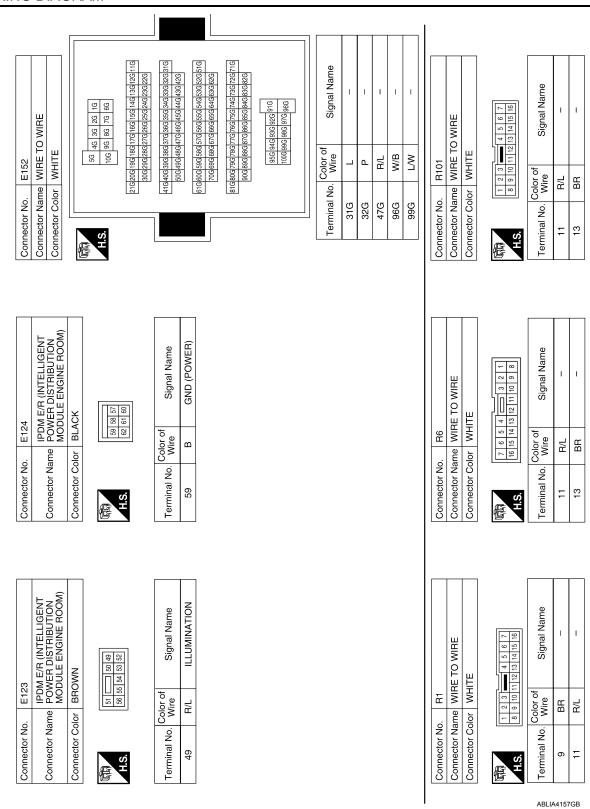
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### **ILLUMINATION**



			_			
~	DOOR MIRROR REMOTE CONTROL SWITCH (WITHOUT AUTOMATIC DRIVE POSITIONER)	WHITE	11 12 18 14 15 16	Signal Name	-	1
). D13		lor WF	8 9 10 11 12	Color of Wire	BR	Α/Ι
Connector No.	Connector Name	Connector Color	原南 H.S.	Terminal No. Wire	8	6

DOOR MIRROR REMOTE
CONTROL SWITCH
(WITH AUTOMATIC DRIVE
POSITIONER)

Connector Name

D10

Connector No.

BROWN

Connector Color

Signal Name	ı	_	
Color of Wire	BB	R/L	
Terminal No.	80	6	

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### **INTERIOR LIGHTING SYSTEM SYMPTOMS**

< SYMPTOM DIAGNOSIS >

### SYMPTOM DIAGNOSIS

### INTERIOR LIGHTING SYSTEM SYMPTOMS

Symptom Table

### **CAUTION:**

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

Symptom	Possible cause	Inspection item
All of the following lamps do not turn ON  Front room/map lamp assembly  Personal lamp 2nd and 3rd row  Cargo room lamp  Front and rear step lamps  Vanity mirror lamps  Ignition keyhole illumination  Puddle lamps (if equipped)  Foot lamps (if equipped)	Harness between BCM and each interior room lamp     BCM	Battery saver output/power supply circuit Refer to INL-16.
Some or all of the following interior room lamps do not turn ON/OFF  • Puddle lamps (if equipped)	Harness between BCM and each door switch     Harness between BCM and each	Door switch circuit Refer to <u>DLK-74</u> (with Intelligent Key) or <u>DLK-271</u> (without Intelligent Key).
<ul><li>Front room/map lamp assembly</li><li>Personal lamp 2nd row</li><li>Personal lamp 3rd row</li></ul>	interior room lamp • BCM	Interior room lamp control circuit Refer to INL-19.
Some or all of the following lamps do not turn ON/OFF  • Front step lamps  • Rear step lamps  • Foot lamps (if equipped)	Harness between BCM and step lamps and foot lamps     BCM	Step lamp circuit Refer to INL-22.
Cargo lamp does not turn ON/OFF	Harness between BCM and cargo lamp     BCM	Cargo lamp control circuit Refer to INL-24.
Ignition keyhole illumination does not turn ON/OFF	Harness between BCM and ignition keyhole illumination     BCM	Ignition keyhole illumination control circuit Refer to INL-26
Interior room lamp timer does not activate. (It turns ON/ OFF when the door opens/closes.)	_	Check the interior room lamp setting. Refer to BCS-18.
Interior room lamp battery saver does not activate.	_	Check the interior room lamp battery saver setting. Refer to BCS-18.

### **PRECAUTION**

### **PRECAUTIONS**

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

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

### **WARNING:**

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

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

### **WARNING:**

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

Precaution Necessary for Steering Wheel Rotation After Battery Disconnect INFOID:0000000009822403

### NOTE:

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

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

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

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

### OPERATION PROCEDURE

Connect both battery cables.

### NOTE:

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- Supply power using jumper cables if battery is discharged.
- Use the Intelligent Key or mechanical key to turn the ignition switch to the "ACC" position. At this time, the steering lock will be released.
- 3. Disconnect both battery cables. The steering lock will remain released and the steering wheel can be rotated.
- Perform the necessary repair operation.

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### **PRECAUTIONS**

### < PRECAUTION >

- 5. When the repair work is completed, return the ignition switch to the "LOCK" position before connecting the battery cables. (At this time, the steering lock mechanism will engage.)
- 6. Perform a self-diagnosis check of all control units using CONSULT.

Precaution for Work

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

### **PREPARATION**

### < PREPARATION >

### **PREPARATION**

### **PREPARATION**

Special Service Tool

INFOID:0000000009822405

Tool number (Kent-Moore No.) Tool name	Description
— (J-46534) Trim tool set	Removing trim components

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### REMOVAL AND INSTALLATION

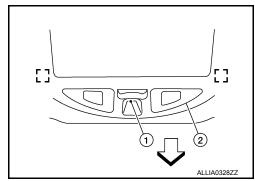
### INTERIOR ROOM LAMP

### Removal and Installation

### FRONT ROOM/MAP LAMP

The front room/map lamp assembly (2) and console illumination lamp (1) is replaced with the overhead console. Refer to <a href="INT-21">INT-21</a>. "Removal and Installation".

<: Front



INFOID:0000000009822406

### **Bulb Replacement**

### **WARNING:**

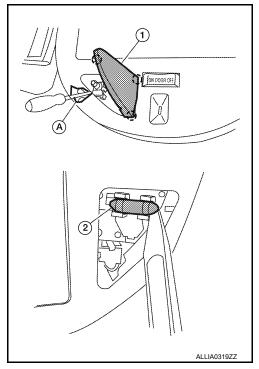
Do not touch bulb while it is lit or right after being turned OFF. Burning may result. CAUTION:

- Do not attempt to separate the vanity mirror lamp from the sun visor or damage to the components may occur.
- Do not touch glass surface of the bulb with bare hands or allow oil or grease to get on it to prevent damage to bulb.
- Using a suitable tool (A), remove front room/map lamp lens (1).
   Pawl
- Release one side of the bulb (2) from the tab, then pull straight downward to remove.

### **CAUTION:**

Wrap a cloth around tool to protect the housing and lens.

- 3. Install the bulb (2).
- 4. Install front room/map lamp lens (1).



### **VANITY MIRROR LAMP**

Removal and Installation

The vanity mirror lamp is replaced as part of the sun visor assembly. Refer to <a href="INT-21">INT-21</a>, "Removal and Installation".

**Bulb Replacement** 

### **WARNING:**

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

Revision: August 2013 INL-72 2014 Armada NAM

### INTERIOR ROOM LAMP

### < REMOVAL AND INSTALLATION >

### **CAUTION:**

- Do not attempt to separate the vanity mirror lamp from the sun visor or damage to the components may occur.
- Do not touch glass surface of the bulb with bare hands or allow oil or grease to get on it to prevent damage to bulb.
- 1. Using a suitable tool (A), release the tabs and remove the vanity mirror lamp lens (1).

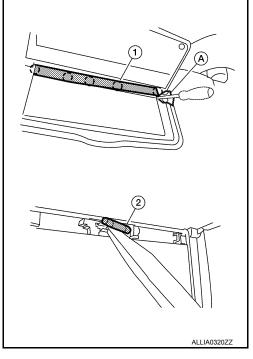
( ): Pawl

2. Release one side of the bulb (2) from the tab, then pull straight out to remove.

### **CAUTION:**

Wrap a cloth around tool to protect the housing and lens.

- 3. Install the bulb (2).
- Install the vanity mirror lamp lens (1).



### **GLOVE BOX LAMP**

### Removal

- Remove instrument lower panel RH and glove box. Refer to IP-17, "Removal and Installation".
- Rotate glove box lamp socket counterclockwise to release from steering member.

Installation

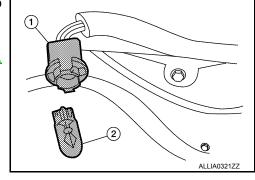
Installation is in the reverse order of removal.

**Bulb Replacement** 

### **WARNING:**

Do not touch bulb while it is lit or right after being turned OFF. Burning may result. CAUTION:

- Do not attempt to separate the vanity mirror lamp from the sun visor or damage to the components may occur.
- Do not touch glass surface of the bulb with bare hands or allow oil or grease to get on it to prevent damage to bulb.
- Remove instrument lower panel RH and glove box. Refer to <u>IP-17</u>. "Removal and Installation".
- 2. Pull bulb (2) straight out from glove box lamp socket (1) to remove.
- 3. Install the bulb (2) to glove box lamp socket (1).
- 4. Install instrument lower panel RH and glove box. Refer to IP-17, "Removal and Installation".



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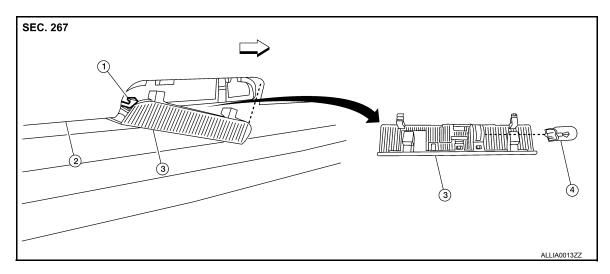
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STEP LAMP

Removal



- 1. Step lamp connector
- 2. Door finisher

3. Step lamp lens/socket

4. Step lamp bulb

- ← Front
- 1. Insert a suitable tool between door finisher and step lamp lens/socket to release the pawls.
- 2. Disconnect the harness connector from step lamp and remove.

### Installation

Installation is in the reverse order of removal.

**Bulb Replacement** 

### **WARNING:**

Do not touch bulb while it is lit or right after being turned OFF. Burning may result. CAUTION:

- Do not attempt to separate the vanity mirror lamp from the sun visor or damage to the components may occur.
- Do not touch glass surface of the bulb with bare hands or allow oil or grease to get on it to prevent damage to bulb.
- 1. Remove the step lamp lens/socket.
- 2. Pull the bulb straight out to remove.
- 3. Install the bulb to the step lamp.
- 4. Install the step lamp lens/socket.

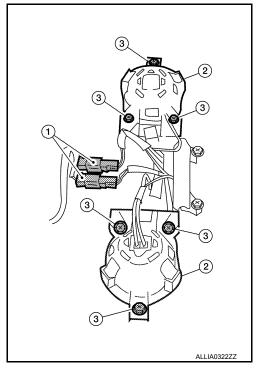
### PERSONAL LAMP

Removal

### INTERIOR ROOM LAMP

### < REMOVAL AND INSTALLATION >

- 1. Remove overhead console. Refer to <a href="INT-21">INT-21</a>, "Removal and Installation".
- 2. Remove personal lamp screws (3).
- 3. Disconnect personal lamp harness connectors (1), then remove personal lamps (2) from overhead console.



Installation

Installation is in the reverse order of removal.

**Bulb Replacement** 

### **WARNING:**

Do not touch bulb while it is lit or right after being turned OFF. Burning may result. CAUTION:

- Do not attempt to separate the vanity mirror lamp from the sun visor or damage to the components may occur.
- Do not touch glass surface of the bulb with bare hands or allow oil or grease to get on it to prevent damage to bulb.
- 1. Using a suitable tool (A), release the pawls and remove personal lamp lens (1).

( ): Pawl

2. Pull bulb (2) straight out to remove.

### **CAUTION:**

Wrap a cloth around tool to protect the housing and lens.

- 3. Install the bulb (2) to personal lamp.
- 4. Install personal lamp lens (1).

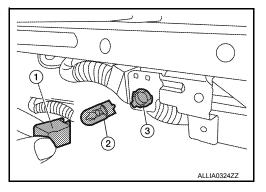
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### **FOOT LAMP**

Removal

Rotate foot lamp socket (3) counterclockwise to remove from bracket.

- (1): Bulb shield
- (2): Bulb



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### INTERIOR ROOM LAMP

### < REMOVAL AND INSTALLATION >

Installation

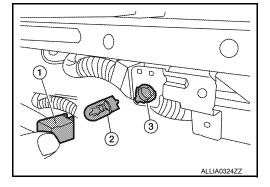
Installation is in the reverse order of removal.

**Bulb Replacement** 

### **WARNING:**

Do not touch bulb while it is lit or right after being turned OFF. Burning may result. CAUTION:

- Do not attempt to separate the vanity mirror lamp from the sun visor or damage to the components may occur.
- Do not touch glass surface of the bulb with bare hands or allow oil or grease to get on it to prevent damage to bulb.
- 1. Release the pawls and remove bulb shield (1) from bracket.
- 2. Pull bulb (2) straight out from foot lamp socket (3) to remove.
- 3. Install bulb (2) to foot lamp socket (3).
- 4. Install bulb shield (1) to bracket.



### ILLUMINATION

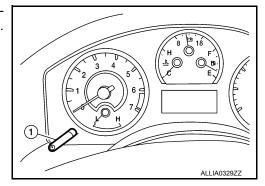
### Removal and Installation

### INFOID:0000000009822407

### **ILLUMINATION CONTROL SWITCH**

### Removal and Installation

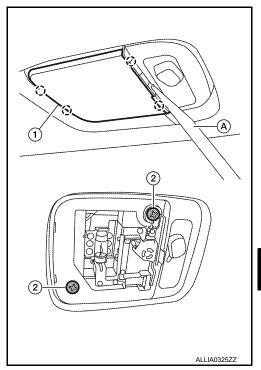
The illumination control switch (1) is replaced as a part of the combination meter assembly. Refer to MWI-98, "Removal and Installation".



### **CARGO LAMP**

### Removal

- Using a suitable tool (A), release the pawls and remove the cargo lamp lens (1).
  - ( ): Pawl
- 2. Remove cargo lamp screws (2).
- 3. Disconnect the harness connector from the cargo lamp and remove.



### Installation

Installation is in the reverse order of removal.

**Bulb Replacement** 

### **WARNING:**

Do not touch bulb while it is lit or right after being turned OFF. Burning may result. CAUTION:

- Do not attempt to separate the vanity mirror lamp from the sun visor or damage to the components may occur.
- Do not touch glass surface of the bulb with bare hands or allow oil or grease to get on it to prevent damage to bulb.

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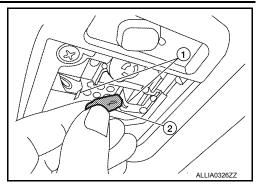
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### **ILLUMINATION**

### < REMOVAL AND INSTALLATION >

- Using a suitable tool, release the pawls and remove the cargo lamp lens.
- 2. Release the cargo lamp bulb retainers (1), then pull bulb (2) straight out to remove.
- 3. Install the bulb (2) to cargo lamp bulb retainers (1).
- 4. Install cargo lamp lens.



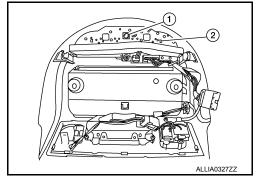
### CONSOLE ILLUMINATION LAMP

**Bulb Replacement** 

### **WARNING:**

Do not touch bulb while it is lit or right after being turned OFF. Burning may result. CAUTION:

- Do not attempt to separate the vanity mirror lamp from the sun visor or damage to the components may occur.
- Do not touch glass surface of the bulb with bare hands or allow oil or grease to get on it to prevent damage to bulb.
- 1. Remove overhead console. Refer to <a href="INT-21">INT-21</a>, "Removal and Installation".
- 2. Rotate console illumination lamp bulb (1) counterclockwise, then pull straight out away from front room/map lamp assembly (2) to remove.
- 3. Install console illumination lamp bulb (1) to front room/map lamp assembly (2).
- 4. Install overhead console. Refer to <a href="INT-21">INT-21</a>, "Removal and Installation".



### **BULB SPECIFICATIONS**

< SERVICE DATA AND SPECIFICATIONS (SDS)

### SERVICE DATA AND SPECIFICATIONS (SDS)

### **BULB SPECIFICATIONS**

### **Bulb Specifications**

Item	Wattage (W)*
Front room/map lamp	8
Vanity mirror lamp	1.8
Glove box lamp	3.4
Step lamp	3.8
Personal lamp	6
Foot lamp (if equipped)	3.4
Cargo lamp	8
Console lamp	-

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

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