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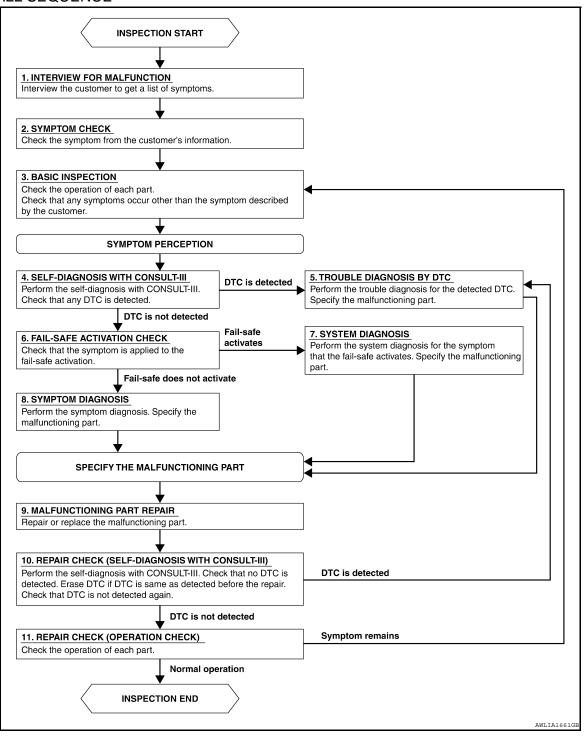
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BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

OVERALL SEQUENCE



< 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-III

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

Is any DTC detected?

YES >> GO TO 5

NO >> GO TO 6

5.TROUBLE DIAGNOSIS BY DTC

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

>> GO TO 9

6. FAIL-SAFE ACTIVATION CHECK

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

Does the fail-safe activate?

YES >> GO TO 7

NO >> GO TO 8

7. SYSTEM DIAGNOSIS

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

>> GO TO 9

8. SYMPTOM DIAGNOSIS

Perform the symptom diagnosis. Specify the malfunctioning part.

>> GO TO 9

9. MALFUNCTION PART REPAIR

Repair or replace the malfunctioning part.

>> GO TO 10

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

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

Is any DTC detected?

YES >> GO TO 5

DIAGNOSIS AND REPAIR WO	ORKFLOW [WITH POWER DOOR LOCKS]
NO >> GO TO 11	[
11. REPAIR CHECK (OPERATION CHECK)	A
Check the operation of each part.	·
Does it operate normally?	В
YES >> Inspection End NO >> GO TO 3	
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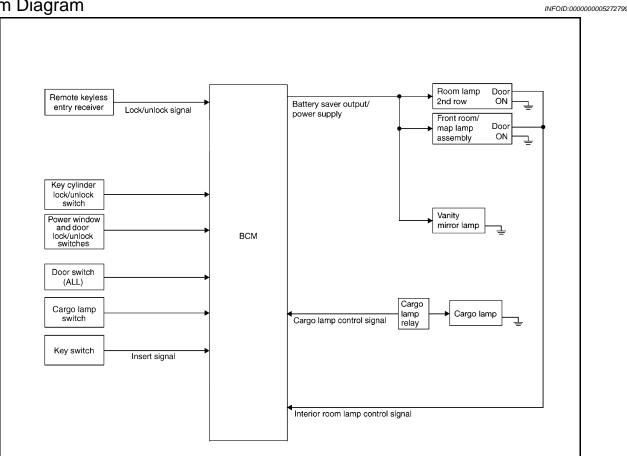
Revision: October 2009 INL-5 2010 Frontier

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FUNCTION DIAGNOSIS

INTERIOR ROOM LAMP CONTROL SYSTEM

System Diagram



System Description

INFOID:0000000005272800

AWLIA07800

OUTLINE

- Front room/map lamp and room lamp 2nd row are controlled by the interior room lamp timer control function of the BCM.
- Cargo lamp is controlled by the cargo lamp control function of the BCM.

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 the power window and door lock/unlock switches.

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 main power window and door lock/unlock switch, or front door lock assembly LH (key cylinder switch)].
- When a door opens → closes.

Timer control is cancelled under the following conditions.

- When the front door LH is locked [with 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).

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

INTERIOR LAMP BATTERY SAVER CONTROL

< FUNCTION DIAGNOSIS >

[WITH POWER DOOR LOCKS]

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 30 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 a 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 interior lamp battery saver control time period can be changed with the function setting of CONSULT-III.

Component Parts Location

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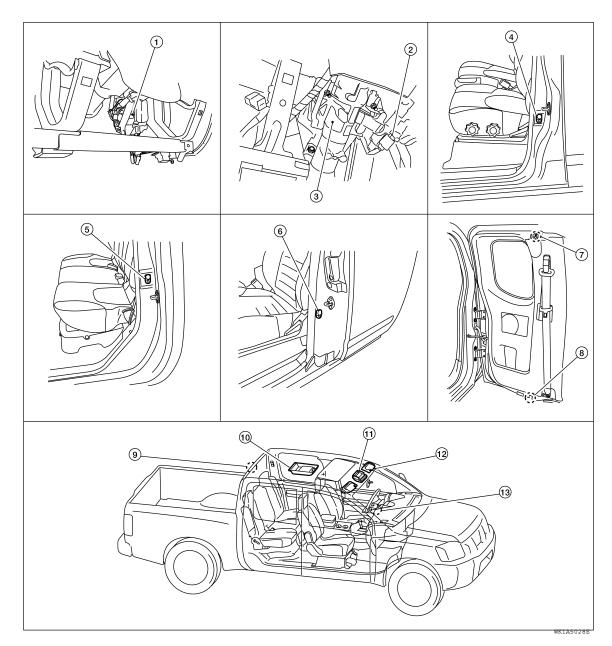
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- BCM M18, M19, M20 (view with lower 2. instrument panel LH removed)
- Front door switch LH B8 (crew cab) Front door switch RH B108 (crew cab)
- Rear door switch upper LH D211 (king cab)
 - Rear door switch upper LH D312 (king cab)
- Key switch M27
- Rear door switch LH B18 (crew cab) Rear door switch RH B116 (crew cab)
- Rear door switch lower LH D212 (king cab)

Rear door switch lower LH D313 (king cab)

- Front door switch LH D213 (king cab) Front door switch RH D316 (king cab)
 - Cargo lamp B161

Steering column assembly

INL-7 **Revision: October 2009** 2010 Frontier

< FUNCTION DIAGNOSIS >

[WITH POWER DOOR LOCKS]

10. Room lamp 2nd row R10

11. Front room/map lamp assembly R9

12. Vanity lamp LH B80 Vanity lamp RH B81

13. Ignition keyhole illumination M150

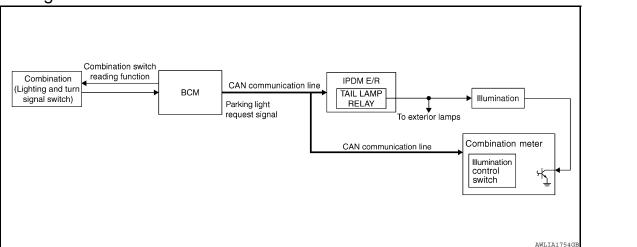
Component Description

INFOID:0000000005272802

Part name	Description	
BCM	Provides power and ground and controls timer functions for the interior room lamps and cargo lamp.	
Key switch	Provides key in ignition status to the BCM.	
Door switches	Provides door OPEN/CLOSED status to the BCM.	
Back door switch	Provides back door OPEN/CLOSED status to the BCM.	
Main power window and door lock/unlock switch	Dravides deer leek/unleek position quitab status to the PCM	
Power window and door lock/unlock switch RH	Provides door lock/unlock position switch status to the BCM.	
Front door lock assembly LH (key cylinder switch)	Provides door lock/unlock status to the BCM.	

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 30 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 second 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.

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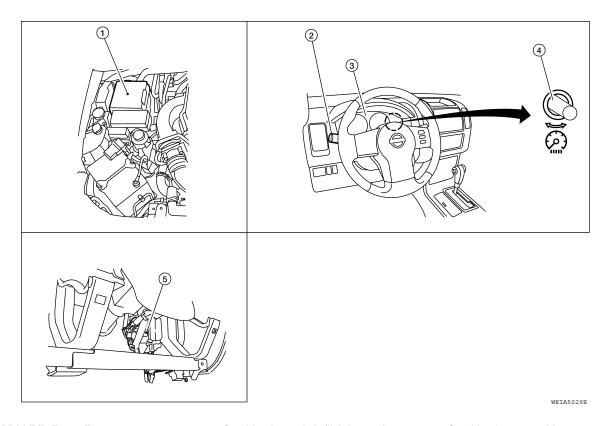
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Component Parts Location

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- IPDM E/R E122, E124
- Illumination control switch (built into combination meter)
- Combination switch (lighting and turn 3. Combination meter M24 signal switch) M28
- BCM M18, M20 (view with lower instrument panel LH removed)

Component Description

INFOID:0000000005272806

Part name	Description
ВСМ	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 (lighting and turn signal switch) provides input to the BCM about the lighting switch position.

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[WITH POWER DOOR LOCKS]

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

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

INFOID:0000000005550744

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APPLICATION ITEM

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

Diagnosis mode	Function Description		
WORK SUPPORT	Changes the setting for each system function.		
SELF-DIAG RESULTS	Displays the diagnosis results judged by BCM. Refer to BCS-50, "DTC Index".		
CAN DIAG SUPPORT MNTR	Monitors the reception status of CAN communication viewed from BCM.		
DATA MONITOR	The BCM input/output signals are displayed.		
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.		
ECU IDENTIFICATION	The BCM part number is displayed.		
CONFIGURATION	 Enables to read and save the vehicle specification. Enables to write the vehicle specification when replacing BCM. 		

SYSTEM APPLICATION

BCM can perform the following functions for each system.

It can perform the diagnosis modes except the following for all sub system selection items.

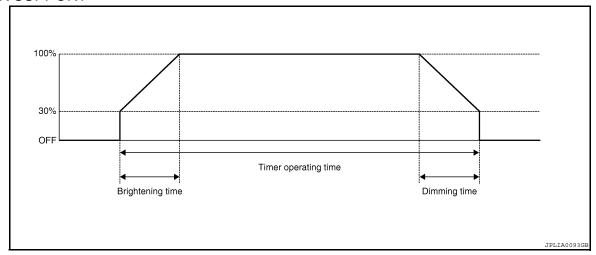
System	Cub avatom adjection item	Diagnosis mode			_
System	Sub system selection item	WORK SUPPORT	DATA MONITOR	ACTIVE TEST	_
BCM	BCM	×			_
Door lock	DOOR LOCK	×	×	×	_
Rear window defogger	REAR DEFOGGER		×	×	J
Warning chime	BUZZER		×	×	_
Interior room lamp timer	INT LAMP	×	×	×	_
Remote keyless entry system	MULTI REMOTE ENT	×	×	×	K
Exterior lamp	HEAD LAMP	×	×	×	
Wiper and washer	WIPER	×	×	×	INL
Turn signal and hazard warning lamps	FLASHER		×	×	
Air conditioner	AIR CONDITONER		×		_
Combination switch	COMB SW		×		M
Immobilizer	IMMU		×	×	_
Interior room lamp battery saver	BATTERY SAVER	×	×	×	N
Vehicle security system	THEFT ALM	×	×	×	_
RAP (retained accessory power)	RETAINED PWR	×	×	×	_
Signal buffer system	SIGNAL BUFFER		×	×	0
TPMS (tire pressure monitoring system)	AIR PRESSURE MONITOR	×	×	×	_
Panic alarm system	PANIC ALARM			×	Р

INT LAMP

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

INFOID:0000000005550745

WORK SUPPORT



Work Item	Setting item	Setting		
SET I/L D-UNLCK INTCON	ON*	With the interior room lamp timer function		
SET I/L D-UNLER INTCOM	OFF	Without th	ne interior room lamp timer function	
	MODE 1	0.5 sec.		
	MODE 2*	1 sec.		
	MODE 3	2 sec.		
ROOM LAMP ON TIME SET	MODE 4	3 sec.	Sets the interior room lamp gradual brightening time.	
	MODE 5	4 sec.		
	MODE 6	5 sec.		
	MODE 7	0 sec.		
	MODE 1	0.5 sec.		
	MODE 2	1 sec.		
	MODE 3	2 sec.		
ROOM LAMP OFF TIME SET	MODE 4*	3 sec.	Sets the interior room lamp gradual dimming time.	
	MODE 5	4 sec.		
	MODE 6	5 sec.		
	MODE 7	0 sec.		

^{*:} Initial setting

DATA MONITOR

Monitor Item [Unit]	Description	
IGN ON SW [ON/OFF]	Ignition switch (ON) status judges from IGN signal (ignition power supply)	
KEY ON SW [ON/OFF]	The switch status input from key switch	
DOOR SW-DR [ON/OFF]	Indicates condition of front door switch (all) and rear door switch upper and lower (king cab) LH	
DOOR SW-AS [ON/OFF]	Indicates condition of front door switch (all) and rear door switch upper and lower (king cab) RH	
DOOR SW-RR [ON/OFF]	Indicates condition of rear door switch RH (crew cab)	
DOOR SW- RL [ON/OFF]	Indicates condition of rear door switch LH (crew cab)	
KEY CYL LK-SW [ON/OFF]	Lock switch status input from door lock and unlock switch	

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[WITH POWER DOOR LOCKS]

Monitor Item [Unit]	Description
KEY CYL UN-SW [ON/OFF]	Lock switch status input from door lock and unlock switch
CDL LOCK SW [ON/OFF]	Lock switch status input from door lock and unlock switch
CDL UNLOCK SW [ON/OFF]	Unlock switch status input from door lock and unlock switch
KEYLESS LOCK [ON/OFF]	Lock signal status received from remote keyless entry receiver (integrated in the BCM)
KEYLESS UNLOCK [ON/OFF]	Unlock signal status received from remote keyless entry receiver (integrated in the BCM)

ACTIVE TEST

Test Item	Operation	Description	
CINI :		Outputs the ignition keyhole illumination control signal to turn the ignition keyhole illumination lamp ON.	
IGN ILLUM	OFF	Stops the ignition keyhole illumination control signal to turn the ignition keyhole illumination lamp OFF.	
INT LAMP	ON	Outputs the interior room lamp control signal to turn the interior room lamps ON.	
INT LAWIP	OFF	Stops the interior room lamp control signal to turn the interior room lamps OFF.	

BATTERY SAVER

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

INFOID:0000000005550746

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WORK SUPPORT

Work Item	Setting Item	Setting		
	MODE 1*	30 min.		
ROOM LAMP TIMER SET	MODE 2	60 min.	Sets the interior room lamp battery saver timer operating time.	
	MODE 3	10 min.		

^{*:} Initial setting

DATA MONITOR

Monitor Item [Unit]	Description
IGN ON SW [ON/OFF]	Ignition switch (ON) status judges from IGN signal (ignition power supply)
KEY ON SW [ON/OFF]	The switch status input from key switch
DOOR SW-DR [ON/OFF]	The switch status input from front door switch (driver side)
DOOR SW-AS [ON/OFF]	The switch status input from front door switch (passenger side)
DOOR SW-RR [ON/OFF]	The switch status input from rear door switch RH
DOOR SW- RL [ON/OFF]	The switch status input from rear door switch LH
KEY CYL LK-SW [ON/OFF]	Lock switch status input from door key cylinder switch
KEY CYL UN-SW [ON/OFF]	Unlock switch status input from door key cylinder switch
CDL LOCK SW [ON/OFF]	Lock switch status input from door lock and unlock switch
CDL UNLOCK SW [ON/OFF]	Unlock switch status input from door lock and unlock switch
KEYLESS LOCK [ON/OFF]	Lock signal status received from remote keyless entry receiver (integrated in the BCM)
KEYLESS UNLOCK [ON/OFF]	Unlock signal status received from remote keyless entry receiver (integrated in the BCM)

ACTIVE TEST

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[WITH POWER DOOR LOCKS]

Test Item	Operation	Description
BATTERY SAVER	OFF	Cuts the interior room lamp power supply to turn interior room lamps OFF.
DATTERT SAVER	ON	Outputs the interior room lamp power supply to turn interior room lamps ON.*

^{*:} Each lamp switch is in ON position.

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[WITH POWER DOOR LOCKS]

COMPONENT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

BCM

BCM: Diagnosis Procedure

INFOID:0000000005550754

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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 power cupply	18 (10A)
70	Battery power supply	G (50A)
11	Ignition ACC or ON	4 (10A)
38	Ignition ON or START	1 (10A)

Is the fuse blown?

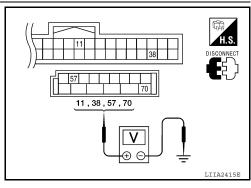
YES >> Replace the blown fuse or fusible link after repairing the affected circuit.

NO >> GO TO 2

2. CHECK POWER SUPPLY CIRCUIT

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

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



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Is the measurement value normal?

YES >> GO TO 3

NO >> Repair or replace harness.

3. CHECK GROUND CIRCUIT

POWER SUPPLY AND GROUND CIRCUIT

< COMPONENT DIAGNOSIS >

[WITH POWER DOOR LOCKS]

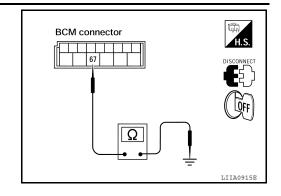
Check continuity between BCM harness connector and ground.

В	BCM		Continuity
Connector	Connector Terminal		Continuity
M20	67		Yes

Does continuity exist?

YES >> Inspection End.

NO >> Repair or replace harness.



BATTERY SAVER OUTPUT/POWER SUPPLY CIRCUIT

< COMPONENT DIAGNOSIS >

[WITH POWER DOOR LOCKS]

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BATTERY SAVER OUTPUT/POWER SUPPLY CIRCUIT

Description INFOID:0000000005272811

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:0000000005272812

1.CHECK BATTERY SAVER OUTPUT/POWER SUPPLY FUNCTION

(P)CONSULT-III

- Turn ignition switch ON. 1.
- Turn each interior room lamp ON.
- Front room/map lamp assembly (if equipped)
- Vanity lamps (if equipped)
- Room lamp 2nd row
- Select "BATTERY SAVER" of BCM (BATTERY SAVER) active test item.
- 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.

>> Refer to INL-17, "Diagnosis Procedure". NO

Diagnosis Procedure

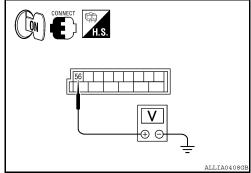
Regarding Wiring Diagram information, refer to INL-26, "Wiring Diagram".

1. CHECK BATTERY SAVER OUTPUT/POWER SUPPLY OUTPUT

(P)CONSULT-III

- Turn ignition switch ON.
- Select "BATTERY SAVER" of BCM (BATTERY SAVER) active
- 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
IVIZU	56	Ground	ON	Battery voltage



Is the inspection result normal?

YES >> GO TO 2

NO >> Replace BCM. Refer to BCS-54, "Removal and Installation".

2.CHECK BATTERY SAVER OUTPUT/POWER SUPPLY OPEN CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect the following connectors.
- BCM M20
- Ignition keyhole illumination (if equipped)
- Front room/map lamp assembly (if equipped)
- Vanity lamp LH (if equipped)
- Vanity lamp RH (if equipped)
- Room lamp 2nd row

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BATTERY SAVER OUTPUT/POWER SUPPLY CIRCUIT

< COMPONENT DIAGNOSIS >

[WITH POWER DOOR LOCKS]

3. Check continuity between BCM connector and each interior room lamp connector.

BCI	М	Each interior room lamp			Continuity
Connector	Terminal	Connector Termina			Continuity
		Ignition keyhole illumination (if equipped)	M150	1	
	M20 56	Front room/map lamp assembly (if equipped)	R9	1	
M20		Vanity lamp LH (if equipped)	B80	1	Yes
		Vanity lamp RH (if equipped)	B81	1	
		Room lamp 2nd row	R10	2	

Is the inspection result normal?

YES >> GO TO 3

NO >> Repair the harness or connectors.

3.CHECK BATTERY SAVER OUTPUT/POWER SUPPLY SHORT CIRCUIT

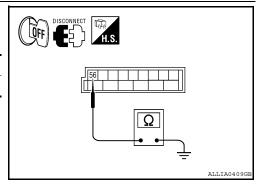
Check continuity between BCM connector M20 terminal 56 and ground.

Connector	Terminal	_	Continuity
M20	56	Ground	No

Is the inspection result normal?

YES >> Replace the interior room lamp. Refer to <u>INL-64</u>. "Removal and Installation".

NO >> Repair the harness or connectors.



INTERIOR ROOM LAMP CONTROL CIRCUIT

< COMPONENT DIAGNOSIS >

[WITH POWER DOOR LOCKS]

INTERIOR ROOM LAMP CONTROL CIRCUIT

Description INFOID:0000000005272814

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

- Front room/map lamp assembly (if equipped)
- Room lamp 2nd row

NOTE:

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

Component Function Check

INFOID:0000000005272815

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CAUTION:

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

- Battery saver output/power supply
- Front room/map lamp bulbs (if equipped)
- Room lamp 2nd row bulb

${f 1}$.CHECK INTERIOR ROOM LAMP CONTROL FUNCTION

(E)CONSULT-III

- 1. Switch the front room/map lamp assembly (if equipped) and room lamp 2nd row switches to DOOR.
- Turn ignition switch ON.
- 3. Select "INT LAMP" of BCM (INT LAMP) active test item.
- 4. 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

agnosis Procedure

Regarding Wiring Diagram information, refer to INL-26, "Wiring Diagram".

1. CHECK INTERIOR ROOM LAMP CONTROL OUTPUT

(E)CONSULT-III

- 1. Turn ignition switch ON.
- 2. 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.

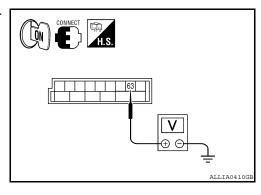
(+)		(-)	INT LAMP	Voltage	
Connector	Terminal	(-)	INT LAWI	voltage	
M20	63	Ground	ON	0V	
IVIZU	03	Ground	OFF	Battery voltage	

Is the inspection result normal?

YES >> Interior room lamp control circuit is operating normally. Fixed ON>>GO TO 3

Fixed OFF>> GO TO 2

2.CHECK INTERIOR ROOM LAMP CONTROL OPEN CIRCUIT



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INTERIOR ROOM LAMP CONTROL CIRCUIT

< COMPONENT DIAGNOSIS >

[WITH POWER DOOR LOCKS]

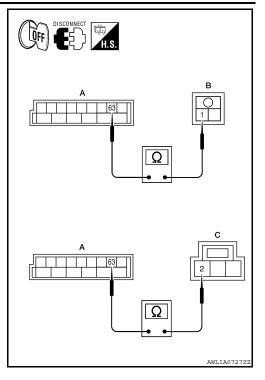
- 1. Turn ignition switch OFF.
- 2. Disconnect BCM connector M20, room lamp 2nd row connector and front room/map lamp connector (if equipped).
- 3. Check continuity between BCM connector M20 terminal 63 and interior room lamp connectors.

Term	inal	Terminal			Continuity
Connector	Terminal	Component Connector Terminal		Continuity	
		Room lamp 2nd row	B: R10	1	
A: M20	63	Front room/map lamp (if equipped)	C: R9	2	Yes

Is the inspection result normal?

YES >> Check interior room lamp for an open. If OK, replace the BCM. Refer to BCS-54, "Removal and Installation". If NG, replace the interior room lamp. Refer to INL-64, "Removal and Installation".

NO >> Repair the harness or connectors.



3. CHECK INTERIOR ROOM LAMP CONTROL SHORT CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM connector M20, room lamp 2nd row connector and front room/map lamp connector (if equipped).
- Check continuity between BCM connector M20 terminal 63 and ground.

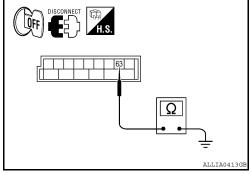
Connector	Terminal	_	Continuity
M20	63	Ground	No

Is the inspection result normal?

YES >> Check interior room lamp for a short circuit. If OK, replace the BCM. Refer to BCS-54, "Removal and last all stignts". If NC replace the interior room lamp. Pefer to BCS-54.

Installation". If NG, replace the interior room lamp. Refer to INL-64, "Removal and Installation".

NO >> Repair the harness or connectors.



CARGO LAMP CONTROL CIRCUIT

< COMPONENT DIAGNOSIS >

[WITH POWER DOOR LOCKS]

CARGO LAMP CONTROL CIRCUIT

Description INFOID:0000000005272817

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

Diagnosis Procedure

INFOID:0000000005272818

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Regarding Wiring Diagram information, refer to INL-26, "Wiring Diagram".

CAUTION:

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

- Fuse
- Cargo lamp bulb

1. CHECK CARGO LAMP OPERATION

Check the cargo lamp operation from the cargo lamp switch, the door switches, and a keyfob (if equipped). Is the cargo lamp inoperative from all of the above switches and the keyfob (if equipped)?

YES >> GO TO 4

NO

- >> Inoperative from cargo lamp switch only, GO TO 2
 - Inoperative from door switches only, refer to <u>DLK-27</u>, "<u>KING CAB</u>: <u>Description</u>" (king cab), <u>DLK-29</u>, "<u>CREW CAB</u>: <u>Description</u>" (crew cab).
 - Inoperative from keyfob only, refer to <u>DLK-51</u>, "<u>Description</u>".

2. CHECK CARGO LAMP SWITCH

Check the cargo lamp switch. Refer to INL-23, "Component Inspection".

Is the inspection result normal?

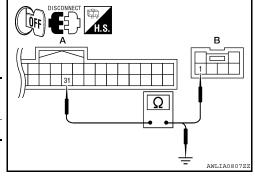
YES >> GO TO 3

NO >> Replace the cargo lamp switch.

3. CHECK CARGO LAMP SWITCH CIRCUIT

- Disconnect BCM connector M18 and cargo lamp switch connector.
- Check continuity between BCM connector M18 (A) terminal 31 and cargo lamp switch connector M71 (B) terminal 1.

В	BCM		mp switch	Continuity
Connector	Terminal	Connector Terminal		Continuity
M18 (A)	31	M71 (B)	1	Yes



3. Check continuity between BCM connector M18 terminal 31 and ground.

Connector	Terminal	_	Continuity
M18 (A)	31	Ground	No

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-54, "Removal and Installation".

NO >> Repair harness or connectors.

4. CHECK CARGO LAMP RELAY

Check the cargo lamp relay. Refer to INL-23, "Component Inspection".

Is the inspection result normal?

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< COMPONENT DIAGNOSIS >

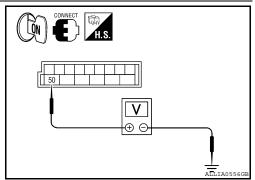
YES >> GO TO 5

NO >> Replace the cargo lamp relay.

5. CHECK CARGO LAMP RELAY CONTROL

While operating the cargo lamp switch, check voltage between BCM connector M19 terminal 50 and ground.

Connector	Terminal	_	Cargo lamp switch	Voltage
M19 5	50	50 Ground	ON	0V
IVITS	30	Giodila	OFF	Battery voltage



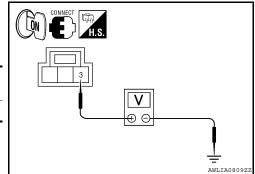
Is the inspection result normal?

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

6. CHECK CARGO LAMP VOLTAGE

- 1. Disconnect the cargo lamp connector.
- 2. While operating the cargo lamp switch, check voltage between cargo lamp connector B161 terminal 3 and ground.

Connector	Terminal	_	Cargo lamp switch	Voltage
B161	3	Ground	ON	Battery voltage



Is the inspection result normal?

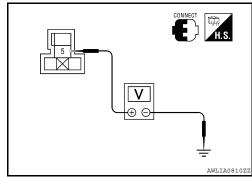
YES >> Replace cargo lamp.

NO >> GO TO 7

7.CHECK CARGO LAMP RELAY VOLTAGE PART 1

Check voltage between cargo lamp relay connector M165 terminal 5 and ground.

Cargo la	Cargo lamp relay		Voltage	
Connector	Terminal	Ground	voltage	
M165	5		Battery voltage	



Is the inspection result normal?

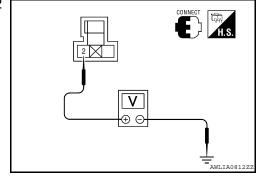
YES >> Repair harness or connectors between cargo lamp relay and cargo lamp.

NO >> Repair harness or connector between splice and cargo lamp relay.

8.CHECK CARGO LAMP RELAY VOLTAGE PART 2

Check voltage between cargo lamp relay connector M165 terminal 2 and ground.

Cargo la	Cargo lamp relay		Voltage
Connector	Terminal	Ground	voltage
M165	2		Battery voltage



Is the inspection result normal?

YES >> GO TO 9

NO >> Repair harness or connectors.

9. CHECK CARGO LAMP RELAY CONTROL CIRCUIT

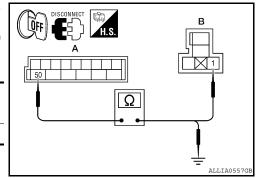
CARGO LAMP CONTROL CIRCUIT

< COMPONENT DIAGNOSIS >

[WITH POWER DOOR LOCKS]

- Disconnect BCM connector M19 and cargo lamp relay connector.
- 2. Check continuity between BCM connector M19 (A) terminal 50 and cargo lamp relay connector M165 (B) terminal 1.

BCM		Cargo lamp relay		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M19 (A)	50	M165 (B)	1	Yes



3. Check continuity between BCM connector M19 terminal 50 and ground.

Connector	Terminal	_	Continuity
M19 (A)	50	Ground	No

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-54, "Removal and Installation".

NO >> Repair harness or connectors.

Component Inspection

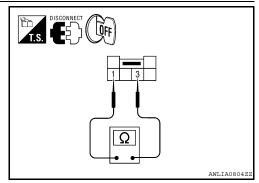
INFOID:0000000005272819

CARGO LAMP SWITCH

1. CHECK CARGO LAMP SWITCH

- Turn ignition switch OFF.
- 2. Disconnect cargo lamp switch connector.
- 3. Check continuity between cargo lamp switch terminals.

Cargo lamp switch	Condition	Continuity	
Terminal	Condition	Continuity	
1 – 3	ON	Yes	
1-3	OFF	No	



Is the inspection result normal?

YES >> Inspection End

NO >> Replace cargo lamp switch.

CARGO LAMP RELAY

1. CHECK CARGO LAMP RELAY

- Turn ignition switch OFF.
- 2. Disconnect cargo lamp relay connector.
- 3. Supply power to terminal 2 and ground to terminal 1 of the cargo lamp relay.
- 4. Check continuity between cargo lamp relay terminals 3 and 5.

Ter	minal	Condition	Continuity
3	5	Power and ground supplied to terminals 1 and 2	Yes
3	3	No power and ground supplied	No

3 3 3 3 5 2 1 SEF497Y

Is the inspection result normal?

YES >> Inspection End

NO >> Replace cargo lamp relay.

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IGNITION KEYHOLE ILLUMINATION CONTROL CIRCUIT

< COMPONENT DIAGNOSIS >

[WITH POWER DOOR LOCKS]

IGNITION KEYHOLE ILLUMINATION CONTROL CIRCUIT

Description INFOID:0000000005272820

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

Component Function Check

INFOID:0000000005272821

CAUTION:

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

- Battery saver output/power supply circuit
- Ignition keyhole illumination bulb
- 1. CHECK IGNITION KEYHOLE ILLUMINATION OPERATION

(P)CONSULT-III

- 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-24, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000005272822

Regarding Wiring Diagram information, refer to INL-26, "Wiring Diagram".

1. CHECK IGNITION KEYHOLE OUTPUT

(P)CONSULT-III

- Turn ignition switch ON.
- 2. 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

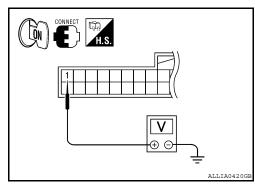
Is the inspection result normal?

YES >> Ignition keyhole illumination control circuit is operating normally.

Fixed ON>>GO TO 3.

Fixed OFF>> GO TO 2.

2.check ignition keyhole illumination open circuit

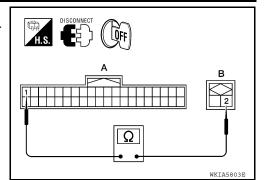


IGNITION KEYHOLE ILLUMINATION CONTROL CIRCUIT

< COMPONENT DIAGNOSIS >

- . 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.

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



[WITH POWER DOOR LOCKS]

Is the inspection result normal?

- YES >> Check the ignition keyhole illumination for an open. If OK, replace the BCM. Refer to <u>BCS-54</u>, "Removal and Installation". If NG, replace ignition keyhole illumination.
- NO >> Repair harness or connectors.

3.check ignition keyhole illumination short circuit

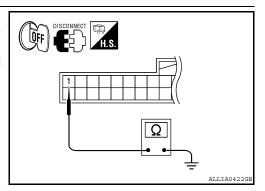
- 1. Turn ignition switch OFF.
- 2. Disconnect BCM connector M18 and ignition keyhole illumination connector.
- 3. Check continuity between BCM connector M18 terminal 1 and ground.

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 the BCM. Refer to BCS-54, "Removal and Installation". If NG, replace ignition keyhole illumination.

NO >> Repair harness or connectors.



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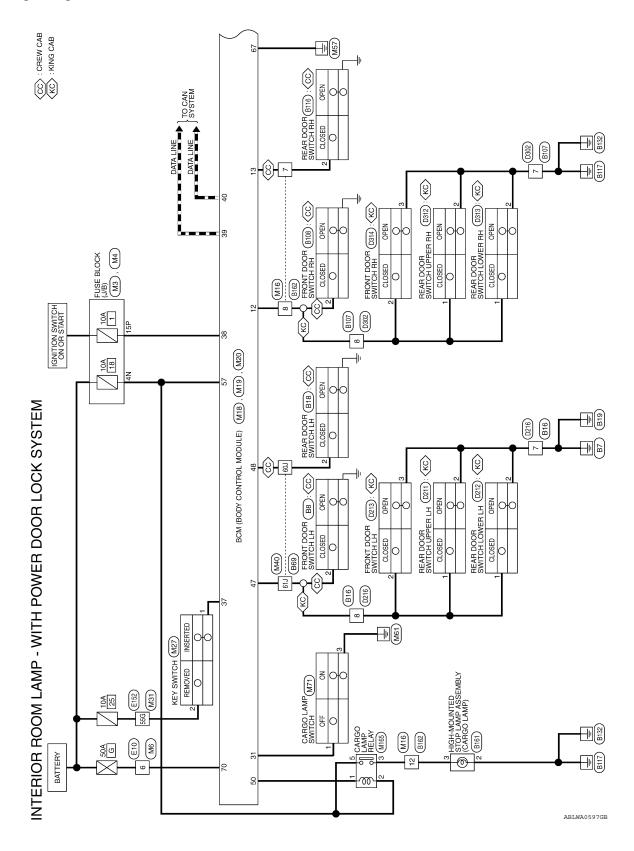
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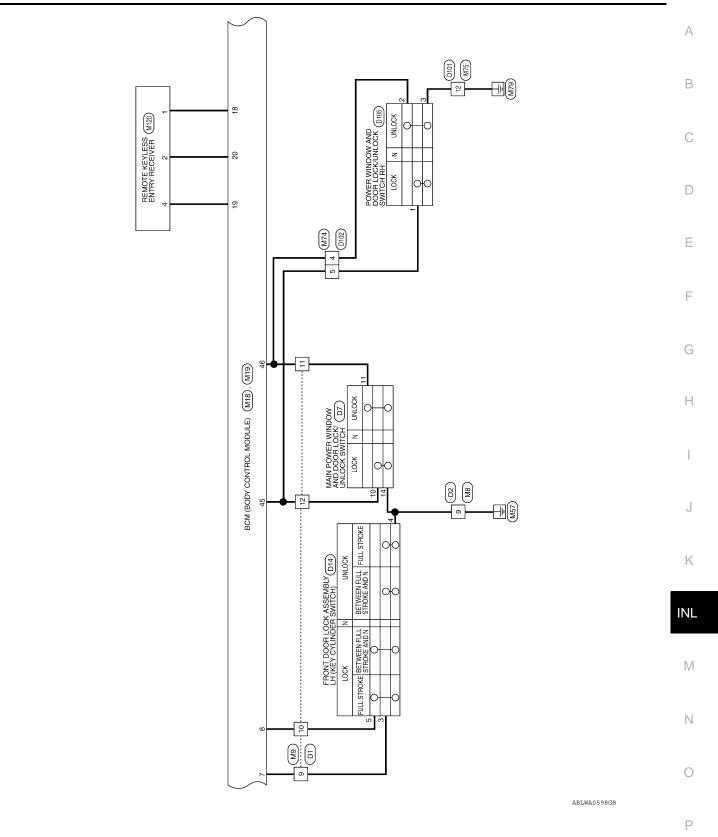
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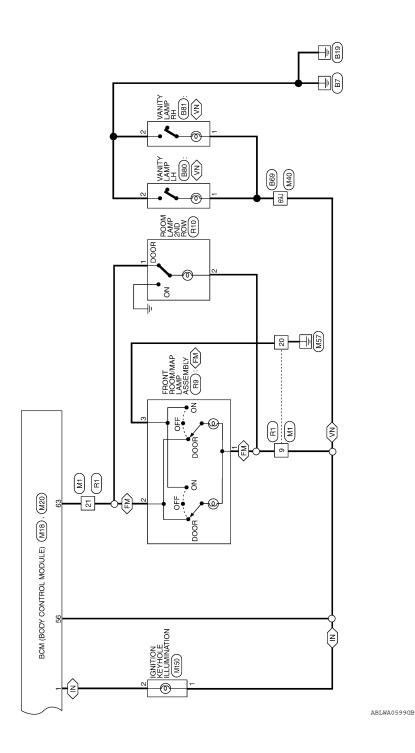
Wiring Diagram





WITH FRONT MAP LAMPS WITH IGNITION KEYHOLE ILLUMINATION WITH VANITY I AMPS





[WITH POWER DOOR LOCKS]

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٥	Connector No.	M		Connector No. M3	No. M3			Connector No.	Α	
<u>, </u>	Connector Name WIRE TO WIRE	ame WIF	RE TO WIRE	Connector	Vame FUS	Connector Name FUSE BLOCK (J/B)		Connector Na	me FUSI	Connector Name FUSE BLOCK (J/B)
	Connector Color WH		TE	Connector Color WHITE	Solor WHI	TE		Connector Color WHITE	lor WHI	ا س
<u> </u>	H.S.	1 2 3 4 13 14 15 16	5 6 7 8 9 10 11 12 5 17 18 19 20 21 22 23 24	H.S.	N8 N8	2N 1N		H.S.	7P 6P 5P 4P [C	7P 6P 5P 4P (
<u>'</u>	Color of Wire Wire	Color of Wire	Signal Name	Color of Terminal No. Wire	Color of Wire	Signal Name		Terminal No. Wire	Color of Wire	Signal Nan
	6	Ρ/A	ı	N4	R/Y	ı		15P	W/R	ı
I	20	В	ı							
	21	BR	ı							
J										

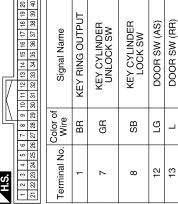
Connector No.	M6	Connector No.	o. M8		<u> 8</u>	Connector No.	6W	
Sonnector Name	Connector Name WIRE TO WIRE	Connector Name WIRE TO WIRE	ame WIRE	TO WIRE	ပ	Connector Name WIRE TO WIRE	e WIRE	TO WIRE
Connector Color WHITE	WHITE	Connector Color	olor BROWN	NN	8	Connector Color WHITE	WHITE	
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Terminal No. M	Color of Signal Name	Terminal No.	Color of Wire	Signal Name	T ⊕	Terminal No.	Color of Wire	Signal Name
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						10	SB	ı
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						12	>	ı

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Signal Name	KEYLESS & AUTO LIGHT SENSOR GND	KEYLESS TUNER POWER SUPPLY OUTPUT	KEYLESS TUNER SIGNAL	CARGO LAMP SW	KEY SW	MS N9I	CAN-H	CAN-L
Color of Wire	BR	>	Э	GR	В	W/R	٦	Д
Terminal No.	18	19	20	31	37	38	39	40

			i			
	SWITCH]E		Signal Name	ı	
	me KE	lor WH		Color of Wire	В	
Connector No	Connector Na	Connector Co	ing H.S.	Terminal No.	-	,
	Connector No. M27	<u>e</u>	e 5	Connector No. M27 Connector Name KEY SWITCH Connector Color WHITE		

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



Olginal Ivallie	KEY RING OUTPUT	KEY CYLINDER UNLOCK SW	KEY CYLINDER LOCK SW	DOOR SW (AS)	DOOR SW (RR)
Wire	BB	GR	SB	ГG	7
- dilla	-	7	8	12	13

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

H.S.		
Terminal No. Wire	Color of Wire	Signal Name
56	R/Y	BATTERY SAVEF OUTPUT
57	R/Y	BAT (FUSE)
63	НВ	ROOM LAMP OUTPI
29	В	GND (POWER)
20	M	BAT (F/L)

3 2 1	9 8 7]	Signal Name	ı	1	ı
6 5 4	12 11 10 9		Color of Wire	_	ГG	ď
SH	5		Terminal No.	7	8	15

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

ກ	BCM (BODY CONTROL MODULE)	WHITE	41 42 43 44 45 46 47 48 49 50 51 52 53 54 55		Signal Name	CDL LOCK SW	CDL UNLOCK SW	DOOR SW (DR)	DOOR SW (RL)	CARGO LAMP OUTPUT
			41 42 43 50 51		Color of Wire	>	ГG	GR	Ь	۵
COLLINGIA NO.	Connector Name	Connector Color		H.S.	Terminal No.	45	46	47	48	09

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[WITH POWER DOOR LOCKS]

Connector No. M71 Connector Name CARGO LAMP SWITCH Connector Color WHITE A.S. Terminal No. Wire Signal Name 1 GR 3 B			A B C D
Connector No. M40 Connector Name WIRE TO WIRE Connector Color WHITE Sol 41 31 21 11 Sol 20 130 131 131 171 161 151 141 131 121 11 Sol 20 130 131 131 171 161 151 141 131 121 11 Sol 20 130 131 131 171 161 151 141 131 131 131 Sol 30 20 20 27 27 261 251 241 231 231 311 Sol 40 43 43 471 461 451 441 43 431 Sol 40 481 891 771 861 851 841 831 831 831 831 Sol 492 881 677 861 851 841 831 831 831 831 831 Tol 60 850 851 671 861 851 841 831 831 831 831 831 Tol 60 850 851 771 851 851 771 781 Sol 772 773 774 773 773 773 773 773	Terminal No. Wire Signal Name 60J P - 61J GR - 69J R/Y -	Connector No. M75 Connector Name WIRE TO WIRE Connector Color WHITE Terminal No. Color of Signal Name 12 B Signal Name	F G H
Connector No. M31	Terminal No. Color of Signal Name 55G Y –	Connector No. M74	INL M N O

Connector No. M165 Connector Name CARGO LAMP RELAY Connector Color BLUE	Signal Name	Signal Name
me CARG	Wire Wire R/Y B/Y B/Y B/Y	Color of Wire
Connector No. Connector Name Connector Color	Terminal No. (2 2 3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	Terminal No. 55G
Connector No. M150 Connector Name IGNITION KEYHOLE ILLUMINATION Connector Color WHITE	Terminal No. Color of Signal Name	Connector No. E152 Connector Name WIRE TO WIRE Connector Color WHITE 16 26 36 46 56 16 76 86 96 106 226 226 246 256 266 276 286 286 286 286 286 286 286 286 286 28
Connector No. M120 Connector Name REMOTE KEYLESS ENTRY RECEIVER Connector Color WHITE	Terminal No. Color of Signal Name 1 BR GND 2 G SIGNAL 4 V PWR	Connector No. E10 Connector Name WIRE TO WIRE Connector Color WHITE H.S. Terminal No. Color of Signal Name 6 W -

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[WITH POWER DOOR LOCKS]

	А
Aame ame	В
B18 WHITE or of Signal Name ANITY LAMP LH HITE	С
	D
Connector No. B18 Connector Name REAR DOOR SV Connector Color of Signa Connector Name VANITY LAMP LH Connector Color of Signal No. Wire 1 Terminal No. Wire 1 Terminal No. Wire 2 Terminal No. Wire 1 Terminal No. Wire 1	Е
	F
Signal Name	G
	Н
No. Color of B16 AIRE T Color of B16	I
Connector No. Connector Name Connector Color Terminal No. V 60J 61J 69J F	J
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Name FRONT	N
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Connector No.	B81	Connector No.). B107		Connector No.	, B108	
ame	Connector Name VANITY LAMP RH	Connector Name WIRE TO WIRE	ame WIRE	TO WIRE	Connector Na	ıme FRO	Connector Name FRONT DOOR SWITCH RH
	Connector Color WHITE	Connector Color WHITE	TIHM MHIT	Щ		(CR	W CAB)
				J	Connector Color WHITE	lor WHI	щ
	<u> </u>	H.S.	4 ®	2 0	H.S.		
° S	Terminal No. Wire Signal Name	Terminal No. Wire	Color of Wire	Signal Name	Terminal No. Wire	Color of Wire	Signal Name
_	R/Y –		В	ı	2	ГG	I
	- В	80	p_	ı			

	2	E TO WIRE	11		9 10 11 12	Signal Name	_	-	
	B162	ne WIF	or WH		1 2 4 8 8 7	Solor of Wire	٦	ГG	(
	Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE		赋 H.S.	Terminal No. Wire	7	8	
,									1
		Connector Name HIGH-MOUNTED STOP	P ASSEMBLY	旦	33	Signal Name	1	-	
	B161	e HIG	Z Z		-	Solor of Wire	В	G	
	Connector No.	Connector Nam		Connector Color WHITE	(中)	Terminal No. Wire	2	3	
•				7]	
	9,	REAR DOOR SWITCH RH	WHITE			Signal Name	ı		
	. B116	ame RE/	olor WH	\dashv		Color of Wire	_		
	l o	١ਛ	1 0	1					

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[WITH POWER DOOR LOCKS]

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< COMPONENT DIAGNOSIS >

	>								
	Connector Name ROOM LAMP 2ND ROW Connector Color WHITE				Signal Name	1	1		
R10	a ROC			Solor of	Wire	BR	Ρ/Υ		
Connector No.	Connector Name ROOM		H.S.		Terminal No. Wire	,	2		
	MP								
	Connector Name FRONT ROOM/MAP LAMP ASSEMBLY	ITE	<u>8</u>		Omci N		_	1	ı
B3	ne FRC ASS	or WH			Color of	Wire	R/Υ	>	В
Connector No.	Connector Nar	Connector Color WHITE	用.S.		Color of	ellilla NO.	1	2	က
	E TO WIRE		8 7 6 8 7 19 18 17 16 15 1 1 13 1 13 1 1 1 1 1 1 1 1 1 1 1 1			Signal Name	ı	1	1
뜐	me WIRI	2	2 11 10 9 4 23 22 21		Solor of	Wire	R/Y	В	BB
Connector No.	Connector Name WIRE TO WIRE		H.S.		Color of	erminal No.	6	20	2

	MO.	NEOCK			au	2		
	N POWER WIND	Connector Name AND DOOR LOCK/UNLOCK SWITCH	TE	2 3 4 5 6 7 9 10 11 12 13 14 15 16	Signal Name		I	
D7	MAI	SWI	or WH	1 2 3 8 9 10	Solor of	Wire	2	\ \A
Connector No.		Connector Nar	Connector Color WHITE	所 H.S.	Terminal No		10	Ţ
Connector No. D2	Connector Name WIRE TO WIRE	Connector Color BROWN	L T	H.S.	Terminal No. Wire Signal Name	п С		

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Connector No. D1
Connector Name WIRE TO WIRE

D102	WIRE TO WIRE	WHITE	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	Color of
Connector No. D102	Connector Name WIRE TO WIRE	Connector Color WHITE	嘶	

Connector No. D102 Connector Name WIRE TO WIRE Connector Color WHITE	Terminal No. Color of Signal Name 4 W - 5 LG -	Connector No. D212 Connector Name REAR DOOR SWITCH LOWER LH Connector Color BLACK LAS.	al No. Wire Signa	2 B
Connector No. D101 Connector Name WIRE TO WIRE Connector Color WHITE (1 2 3 mm 4 5 mm) 4 5 mm 4 5 mm) (6 7 8 9 10 11 12	Terminal No. Wire Signal Name	Connector No. D211 Connector Name REAR DOOR SWITCH UPPER LH Connector Color BLACK	al No. Wire Signa	1 LG -
FRONT DOOR LOCK ASSEMBLY LH GRAY	of Signal Name	MER W WER W TICH F	Signal Name -	1 1
	Color of Wire R/W B B SB	1		≥ ∞
Connector No. Connector Name Connector Color	Terminal No. 3 4 4 5	Connector No. Connector Name Connector Color H.S.	Terminal No.	ი დ

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INTERIOR ROOM LAMP CONTROL SYSTEM

[WITH POWER DOOR LOCKS]

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		7				
2	E TO WIRE	1	7 8 4	Signal Name	I	ı
D302	ne WIRI		- r 0 0	Solor of Wire	В	LG
Connector No.	Connector Name WIRE TO WIRE		斯S.	Terminal No. Wire	7	8
	WIRE			Signal Name	ı	ı
D216	Connector Name WIRE TO WIRE	5	1 1 2 9 4 8 4 8 4 8 4 8 8 4 8 8 8 8 8 8 8 8 8	Color of Wire	В	re
Connector No.	Connector Name WIRE T		H.S.	Terminal No. Wire	7	8
8	Connector Name FRONT DOOR SWITCH LH (KING CAB)	31		Signal Name	1	1
. D213	me FRO (KIN(or WHI	0 0 0	Color of Wire	p_	В
Connector No.	Connector Na	Connector Color WHITE	H.S.	Terminal No. Wire	2	3

Connector Name FRONT DOOR SWITCH RH (KING CAB) Connector Color WHITE		ИТСН			lame		
Connector No. D3 Connector Name FR Connector Color W H.S. H.S. Terminal No. Wire 2 LG 3 B	14	ONT DOOR SV (KING CAB)	뿔			ı	1
Nonnector Na. Connector Col H.S. H.S. Ferminal No.		me FR RH			Color o Wire	LG LG	В
	Connector No.	Connector Na	Connector Col	所 H.S.	Terminal No.	2	3

m	REAR DOOR SWITCH LOWER RH	, XO		Signal Name	1	1
D313	ne REA LOW	or BLACK	\ <u>10</u>	Color of Wire		В
Connector No.	Connector Name	Connector Color	赋 H.S.	Terminal No.	-	٥

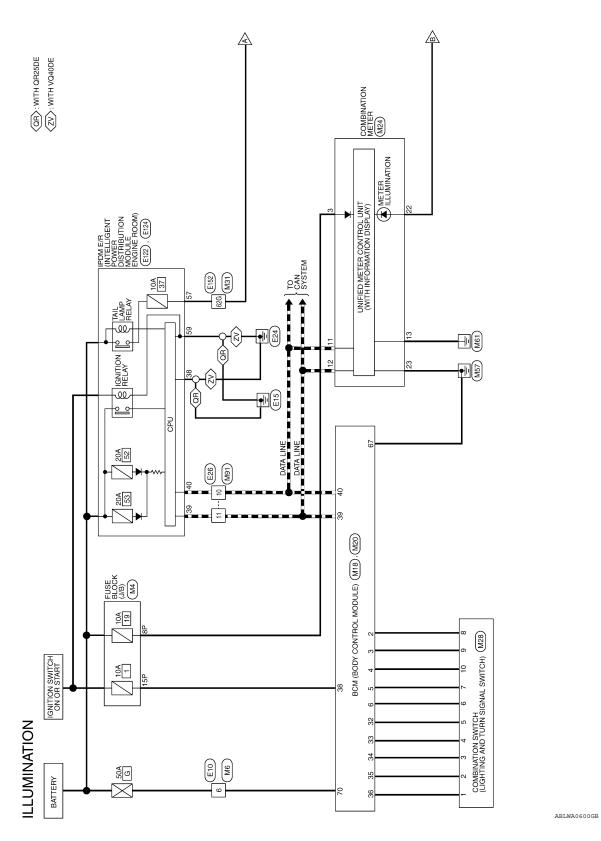
Connector Na	me RE/ UPF	Connector Name REAR DOOR SWITCH UPPER RH
Connector Color BLACK	lor BLA	CK
H.S.	120	
Terminal No.	Color of Wire	Signal Name
1	٦	_
2	В	1

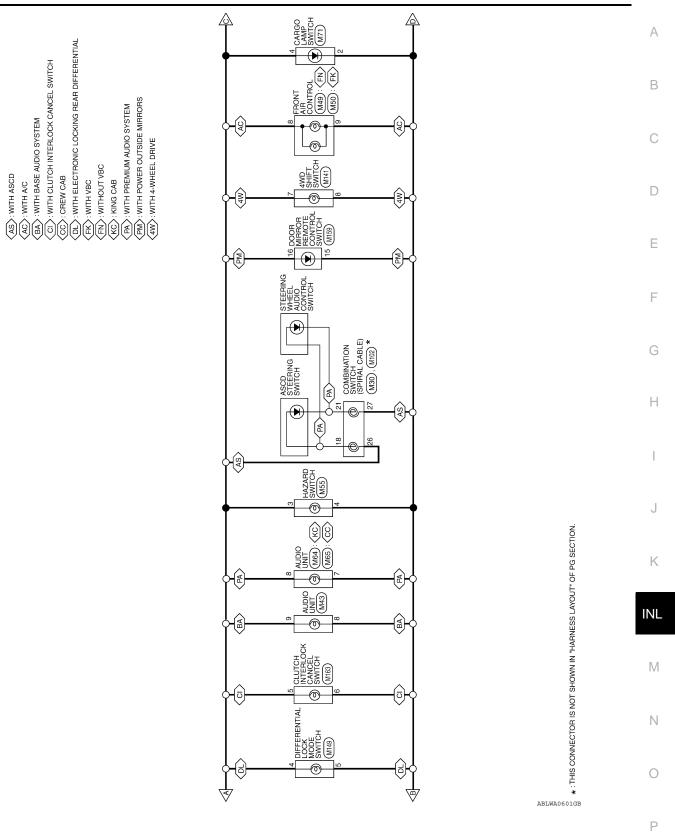
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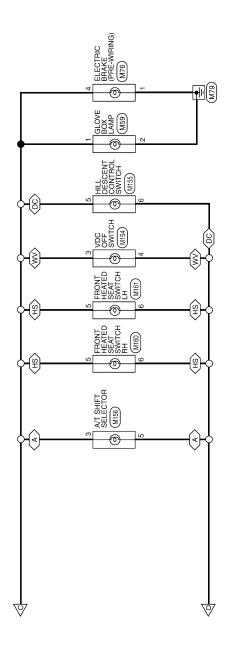
ILLUMINATION

Wiring Diagram





(A):WITH AT
(DC):WITH HILL DESCENT CONTROL
AND HILL START ASSIST
(HS):WITH HEATED SEATS
(WV):WITH VDC



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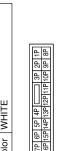
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WHITE

Connector Color

ILLUMINATION CONNECTORS

Connector No. M18	Connector Name BCM (BODY CONTROL	MODULE)	. ((
tor No. M6	Connector Name WIRE TO WIRE	Connector Color WHITE	
M4 Connector No.	FUSE BLOCK (J/B) Connector	WHITE	
Connector No.	Connector Name	Connector Color	



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	₽	₩	Ш		
	2Ρ	96			
	ЗБ	10P			
	П	11P			
	Ш	12P			
	4₽	13P			
	5P	14P			
	99	15P			
	7P	16P			
			_		
1		-	×		

Signal Name	ı	_
Color of Wire	R/Y	W/R
Terminal No.	8P	15P

Signal Name

Color of Wire ≥

Terminal No.

		1												
<u> </u>	10 11 12 13 14 15 16 17 18 19 20 30 31 32 33 34 35 36 37 38 39 40		Signal Name	INPUT 5	INPUT 4	INPUT 3	INPUT 2	INPUT 1	OUTPUT 5	OUTPUT 4	OUTPUT 3	OUTPUT 2	OUTPUT 1	MS NDI
П	6 7 8 9 26 27 28 29		Color of Wire	۵	SB	>	_	В	0	GR	ច	BR	ГВ	W/R
2	1 2 3 4 5 6 21 22 23 24 25 2		Terminal No.	2	က	4	5	9	32	33	34	35	36	38

Signal Name	BATTERY	CAN-L	CAN-H	GROUND	ILLUMINATION CONTROL	POWER GND
Color of Wire	₽/Y	Ь	٦	GR	BR	В
Terminal No.	က	11	12	13	22	23

CAN-H

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Connector Name COMBINATION METER Connector Color WHITE H.S. 20 19 18 17 16 15 14 13 12 111 10 9 8 7 26 28 14 23 12 17 11 10 9 8 17 28 28 13 13 12 13 12 11 11 10 9 12 12 13 13 13 13 13 13 13 13 13 13 13 13 13	Connector No.	nne	ect	or	8		_	M24	4											
101 9 8 8 8 29 28	ပိ	lu e	ŝ	ō	Na	шe	-	0	M	\ E	A	2	z	₹	Ë	E.				
S. 18 17 16 15 14 13 12 11 11 0 9 8 8 38 38 38 38 38 38 38 38 39 88 38 38 38 38 38 38 38 38 38 38 38 38	ပိ	lu e	ŝ	٥	ပြ	ō	_	₹	I≣	ш										
20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 11 40 39 38 37 36 34 33 32 31 30 29 28 27 26 25 24 29 22 21 40 39 38 37 36 36 33 32 31 30 36	造	S. T.								IN.	IV.	117								
40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21	8	19		17	16	15	4	13	12	Ξ	무	တ	8	_	9	2	4	8	2	—
	8	88	38	37	ဗ္တ	35	용	33	88	31	98	53	88	27	56	25	24	23	ន	21

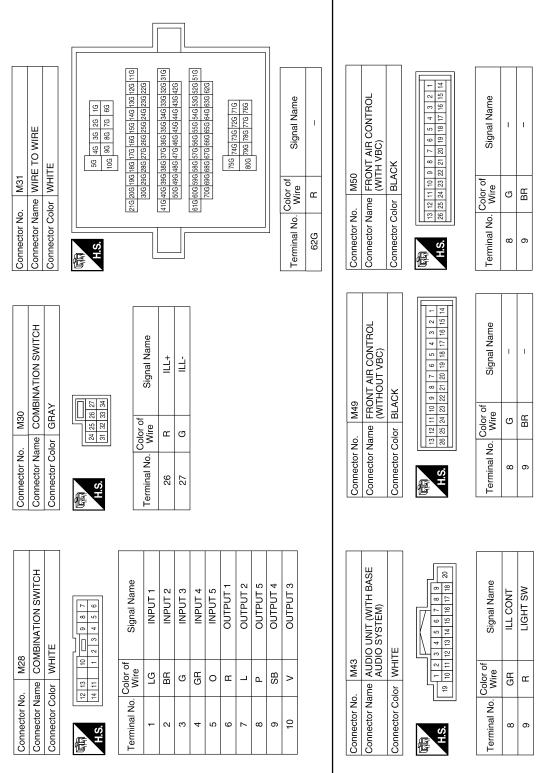
Connector Name COMBI
Connector Color WHITE
प्रोत H.S.
20 19 18 17 16 15 14 13 12
40 39 38 37 36 35 34 33 32

0	BCM (BODY CONTROL MODULE)	BLACK	85 56 57 68 69 70 68 69 70	Signal Name	GND (POWER)	BAT (F/L)
M20		_	56 57 58 59 60 61 65 66 67 68	Color of Wire	В	Μ
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	29	70

BAT (Μ	02
GND (PC	В	29
of Signal N	Color of Wire	Terminal No.

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Connector No. M64 AUDIO UNIT (KING CAB SYSTEM) Connector Color WHITE	Terminal No. Wire Signal Name 7 GR ILL CONT 8 G LIGHT SW	Connector No. M76 Connector Name ELECTRIC BRAKE (PRE-WIRING) Connector Color WHITE	Terminal No. Color of Signal Name 1 B GROUND 4 R ILL (TAIL)
Connector No. M59 Connector Name GLOVE BOX LAMP Connector Color BROWN H.S.	Terminal No. Wire Signal Name 1 R	Connector No. M71 Connector Name CARGO LAMP SWITCH Connector Color WHITE	Terminal No. Wire Signal Name 2 P
Connector No. M55 Connector Name HAZARD SWITCH Connector Color WHITE	Terminal No. Wire Signal Name 3 R - 4 4 BR	Connector No. M65 Connector Name WITH PREMIUM AUDIO SYSTEM) Connector Color WHITE	Terminal No. Wire Signal Name 7 GR ILL CONT 8 G LIGHT SW

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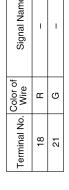
Connector No. M102		Connector No.	M141
Connector Name COMBINATION SWITCH	SINATION SWITCH	Connector Name	Connector Name 4WD SHIFT SWITCH
Connector Color GRAY		Connector Color GRAY	GRAY

Connector Name | WIRE TO WIRE Connector Color WHITE

Connector No. M91

	Signal Name	WS_THDIJ	GND
	Color of Wire	ш	BR
i. E	Terminal No.	7	8





7 6 5 4	Signal Name	ľ	ı
7 6 5 14 16 15 14	Color of Wire	Ь	
H.S.	Terminal No. Wire	10	+

Connector No.	. M155	55
Connector Na	me HILI SWI	Connector Name HILL DESCENT CONTROL SWITCH
Connector Color WHITE	lor WH	믵
赋 H.S.	<u>u</u>	9 1 5
Terminal No.	Color of Wire	Signal Name
5	В	_
9	BR	_

54	Connector Name VDC OFF SWITCH	4	4 8 2 1	Signal Name	I	1
M154	ne VDC	or GR/	9 2	Color of Wire	æ	BR
Connector No.	Sonnector Nar	Sonnector Color GRAY	赋 H.S.	Terminal No.	3	4

Connector No.	. M149	9
Connector Na	me DIFF	Connector Name DIFFERENTIAL LOCK MODE SWITCH
Connector Color WHITE	lor WHI	TE
原 H.S.	4 2	9311
Terminal No.	Color of Wire	Signal Name
4	В	I
5	BR	ı

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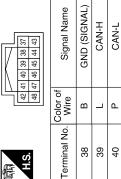
Connector No.	. M156			Connector No. M159	. M159	6		Connector No. M160). M16i	0	
Connector Na.	me A/T SHII	Connector Name A/T SHIFT SELECTOR		Connector Nai	me CON	Connector Name DOOR MIRROR REMOTE CONTROL SWITCH		Connector Na	tme FRO SWI	Connector Name FRONT HEATED SEAT SWITCH RH	
Connector Color WHITE	lor WHILE			Connector Color WHITE	lor WHI	TE		Connector Color BROWN	olor BRO	NW	
所 H.S.	2 4 3	6 7 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		H.S.	9 9	3 4 5 6 7		崎 H.S.	2 4 5	4 5 1 0 8 4 5 1 0 8 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
			L				_				Г
Terminal No. Wire	Color of Wire	Signal Name		Terminal No. Wire	Color of Wire	Signal Name		Terminal No. Wire	Color of Wire	Signal Name	
ю	æ	I		15	BR	-		2	SB	1	
2	BB	1		16	ш	1		9	0	1	

Connector No. M161	M161	Connector No. M163	M163		Connector No.	E10	
Connector Nar	Connector Name FRONT HEATED SEAT SWITCH LH	Connector Nar	Connector Name CLUTCH INTERLOCK CANCEL SWITCH	NTERLOCK	Connector Name WIRE TO WIRE	wire TO	WIRE
Connector Color WHITE	or WHITE	Connector Color WHITE	or WHITE]	
H.S.	5 2 1 3 6 1 3 1 0 1 3 1 0 1 1 3 1 0 1 1 1 1 1 1 1	赋取 H.S.	3 6 2 1 4	4	H.S.	1 4 5 5 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	
Terminal No. Wire	Color of Signal Name	Terminal No. Wire		Signal Name	Terminal No. Wire	olor of Wire	Signal Name
.C	ı	5	В	ı	9	W	_
9	BR -	9	BR	1			

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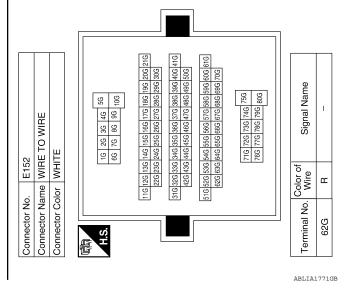
	⊢_Ŷ					
4	Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM	CK	59 58 57 62 61 60	Signal Name	TAIL LAMP	GND (POWER)
E124	ne POV	or BLACK	85 89	Color of Wire	GR	В
Connector No.	Connector Nar	Connector Color	原引 H.S.	Terminal No. Wire	22	59

Connector No.	E122
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color WHITE	WHITE





	IE TO WIRE	型	3	Signal Name	_	_
E26	me WIF	or WH	8 9 10	Color of Wire	Ь	٦
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	H.S.	Terminal No.	10	11



< ECU DIAGNOSIS >

[WITH POWER DOOR LOCKS]

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ECU DIAGNOSIS

BCM (BODY CONTROL MODULE)

Reference Value

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
IGN ON SW	Ignition switch OFF or ACC	OFF
IGN ON SW	Ignition switch ON	ON
KEY ON CW	Mechanical key is removed from key cylinder	OFF
KEY ON SW	Mechanical key is inserted to key cylinder	ON
CDL LOCK CW	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
DOOD CW DD	Driver's door closed	OFF
DOOR SW-DR	Driver's door opened	ON
DOOD SW AS	Passenger door closed	OFF
DOOR SW-AS	Passenger door opened	ON
DOOD CW DD	Rear RH door closed	OFF
DOOR SW-RR	Rear RH door opened	ON
DOOD CW DI	Rear LH door closed	OFF
DOOR SW-RL	Rear LH door opened	ON
KEN ONLIN OM	Other than driver door key cylinder LOCK position	OFF
KEY CYL LK-SW	Driver door key cylinder LOCK position	ON
KEY CYL UN-SW	Other than driver door key cylinder UNLOCK position	OFF
KET CTL UN-SW	Driver door key cylinder UNLOCK position	ON
KEYLESS LOCK	"LOCK" button of key fob is not pressed	OFF
RETLESS LOCK	"LOCK" button of key fob is pressed	ON
KEYLESS UNLOCK	"UNLOCK" button of key fob is not pressed	OFF
RETLESS UNLOCK	"UNLOCK" button of key fob is pressed	ON
ACC ON SW	Ignition switch OFF	OFF
ACC ON SW	Ignition switch ACC or ON	ON
REAR DEF SW	Rear window defogger switch OFF	OFF
REAR DEF 3W	Rear window defogger switch ON	ON
LIGHT SW 1ST	Lighting switch OFF	OFF
LIGITI SW 131	Lighting switch 1ST	ON
BUCKLE SW	The seat belt (driver side) is unfastened. [Seat belt switch (driver side) OFF]	OFF
DOORLE SW	The seat belt (driver side) is fastened. [Seat belt switch (driver side) ON]	ON
KEYLESS PANIC	PANIC button of key fob is not pressed	OFF
NL I LEGO PANIC	PANIC button of key fob is pressed	ON

< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status
DIVE LOW LINE OV	LOCK/UNLOCK button of key fob is not pressed and held simultaneously	OFF
RKE LCK-UNLCK	LOCK/UNLOCK button of key fob is pressed and held simultaneously	ON
	UNLOCK button of key fob is not pressed	OFF
RKE KEEP UNLK	UNLOCK button of key fob is pressed and held	ON
LUDEAMOW	Lighting switch OFF	OFF
HI BEAM SW	Lighting switch HI	ON
LIEAD LAMB CW/4	Lighting switch OFF	OFF
HEAD LAMP SW 1	Lighting switch 2ND	ON
LIEAD LAMB OW O	Lighting switch OFF	OFF
HEAD LAMP SW 2	Lighting switch 2ND	ON
	Lighting switch OFF	OFF
AUTO LIGHT SW	Lighting switch AUTO	ON
	Other than lighting switch PASS	OFF
PASSING SW	Lighting switch PASS	ON
	Front fog lamp switch OFF	OFF
FR FOG SW	Front fog lamp switch ON	ON
	Turn signal switch OFF	OFF
TURN SIGNAL R	Turn signal switch RH	ON
	Turn signal switch OFF	OFF
TURN SIGNAL L	Turn signal switch LH	ON
	Cargo lamp switch OFF	OFF
CARGO LAMP SW	Cargo lamp switch ON	ON
	Bright outside vehicle	5V
OPTICAL SENSOR	Dark outside vehicle	0V
	Ignition switch OFF or ACC	OFF
IGN SW CAN	Ignition switch ON	ON
	Front wiper switch OFF	OFF
FR WIPER HI	Front wiper switch HI	ON
	Front wiper switch OFF	OFF
FR WIPER LOW	Front wiper switch LO	ON
	Front wiper switch OFF	OFF
FR WIPER INT	Front wiper switch INT	ON
	Front washer switch OFF	OFF
FR WASHER SW	Front washer switch ON	ON
INT VOLUME		1 - 7
INT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	
FR WIPER STOP	Any position other than front wiper stop position Front wiper stop position	OFF ON
VEHICLE OBEED		_
VEHICLE SPEED	While driving	Equivalent to speedometer reading
HAZARD SW	Hazard switch ON	OFF
	Hazard switch ON	ON
BRAKE SW	Brake pedal is not depressed	OFF
	Brake pedal is depressed	ON

BCM (BODY CONTROL MODULE) [WITH POWER DOOR LOCKS]

< ECU DIAGNOSIS >

Monitor Item	Condition	Value/Status
FANLONI CIC	Blower fan motor switch OFF	OFF
FAN ON SIG	Blower fan motor switch ON (other than OFF)	ON
AIR COND SW	Compressor ON is not requested from auto amp. (A/C indicator OFF, blower fan motor switch OFF or etc.)	OFF
AIR COIND SW	Compressor ON is requested from auto amp. (A/C indicator ON and blower fan motor switch ON).	ON
OIL PRESS SW	Ignition switch OFF or ACC Engine running	OFF
	Ignition switch ON	ON
AIR PRESS FL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front LH tire
AIR PRESS FR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front RH tire
AIR PRESS RR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear RH tire
AIR PRESS RL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear LH tire
D DECCT EL 4	ID of front LH tire transmitter is registered	DONE
D REGST FL1	ID of front LH tire transmitter is not registered	YET
D REGST FR1	ID of front RH tire transmitter is registered	DONE
D KEG91 FK1	ID of front RH tire transmitter is not registered	YET
D REGST RR1	ID of rear RH tire transmitter is registered	DONE
DILUGITATI	ID of rear RH tire transmitter is not registered	YET
D REGST RL1	ID of rear LH tire transmitter is registered	DONE
D NEGOT KLI	ID of rear LH tire transmitter is not registered	YET
VARNING LAMP	Tire pressure indicator OFF	OFF
VAINING LAWF	Tire pressure indicator ON	ON
BUZZER	Tire pressure warning alarm is not sounding	OFF
DULLER	Tire pressure warning alarm is sounding	ON

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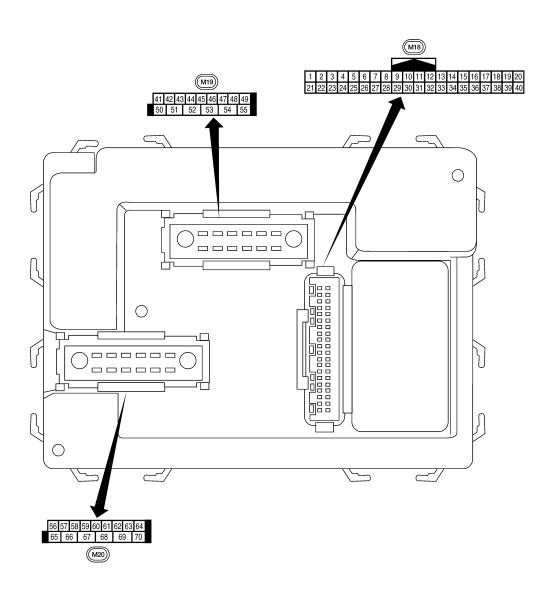
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Terminal Layout



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Physical Values

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	14/:		Signal		Measuring condition	Defenses value as week famo
Terminal	Wire color	Item	input/ output	Ignition switch	Operation or condition	Reference value or waveform (Approx.)
1	BR	Ignition keyhole illumi-	Output	OFF	Door is locked (SW OFF)	Battery voltage
	DIX	nation	Cutput	011	Door is unlocked (SW ON)	0V
2	Р	Combination switch input 5	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 6 4 2 0 **5ms SKIA5291E
3	SB	Combination switch input 4	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 64 20 •••5ms skias292E
4	V	Combination switch input 3	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 6 4 2 0 **5ms
5	L	Combination switch input 2				(V)
6	R	Combination switch input 1	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	** 5ms SKIA5292E
		Front door lock as-			ON (open, 2nd turn)	Momentary 1.5V
7	GR	sembly LH (key cylin- der switch) unlock	Input		OFF (closed)	0V
		Front door lock as-		OFF	On (open)	Momentary 1.5V
8	SB	sembly LH (key cylin- der switch) lock	Input		OFF (closed)	0V
9	Y	Rear window defogger	Input	ON	Rear window defogger switch ON	0V
9	T	switch	input	ON	Rear window defogger switch OFF	5V
11	G/B	Ignition switch (ACC or ON)	Input	ACC or ON	Ignition switch ACC or ON	Battery voltage
		Front door switch RH (All)			ON (open)	0V
12	LG	Rear door switch up- per RH (King Cab) Rear door switch low- er RH (King Cab)	Input	OFF	OFF (closed)	Battery voltage

Terminal Wire color Item Signal input/ output Ignition switch Operation or condition 13 L Rear door switch RH (Crew Cab) Input OFF ON (open) OFF (closed) Battery to the check connector Input OFF OFF OFF OFF OFF OFF OFF OFF OFF OF	
13 L (Crew Cab) Input OFF OFF (closed) Battery v 15 W Tire pressure warning check connector Input OFF — 5V	
15 W Tire pressure warning check connector Input OFF — 5V	,
check connector input OFF — 5v	roltage
Demote keydeen onto	,
18 BR Remote keyless entry receiver (Ground) Output OFF — 0V	,
Remote keyless entry receiver (power supply) Output OFF Ignition switch OFF	LIIA1893E
Stand-by (keyfob buttons released) Remote keyless entry receiver signal (Sig- Input OFF	LITA1894E
nal) When remote keyless entry receiver receives signal from keyfob (keyfob buttons pressed) When remote keyless entry receives signal from keyfob (seyfob buttons pressed)	LITAL895E
21 GR NATS antenna amp. Input OFF → ON Ignition switch (OFF → ON) Just after turning ON: Pointer of mov	tester should
23 G Security indicator Output OFF Goes OFF → illuminates (Every 2.4 seconds) Battery voltages	age → 0V
25 BR NATS antenna amp. Input $OFF \rightarrow ON$ Ignition switch (OFF \rightarrow ON) Just after turning ON: Pointer of move	tester should
27 W Compressor ON sig- Input ON A/C switch OFF 5V	,
nal nal A/C switch ON 0v	,
28 R Front blower monitor Input ON Front blower motor OFF Battery v Front blower motor ON OV	
ON OV	
29 G Hazard switch Input OFF OFF 5V	
ON ON	,
31 GR Cargo lamp switch Input OFF OFF Battery v	roltage

< ECU DIAGNOSIS >

	Wire		Signal		Measuring condition	Reference value or waveform
Terminal	color	Item	input/ output	Ignition switch	Operation or condition	(Approx.)
32	0	Combination switch output 5	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 6 4 2 0
33	GR	Combination switch output 4	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 6 4 2 0 ***5ms
34	G	Combination switch output 3	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 6 4 2 0 +-5ms SKIA5291E
35	BR	Combination switch output 2				(V)
36	LG	Combination switch output 1	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	6 4 2 0
27	В	Kov owitch	Innut	OFF	Key inserted	Battery voltage
37	В	Key switch	Input	OFF	Key removed	0V
38	W/R	Ignition switch (ON)	Input	ON	_	Battery voltage
39	L	CAN-H	_	_	_	_
40 45	P V	CAN-L Lock switch	— Input	OFF	ON (lock) OFF	OV Battery voltage
46	LG	Unlock switch	Input	OFF	ON (unlock) OFF	0V Battery voltage
		Front door switch LH (All)			ON (open)	ov
47	GR	Rear door switch upper LH (King Cab)	Input	OFF	OFF (closed)	Rattony voltage
		Rear door switch low- er LH (King Cab)			OFF (Glosea)	Battery voltage
48	Р	Rear door switch LH (Crew Cab)	Input	OFF	ON (open) OFF (closed)	0V Battery voltage
50	Р	Cargo lamp	Output	OFF	Any door open (ON) All doors closed (OFF)	0V Battery voltage

	Wire		Signal		Measuring con	dition	Defenses value annual famo
Terminal	color	Item	input/ output	Ignition switch	Operation	or condition	Reference value or waveform (Approx.)
51	0	Trailer turn signal (right)	Output	ON	Turn right ON		(V) 15 10 500 ms 500 ms
52	LG	Trailer turn signal (left)	Output	ON	Turn left ON		(V) 15 10 500 ms SKIA3009J
56	R/Y	Battery saver output	Output	OFF	30 minutes after switch is turne		0V
		, , , , , , , , , , , , , , , , , , , ,		ON	-	_	Battery voltage
57	R/Y	Battery power supply	Input	_	-	_	Battery voltage
58	W	Optical sensor	Input	ON	nated	sensor is illumi- sensor is not illu-	3.1V or more 0.6V or less
59	GR	Front door lock as- sembly LH (unlock)	Output	OFF	OFF (neutral) ON (unlock)		0V Battery voltage
60	LG	Turn signal (left)	Output	ON	Turn left ON		(V) 15 10 5 0
61	G	Turn signal (right)	Output	ON	Turn right ON		(V) 15 10 500 ms
63	BR	Interior room/map lamp	Output	OFF	Any door switch	ON (open) OFF (closed)	0V Battery voltage
65	V	All door lock actuators (lock)	Output	OFF	OFF (neutral) ON (lock)		0V Battery voltage
-		Front door lock actua-			OFF (neutral)		0V
66	L	tor RH, rear door lock actuators LH/RH (un- lock)	Output	OFF	ON (unlock)		Battery voltage
67	В	Ground	Input	ON	-	_	0V

< ECU DIAGNOSIS >

[WITH POWER DOOR LOCKS]

	Wire		Signal		Measuring condition	Reference value or waveform
Terminal	color	Item	input/ output	Ignition switch	Operation or condition	(Approx.)
					Ignition switch ON	Battery voltage
					Within 45 seconds after ignition switch OFF	Battery voltage
68 ¹	0	Power window power supply (RAP)	Output	_	More than 45 seconds after ignition switch OFF	0V
					When front door LH or RH is open or power window timer operates	0V
					Ignition switch ON	Battery voltage
					Within 45 seconds after ignition switch OFF	Battery voltage
68 ²	SB	Power window power supply (RAP)	Output	_	More than 45 seconds after ignition switch OFF	0V
					When front door LH or RH is open or power window timer operates	0V
69	Р	Power window power supply (BAT)	Output	OFF	_	Battery voltage
70	W	Battery power supply	Input	OFF	_	Battery voltage

^{1:} King cab (with power door lock system)

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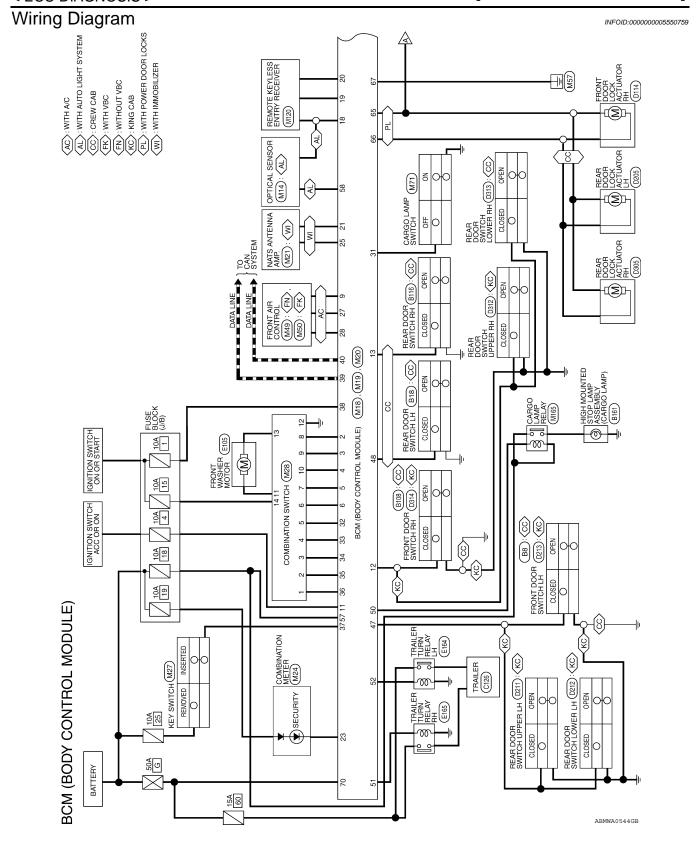
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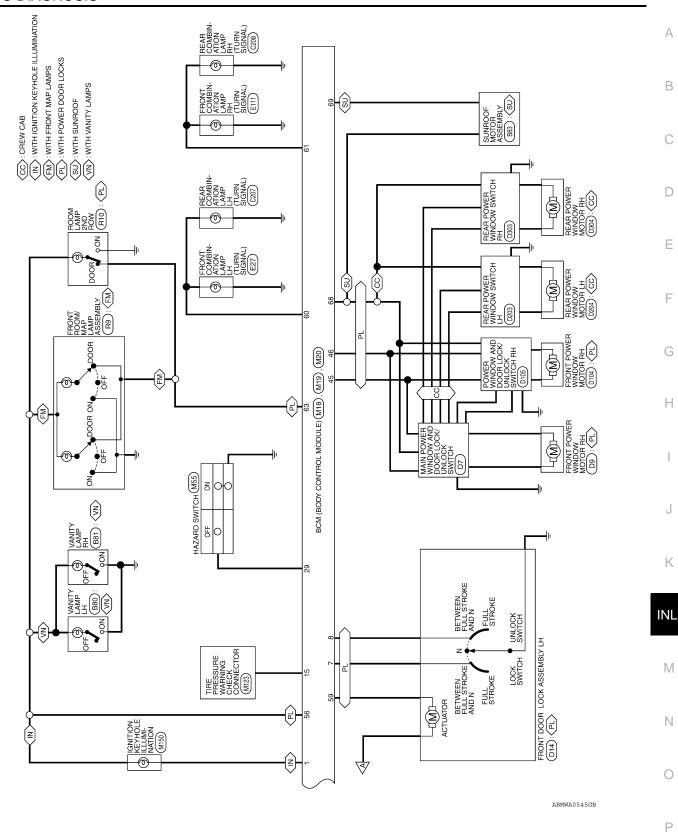
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^{2:} Crew cab (with power door lock system)





Revision: October 2009 INL-57 2010 Frontier

BCM (BODY CONTROL MODULE) CONNECTORS

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

	NTROL		17 48 49 54 55		Signal Name					LOCK SW	CDL UNLOCK SW	SW (DR)	SW (RL)		LAMP PUT	LER OUTPUT HT)	LER OUTPUT FT)			
	BCM (BODY CONTROL MODULE)	WHITE	41 42 43 44 45 46 47 50 51 52 53 54			'	ı	'	'	CDLLO	CDF NNF	DOOR SW (DR)	DOOR SW (RL)	1	CARGO LAMP OUTPUT	TRAILER FLASHER OUT (RIGHT)	TRAII FLASHER ((LEF	'	'	1
M10		Ľ.	4	1	Color of Wire	ı	١.	ı	ı	>	FG	GR	Ь	ı	۵	0	P	ı	ı	1
Oppositor No	Connector Name	Connector Color		H.S.	Terminal No.	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55

	Color of	
Terminal No.	Wire	Signal Name
20	9	KEYLESS TUNER SIGNAL
21	GR	IMMOBILIZER ANTENNA SIGNAL (CLOCK)
22	ı	ı
23	g	SECURITY INDICATOR OUTPUT
24	1	ı
25	BR	IMMOBILIZER ANTENNA SIGNAL (RX,TX)
26	-	1
27	8	AIRCON SW
28	Œ	BLOWER FAN SW
59	9	HAZARD SW
30	_	1
31	GR	CARGO LAMP SW
32	0	OUTPUT 5
33	GR	OUTPUT 4
34	9	OUTPUT 3
35	ЫB	OUTPUT 2
36	FG	OUTPUT 1
37	В	KEY SW
38	M/R	IGN SW
39	٦	CAN-H
40	Д	CAN-L

Connector Color	+	WHITE
	4	
H.S.	4	
1 2 3 4 5 6 21 22 23 24 25 26	7 8 9 10 27 28 29 30	11 12 13 14 15 16 17 18 19 20 31 32 33 34 35 36 37 38 39 40
Terminal No.	Color of Wire	Signal Name
1	BR	KEY RING OUTPUT
2	Ь	INPUT 5
3	SB	INPUT 4
4	۸	INPUT 3
5	٦	INPUT 2
9	ш	INPUT 1
7	ВĐ	KEY CYLINDER UNLOCK SW
8	SB	KEY CYLINDER LOCK SW
6	٨	RR DEFOGGER SW
10	_	1
11	g/9	ACC SW
12	ГG	DOOR SW (AS)
13	٦	DOOR SW (RR)
14	_	_
15	Μ	TPMS MODE TRIGGER SW
16	-	-
17	-	ı
18	BR	KEYLESS & AUTO LIGHT SENSOR GND
19	۸	KEYLESS TUNER POWER SUPPLY OUTPUT

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ON rotoggo		ACM	
Connector Name			COMBINATION SWITCH
	2 2	3 3	
Connector Color		MHI	
Į.			
臣 H.S.	12 4	1 3	10 <u> </u>
Terminal No.	Color of Wire	Jo e	Signal Name
1	ΓG		INPUT 1
2	BR	-	INPUT 2
3	Э		INPUT 3
4	GR	~	INPUT 4
5	0		INPUT 5
9	Œ		OUTPUT 1
7	Γ		OUTPUT 2
8	Ь		OUTPUT 5
6	SB	~	OUTPUT 4
10	>		OUTPUT 3
11	0		WASH FR (-) RR (+)
12	В		GND
13	Γ		WASH FR (+) RR (-)
14	M/G	(T)	IGN
		ĺ	

Signal Name	DOOR LOCK OUTPUT (ALL)	DOOR UNLOCK OUTPUT (OTHER)	GND (POWER)	POWER WINDOW POWER SUPPLY OUTPUT (LINKED TO RAP) (WITH POWER DOOR LOCK SYSTEM)	POWER WINDOW POWER SUPPLY OUTPUT (LINKED TO RAP) (CREW CAB WITHOUT POWER DOOR LOCK SYSTEM)	POWER WINDOW POWER SUPPLY OUTPUT (BAT)	BAT (F/L)
Color of Wire	>	Г	В	0	SB	А	Μ
Terminal No.	65	99	29	89	89	69	20

0	BCM (BODY CONTROL MODULE)	BLACK	65 66 67 68 69 70	Signal Name	BATTERY SAVER OUTPUT	BAT (FUSE)	AUTO LIGHT SENSOR INPUT 2	DOOR UNLOCK OUTPUT (DR)	FLASHER OUTPUT (LEFT)	FLASHER OUTPUT (RIGHT)	I	ROOM LAMP OUTPUT	I
. M20			565756	Color of Wire	₽	₽	≯	GR	re	g	ı	BR	ı
Connector No.	Connector Name	Connector Color	原 H.S.	Terminal No.	56	57	58	59	09	61	62	63	64

Fail Safe

Fail-safe index

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

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< ECU DIAGNOSIS >

[WITH POWER DOOR LOCKS]

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

DTC Inspection Priority Chart

INFOID:0000000005550761

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
3	C1729: VHCL SPEED SIG ERR C1735: IGNITION SIGNAL
4	 C1704: LOW PRESSURE FL C1705: LOW PRESSURE FR C1706: LOW PRESSURE RR C1707: LOW PRESSURE RL C1708: [NO DATA] FL C1709: [NO DATA] FR C1710: [NO DATA] RR C1711: [NO DATA] RR C1711: [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] RR C1720: [CODE ERR] FL C1721: [CODE ERR] FR C1722: [CODE ERR] RR C1723: [CODE ERR] RR C1724: [BATT VOLT LOW] FL C1725: [BATT VOLT LOW] FR 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.

CONSULT display	Fail-safe	Tire pressure monitor warning lamp ON	Reference page
No DTC is detected. further testing may be required.	_	_	_
U1000: CAN COMM CIRCUIT	_	_	BCS-28

< ECU DIAGNOSIS >

[WITH POWER DOOR LOCKS]

CONSULT display	Fail-safe	Tire pressure monitor warning lamp ON	Reference page
B2190: NATS ANTTENA AMP	_	_	<u>SEC-18</u>
B2191: DIFFERENCE OF KEY	_	_	<u>SEC-21</u>
B2192: ID DISCORD BCM-ECM	_	_	<u>SEC-22</u>
B2193: CHAIN OF BCM-ECM	_	_	SEC-24
C1708: [NO DATA] FL	_	_	<u>WT-14</u>
C1709: [NO DATA] FR	_	_	<u>WT-14</u>
C1710: [NO DATA] RR	_	_	<u>WT-14</u>
C1711: [NO DATA] RL	_	_	<u>WT-14</u>
C1712: [CHECKSUM ERR] FL	_	_	<u>WT-16</u>
C1713: [CHECKSUM ERR] FR	_	_	<u>WT-16</u>
C1714: [CHECKSUM ERR] RR	_	_	<u>WT-16</u>
C1715: [CHECKSUM ERR] RL	_	_	<u>WT-16</u>
C1716: [PRESSDATA ERR] FL	_	_	<u>WT-18</u>
C1717: [PRESSDATA ERR] FR	_	_	<u>WT-18</u>
C1718: [PRESSDATA ERR] RR	_	_	<u>WT-18</u>
C1719: [PRESSDATA ERR] RL	_	_	<u>WT-18</u>
C1720: [CODE ERR] FL	_	_	<u>WT-16</u>
C1721: [CODE ERR] FR	_	_	<u>WT-16</u>
C1722: [CODE ERR] RR	_	_	<u>WT-16</u>
C1723: [CODE ERR] RL	_	_	<u>WT-16</u>
C1724: [BATT VOLT LOW] FL	_	_	<u>WT-16</u>
C1725: [BATT VOLT LOW] FR	_	_	<u>WT-16</u>
C1726: [BATT VOLT LOW] RR	_	_	<u>WT-16</u>
C1727: [BATT VOLT LOW] RL	_	_	<u>WT-16</u>
C1729: VHCL SPEED SIG ERR	_	_	<u>WT-19</u>
C1735: IGNITION SIGNAL			

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INTERIOR LIGHTING SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[WITH POWER DOOR LOCKS]

SYMPTOM DIAGNOSIS

INTERIOR LIGHTING SYSTEM SYMPTOMS

Symptom Table

CAUTION:

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

Symptom	Possible cause	Inspection item
All of the following lamps do not turn ON Front room/map lamp assembly (if equipped) Room lamp 2nd row Vanity mirror lamps (if equipped) Ignition keyhole illumination (if equipped)	Harness between BCM and each interior room lamp Harness between BCM and each door switch BCM	Battery saver output/power supply circuit Refer to INL-17.
Some or all of the following interior room lamps do not turn ON/OFF Front room/map lamp assembly (if equipped) Room lamp 2nd row	Harness between BCM and each interior room lamp BCM	Interior room lamp control circuit Refer to INL-19.
Cargo lamp does not turn ON/OFF	Harness between fuse block (J/B) and cargo lamp relay Harness between cargo lamp relay and cargo lamp Harness between BCM and cargo lamp relay BCM	Cargo lamp control circuit Refer to INL-21.
Ignition keyhole illumination does not turn ON/ OFF	Harness between BCM and ignition keyhole illumination BCM	Ignition keyhole illumination circuit Refer to INL-24
Interior room lamp timer does not activate. (It turns ON/ OFF when the door opens/closes.)	_	Check the interior room lamp setting. Refer to INL-12.
Interior room lamp battery saver does not activate.		Check the interior room lamp battery saver setting. Refer to INL-13.

PRECAUTION

PRECAUTIONS

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

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

WARNING:

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

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

WARNING:

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

General precautions for service operations

- When removing or disassembling any part, be careful not to damage or deform it. Protect parts which may get in the way with cloth.
- When removing parts with a screw driver or other tool, protect parts by wrapping them with vinyl or tape.
- Keep removed parts protected with cloth.
- If an non-reuseable part is removed, replace it with a new one.
- After re-assembly has been completed, make sure each part functions correctly.
- · Never work with wet hands.
- Turn the lighting switch OFF before disconnecting and connecting the connector.
- Do not use organic solvent (paint thinner or gasoline) to clean lamps or remove sealant residue.

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Revision: October 2009 INL-63 2010 Frontier

ON-VEHICLE REPAIR

INTERIOR ROOM LAMP

Removal and Installation

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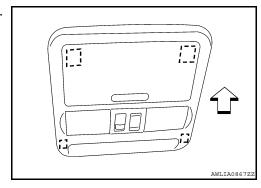
FRONT ROOM/MAP LAMP ASSEMBLY

Removal

The map lamp is replaced as part of the overhead console assembly. Refer to INT-24, "Removal and Installation".

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Installation

Installation is in the reverse order of removal.

Bulb Replacement

1. Using a suitable tool (A), remove map lamp lens (1).

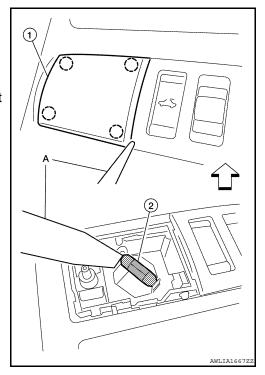
(): Pawl

CAUTION:

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

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

Map lamp bulb : 12V - 8W



VANITY MIRROR LAMP

Removal

INTERIOR ROOM LAMP

< ON-VEHICLE REPAIR >

[WITH POWER DOOR LOCKS]

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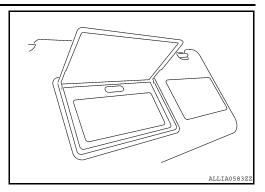
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The vanity mirror lamp is replaced as part of the sunvisor assembly. Refer to INT-24, "Removal and Installation".



Installation

Installation is in the reverse order of removal.

Bulb Replacement

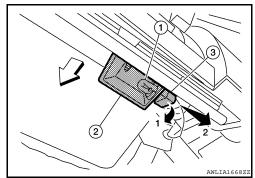
The vanity mirror lamp bulb is replaced as part of the sunvisor assembly. Refer to INT-24, "Removal and Installation".

GLOVE BOX LAMP

Removal

- 1. Remove lower instrument panel RH and glove box. Refer to IP-11, "Removal and Installation".
- 2. Rotate glove box lamp socket (3) with bulb (1) counterclockwise, then pull away from lamp shield (2) on steering member to remove.

⟨□: Vehicle front



Installation

Installation is in the reverse order of removal.

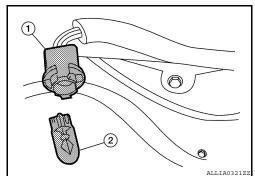
Bulb Replacement

1. Remove glove box lamp.

Revision: October 2009

2. Pull bulb (2) straight out from glove box lamp socket (1) to remove.

Glove box lamp bulb : 12V - 3.4W



ROOM LAMP

Removal

INL-65

2010 Frontier

INTERIOR ROOM LAMP

< ON-VEHICLE REPAIR >

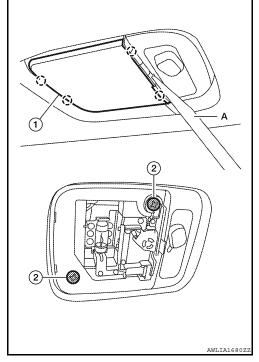
[WITH POWER DOOR LOCKS]

1. Using a suitable tool (A), release the pawls and remove the room lamp lens (1).

(): Pawl CAUTION:

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

- 2. Remove room lamp screws (2).
- 3. Disconnect the connector, then remove room lamp.



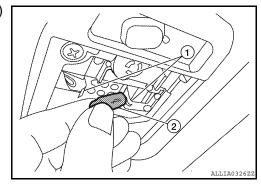
Installation

Installation is in the reverse order of removal.

Bulb Replacement

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

Room lamp bulb : 12V - 8W



[WITH POWER DOOR LOCKS]

ILLUMINATION

Removal and Installation

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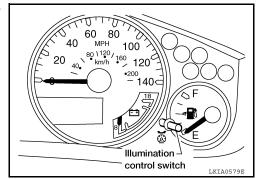
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ILLUMINATION CONTROL SWITCH

Removal

The illumination control switch is replaced as a part of the combination meter assembly. Refer to MWI-95, "Removal and Installation".



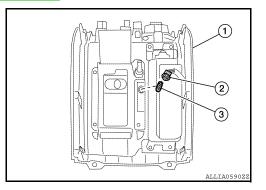
Installation

Installation is in the reverse order of removal.

A/T FINISHER LAMP

Removal

- 1. Remove A/T finisher from center console. Refer to IP-17, "Exploded View".
- 2. Rotate A/T finisher lamp socket (2) with bulb (3) counterclockwise, then pull away from finisher (1).



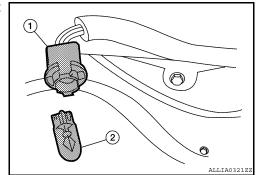
Installation

Installation is in the reverse order of removal.

Bulb Replacement

- Remove A/T finisher from center console. Refer to <u>IP-17</u>, "Exploded View".
- 2. Remove A/T finisher lamp socket (1), then pull bulb (2) straight out away from socket.

AT finisher lamp bulb : 12V - 3W



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BULB SPECIFICATIONS

< SERVICE DATA AND SPECIFICATIONS (SDS)

[WITH POWER DOOR LOCKS]

SERVICE DATA AND SPECIFICATIONS (SDS)

BULB SPECIFICATIONS

Interior Lamp/Illumination

INFOID:0000000005272836

Item	Wattage (W)*
Map lamp	8
Vanity lamp	*
Glove box lamp	3.4
Room lamp	8
A/T finisher lamp	3

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

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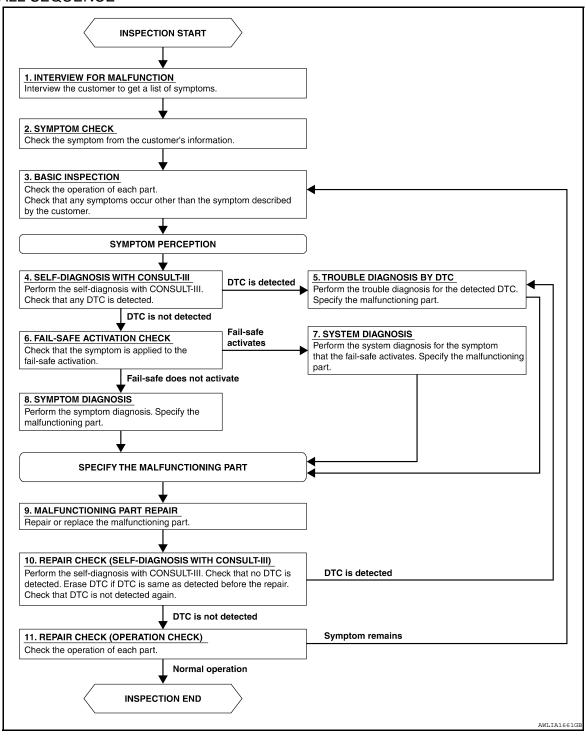
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BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

OVERALL SEQUENCE



DIAGNOSIS AND REPAIR WORKFLOW

[WITHOUT POWER DOOR LOCKS]

< 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-III

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

Is any DTC detected?

YES >> GO TO 5

NO >> GO TO 6

5.TROUBLE DIAGNOSIS BY DTC

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

>> GO TO 9

6. FAIL-SAFE ACTIVATION CHECK

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

Does the fail-safe activate?

YES >> GO TO 7

NO >> GO TO 8

7. SYSTEM DIAGNOSIS

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

>> GO TO 9

8. SYMPTOM DIAGNOSIS

Perform the symptom diagnosis. Specify the malfunctioning part.

>> GO TO 9

9. MALFUNCTION PART REPAIR

Repair or replace the malfunctioning part.

>> GO TO 10

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

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

Is any DTC detected?

YES >> GO TO 5

DIAGNOSIS AND REPAIR WORKFLOW	
< BASIC INSPECTION > [WITHOUT POWE	R DOOR LOCKS]
NO >> GO TO 11	
11. REPAIR CHECK (OPERATION CHECK)	А
Check the operation of each part.	
Does it operate normally?	В
YES >> Inspection End NO >> GO TO 3	
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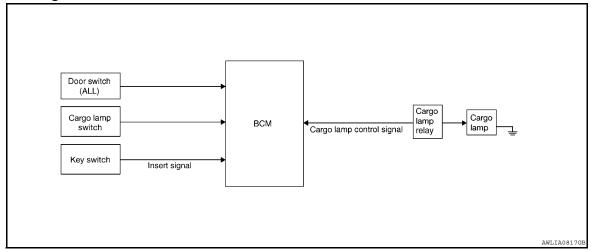
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FUNCTION DIAGNOSIS

INTERIOR ROOM LAMP

System Diagram

INFOID:0000000005272838



System Description

INFOID:0000000005272839

OUTLINE

- Front room/map lamp (if equipped) and room lamp 2nd row are powered by fuse block (J/B) fuse number 18 (10A). When the lamps are set to the DOOR position, ground is provided through the door switches.
- Cargo lamp is controlled by the cargo lamp control function of the BCM.

Component Parts Location

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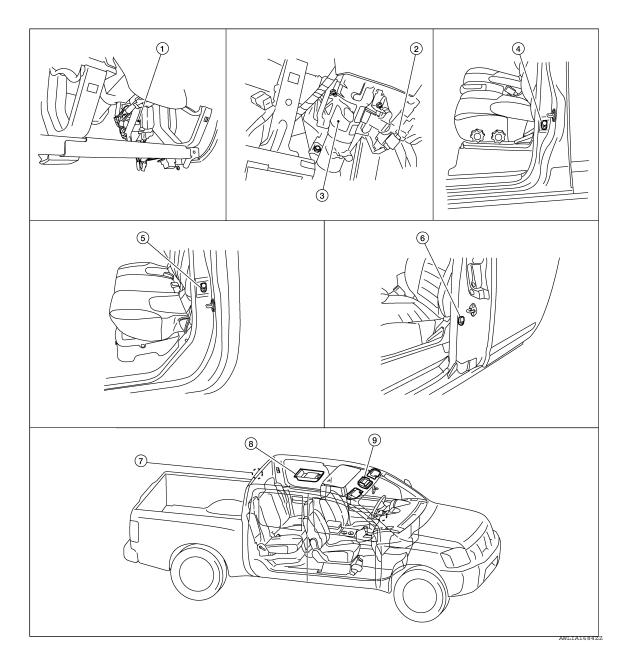
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- BCM M18, M19, M20 (view with lower 2. instrument panel LH removed)
- 4. Front door switch LH B8 (crew cab)
 Front door switch RH B108 (crew cab)
- 7. Cargo lamp B161

- Key switch M27
- Rear door switch LH B18 (crew cab)
 Rear door switch RH B116 (crew cab)
- . Room lamp 2nd row R10
- 3. Steering column assembly
- 6. Front door switch LH D213 (king cab) Front door switch RH D314 (king cab)
- Front room/map lamp assembly (with front map lamps) R9

Component Description

INFOID:0000000005272841

Part name	Description
BCM	Provides ground for the cargo lamp relay.

INTERIOR ROOM LAMP

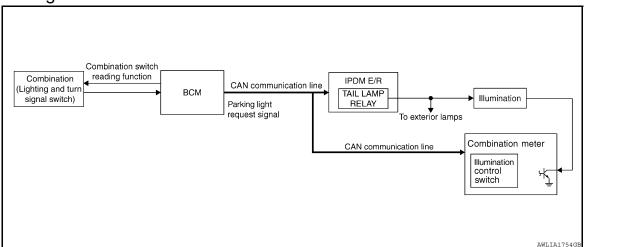
< FUNCTION DIAGNOSIS >

[WITHOUT POWER DOOR LOCKS]

Key switch	Provides key in ignition status to the BCM.
Door switches	Provides door OPEN/CLOSED status to the BCM. Provides ground for the room lamp 2nd row and front room/map lamp assembly (with front map lamps).

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 30 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 second 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.

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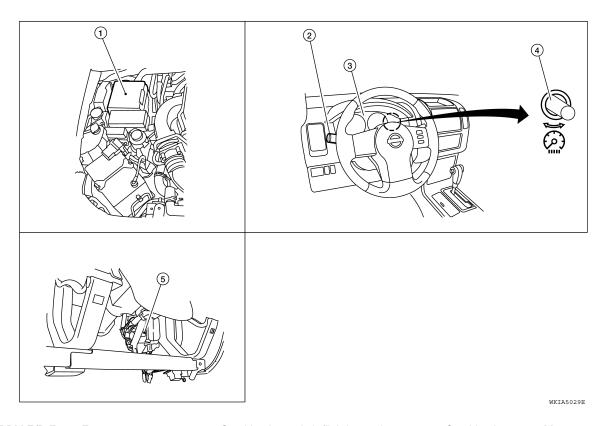
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Component Parts Location

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- IPDM E/R E122, E124
- Illumination control switch (built into combination meter)
- Combination switch (lighting and turn 3. Combination meter M24 signal switch) M28
- BCM M18, M20 (view with lower instrument panel LH removed)

Component Description

INFOID:0000000005272845

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 (lighting and turn signal switch) provides input to the BCM about the lighting switch position.	

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[WITHOUT POWER DOOR LOCKS]

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

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

INFOID:0000000005561351

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APPLICATION ITEM

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

Diagnosis mode	Function Description
WORK SUPPORT	Changes the setting for each system function.
SELF-DIAG RESULTS	Displays the diagnosis results judged by BCM. Refer to BCS-50, "DTC Index".
CAN DIAG SUPPORT MNTR	Monitors the reception status of CAN communication viewed from BCM.
DATA MONITOR	The BCM input/output signals are displayed.
ACTIVE TEST	The signals used to activate each device are forcibly supplied from BCM.
ECU IDENTIFICATION	The BCM part number is displayed.
CONFIGURATION	 Enables to read and save the vehicle specification. Enables to write the vehicle specification when replacing BCM.

SYSTEM APPLICATION

BCM can perform the following functions for each system.

It can perform the diagnosis modes except the following for all sub system selection items.

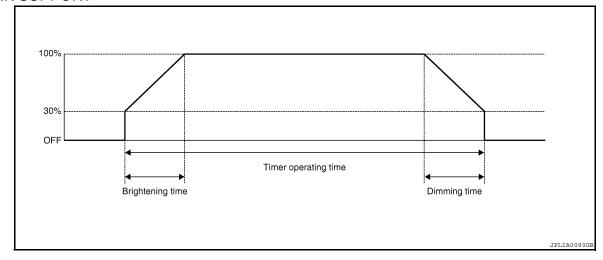
0	Cook acceptance and artifact it are	Diagnosis mode			
System	Sub system selection item	WORK SUPPORT	DATA MONITOR	ACTIVE TEST	_
BCM	BCM	×			_
Door lock	DOOR LOCK	×	×	×	_
Rear window defogger	REAR DEFOGGER		×	×	=
Warning chime	BUZZER		×	×	_
Interior room lamp timer	INT LAMP	×	×	×	_
Remote keyless entry system	MULTI REMOTE ENT	×	×	×	=
Exterior lamp	HEAD LAMP	×	×	×	_
Wiper and washer	WIPER	×	×	×	
Turn signal and hazard warning lamps	FLASHER		×	×	
Air conditioner	AIR CONDITONER		×		_
Combination switch	COMB SW		×		_
Immobilizer	IMMU		×	×	_
Interior room lamp battery saver	BATTERY SAVER	×	×	×	_
Vehicle security system	THEFT ALM	×	×	×	_
RAP (retained accessory power)	RETAINED PWR	×	×	×	_
Signal buffer system	SIGNAL BUFFER		×	×	_
TPMS (tire pressure monitoring system)	AIR PRESSURE MONITOR	×	×	×	=
Panic alarm system	PANIC ALARM			×	_

INT LAMP

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

INFOID:0000000005561352

WORK SUPPORT



Work Item	Setting item	Setting			
SET I/L D-UNLCK INTCON	ON*	With the interior room lamp timer function			
SET I/L D-UNLER INTCOM	OFF	Without th	ne interior room lamp timer function		
	MODE 1	0.5 sec.			
	MODE 2*	1 sec.			
	MODE 3	2 sec.			
ROOM LAMP ON TIME SET	MODE 4	3 sec.	Sets the interior room lamp gradual brightening time.		
	MODE 5	4 sec.			
	MODE 6	5 sec.			
	MODE 7	0 sec.			
	MODE 1	0.5 sec.			
	MODE 2	1 sec.			
	MODE 3	2 sec.			
ROOM LAMP OFF TIME SET	MODE 4*	3 sec.	Sets the interior room lamp gradual dimming time.		
	MODE 5	4 sec.			
	MODE 6	5 sec.			
	MODE 7	0 sec.			

^{*:} Initial setting

DATA MONITOR

Monitor Item [Unit]	Description			
IGN ON SW [ON/OFF]	Ignition switch (ON) status judges from IGN signal (ignition power supply)			
KEY ON SW [ON/OFF]	The switch status input from key switch			
DOOR SW-DR [ON/OFF]	Indicates condition of front door switch (all) and rear door switch upper and lower (king cab) LH			
DOOR SW-AS [ON/OFF]	Indicates condition of front door switch (all) and rear door switch upper and lower (king cab) RH			
DOOR SW-RR [ON/OFF]	Indicates condition of rear door switch RH (crew cab)			
DOOR SW- RL [ON/OFF]	Indicates condition of rear door switch LH (crew cab)			
KEY CYL LK-SW [ON/OFF]	Lock switch status input from door lock and unlock switch			

DIAGNOSIS SYSTEM (BCM)

< FUNCTION DIAGNOSIS >

[WITHOUT POWER DOOR LOCKS]

Monitor Item [Unit]	Description
KEY CYL UN-SW [ON/OFF]	Lock switch status input from door lock and unlock switch
CDL LOCK SW [ON/OFF]	Lock switch status input from door lock and unlock switch
CDL UNLOCK SW [ON/OFF]	Unlock switch status input from door lock and unlock switch
KEYLESS LOCK [ON/OFF]	Lock signal status received from remote keyless entry receiver (integrated in the BCM)
KEYLESS UNLOCK [ON/OFF]	Unlock signal status received from remote keyless entry receiver (integrated in the BCM)

ACTIVE TEST

Test Item	Operation	Description		
IGN ILLUM OFF		Outputs the ignition keyhole illumination control signal to turn the ignition keyhole illumination lamp ON.		
		Stops the ignition keyhole illumination control signal to turn the ignition keyhole illumination lamp OFF.		
INT I AMP	ON	Outputs the interior room lamp control signal to turn the interior room lamps ON.		
OFF		Stops the interior room lamp control signal to turn the interior room lamps OFF.		

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COMPONENT DIAGNOSIS

INTERIOR ROOM LAMP

Diagnosis Procedure

Regarding Wiring Diagram information, refer to INL-85, "Wiring Diagram".

CAUTION:

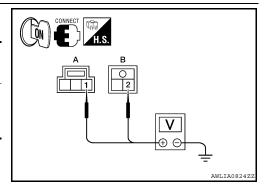
Before performing the diagnosis, check that the following is normal.

- Fuse
- Interior room lamp bulbs

1. CHECK INTERIOR ROOM LAMP POWER SUPPLY

Check voltage between interior room lamp connectors and ground.

Component	(-	+)	()	Voltogo	
Component	Connector	Terminal	(-)	Voltage	
Front room/map lamp (if equipped)	R9 (A)	1	Ground	Battery voltage	
Room lamp 2nd row	R10 (B)	2			



Is the inspection result normal?

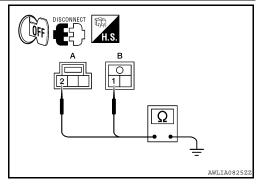
YES >> GO TO 2

NO >> Repair the harness or connectors.

2.CHECK INTERIOR ROOM LAMP GROUND

- Disconnect interior room lamp connectors.
- 2. Check continuity between interior room lamp connectors and ground while operating the door switches.

Component	(+)		(-)	Door switches	Continuity
Component	Connector	r Terminal (-)			
Front room/map lamp	R9 (A) 2		Open	Yes	
(if equipped)	IX9 (A)	R9 (A) 2	Ground	Closed	No
Doom Jama 2nd row D10 (D)	4	Giodila	Open	Yes	
Room lamp 2nd row	R10 (B)	U (D) I		Closed	No



Is the inspection result normal?

YES >> Replace the interior room lamp. Refer to INL-64, "Removal and Installation".

NO >> GO TO 3

3.CHECK DOOR SWITCHES

Check the door switches. Refer to INL-81, "Component Inspection (Door Switch)".

Is the inspection result normal?

YES >> • Crew cab models, repair the harness or connectors between the interior room lamp and the door switches.

• King cab models, GO TO 4

NO >> Replace the door switch.

4. CHECK DOOR SWITCH GROUND (KING CAB)

INTERIOR ROOM LAMP

< COMPONENT DIAGNOSIS >

[WITHOUT POWER DOOR LOCKS]

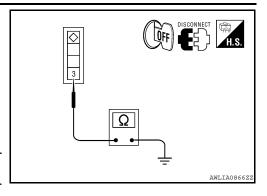
Check continuity between door switch connectors and ground.

Component	(+)	(-)	Continuity
Component	Connector	Terminal	(-)	
Front door switch LH	D213	3	Ground	Yes
Front door switch RH	D314	3	Giodila	163

Is the inspection result normal?

YES >> Repair the harness or connectors between the interior room lamp and the door switches.

NO >> Repair the harness or connectors between the door switch and ground.



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Component Inspection (Door Switch)

CREW CAB

1. CHECK DOOR SWITCHES

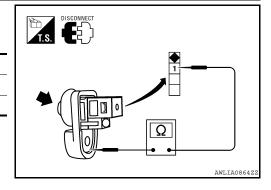
- 1. Disconnect door switch.
- 2. Check continuity between door switch terminals.

	Terminal	Condition	Continuity
Door switch	1 – Ground	Open	Yes
	i – Giodila	Closed	No

Is the inspection result normal?

YES >> Inspection End

NO >> Replace door switch.



KING CAB

1. CHECK DOOR SWITCHES

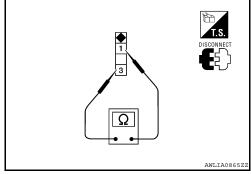
- 1. Disconnect door switch.
- 2. Check continuity between door switch terminals.

Item	Terminal	Condition	Continuity
Door switches	r switches 1 – 3	Open	Yes
Door switches		Closed	No

Is the inspection result normal?

YES >> Inspection End

NO >> Replace door switch.



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CARGO LAMP CONTROL CIRCUIT

Description

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

Diagnosis Procedure

INFOID:0000000005272851

Regarding Wiring Diagram information, refer to INL-85, "Wiring Diagram".

CAUTION:

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

- Fuse
- Cargo lamp bulb

1. CHECK CARGO LAMP OPERATION

Check the cargo lamp operation from the cargo lamp switch and the door switches.

Is the cargo lamp inoperative from all of the above switches?

YES >> GO TO 4

NO

- >> Inoperative from cargo lamp switch only, GO TO 2
 - Inoperative from door switches only, refer to <u>DLK-27, "KING CAB: Description"</u> (king cab), <u>DLK-29, "CREW CAB: Description"</u> (crew cab).

2. CHECK CARGO LAMP SWITCH

Check the cargo lamp switch. Refer to INL-84, "Component Inspection".

Is the inspection result normal?

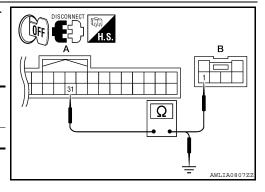
YES >> GO TO 3

NO >> Replace the cargo lamp switch.

3. CHECK CARGO LAMP SWITCH CIRCUIT

- Disconnect BCM connector M18 and cargo lamp switch connector.
- 2. Check continuity between BCM connector M18 (A) terminal 31 and cargo lamp switch connector M71 (B) terminal 1.

ConnectorTerminalConnectorTerminalM18 (A)31M71 (B)1Yes	BCM		Cargo lamp switch		Continuity
M18 (A) 31 M71 (B) 1 Yes	Connector	Terminal	Connector	Terminal	Continuity
	M18 (A)	31	M71 (B)	1	Yes



Check continuity between BCM connector M18 terminal 31 and ground.

Connector	Terminal	_	Continuity
M18 (A)	31	Ground	No

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-54, "Removal and Installation".

NO >> Repair harness or connectors.

4. CHECK CARGO LAMP RELAY

Check the cargo lamp relay. Refer to INL-84, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 5

CARGO LAMP CONTROL CIRCUIT

[WITHOUT POWER DOOR LOCKS]

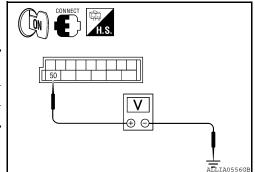
< COMPONENT DIAGNOSIS >

NO >> Replace the cargo lamp relay.

5. CHECK CARGO LAMP RELAY CONTROL

While operating the cargo lamp switch, check voltage between BCM connector M19 terminal 50 and ground.

Connector	Terminal	_	Cargo lamp switch	Voltage
M19	50	Ground	ON	0V
10119	50	Ground	OFF	Battery voltage



Is the inspection result normal?

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

6. CHECK CARGO LAMP VOLTAGE

1. Disconnect the cargo lamp connector.

2. While operating the cargo lamp switch, check voltage between cargo lamp connector B161 terminal 3 and ground.

Connector	Terminal	_	Cargo lamp switch	Voltage
B161	3	Ground	ON	Battery voltage

Is the inspection result normal?

YES >> Replace cargo lamp.

NO >> GO TO 7

7.CHECK CARGO LAMP RELAY VOLTAGE PART 1

Check voltage between cargo lamp relay connector M165 terminal 5 and ground.

Cargo lamp relay			Voltage
Connector	Terminal	Ground	voltage
M165	5		Battery voltage

Is the inspection result normal?

YES >> Repair harness or connectors between cargo lamp relay and cargo lamp.

NO >> Repair harness or connector between splice and cargo lamp relay.

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8.CHECK CARGO LAMP RELAY VOLTAGE PART 2

Check voltage between cargo lamp relay connector M165 terminal 2 and ground.

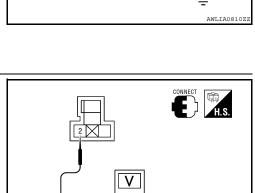
Cargo la	ımp relay		Voltage
Connector	Terminal	Ground	vollage
M165	2		Battery voltage

Is the inspection result normal?

YES >> GO TO 9

NO >> Repair harness or connectors.

9. CHECK CARGO LAMP RELAY CONTROL CIRCUIT



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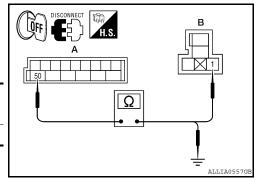
CARGO LAMP CONTROL CIRCUIT

< COMPONENT DIAGNOSIS >

[WITHOUT POWER DOOR LOCKS]

- Disconnect BCM connector M19 and cargo lamp relay connector
- 2. Check continuity between BCM connector M19 (A) terminal 50 and cargo lamp relay connector M165 (B) terminal 1.

В	BCM		Cargo lamp relay		
Connector	Terminal	Connector Terminal		Continuity	
M19 (A)	50	M165 (B)	1	Yes	



3. Check continuity between BCM connector M19 terminal 50 and ground.

Connector	Terminal	_	Continuity
M19 (A)	50	Ground	No

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-54, "Removal and Installation".

NO >> Repair harness or connectors.

Component Inspection

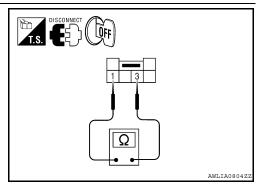
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CARGO LAMP SWITCH

1. CHECK CARGO LAMP SWITCH

- 1. Turn ignition switch OFF.
- 2. Disconnect cargo lamp switch connector.
- 3. Check continuity between cargo lamp switch terminals.

Cargo lamp switch	Condition	Continuity	
Terminal	Condition		
1 – 3	ON	Yes	
1 – 3	OFF	No	



Is the inspection result normal?

YES >> Inspection End

NO >> Replace cargo lamp switch.

CARGO LAMP RELAY

1. CHECK CARGO LAMP RELAY

- 1. Turn ignition switch OFF.
- Disconnect cargo lamp relay connector.
- 3. Supply power to terminal 2 and ground to terminal 1 of the cargo lamp relay.
- 4. Check continuity between cargo lamp relay terminals 3 and 5.

Terr	minal	Condition	Continuity
3	5	Power and ground supplied to terminals 1 and 2	Yes
3	3 5	No power and ground supplied	No

3 3 3 5 5 2 1 1

Is the inspection result normal?

YES >> Inspection End

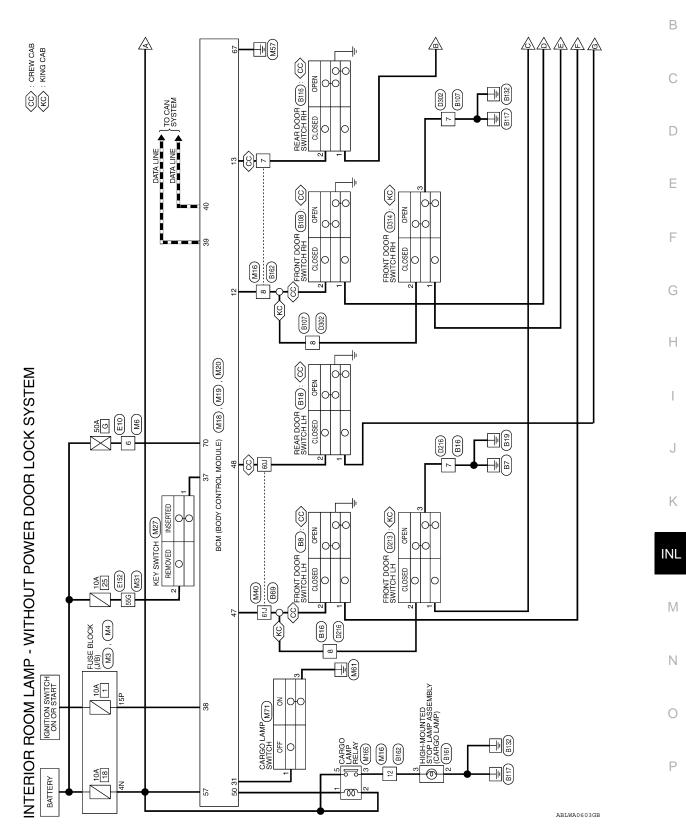
NO >> Replace cargo lamp relay.

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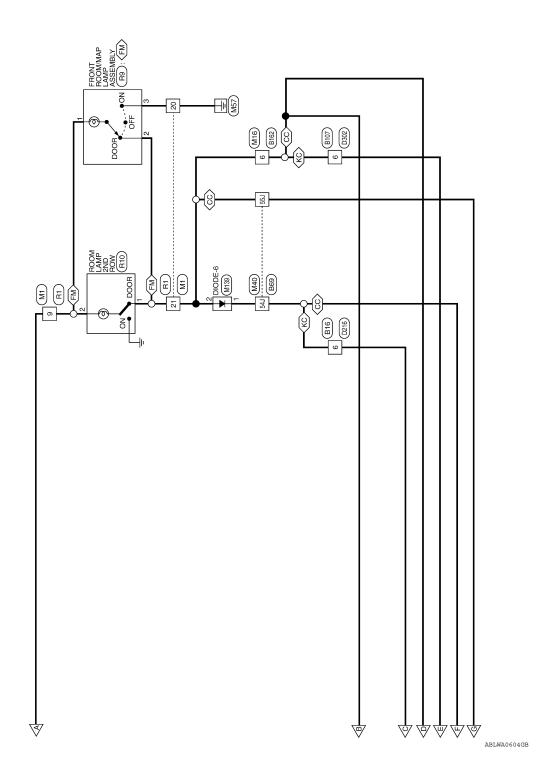
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INTERIOR ROOM LAMP

Wiring Diagram







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Connector No. M4 Connector Name FUSE BLOCK (J/B) Connector Color WHITE The sp 44 T sp 29 19 The sp 44 T sp	
Connecto Connecto Connecto Connecto Connecto H.S. H.S.	
Connector No. M3 Connector No. M3 Connector Name FUSE BLOCK (J/B) Connector Color WHITE Connector Connec	
Connector No. M3 Connector Name FUSE E Connector Color WHITE M.S. No. Color of Terminal No. Wire 4N R/Y	
CTORS	
	ı
M1 M1 M1 M1 M1 M1 M1 M1	BB
Connector No. M1	21

	BCM (BODY CONTROL MODULE)	1	V	10 11 12 13 14 15 16 17 18 19 20 30 31 32 33 34 35 36 37 38 39 40	Signal Name	DOOR SW (AS)	DOOR SW (RR)	CARGO LAMP SW	KEY SW	IGN SW		CAN-H
. M18		lor WHITE		7 8 9 27 28 29	Color of Wire	P.	_	GR	В	M/R	_	J
Connector No.	Connector Name	Connector Color	(南) H.S.	1 2 3 4 5 6 21 22 23 24 25 26	Terminal No.	12	13	31	37	38	36	3

	WIRE TO WIRE	<u>T</u> E	L S S S S S S S S S	Signal Name	1	ı	ı	I
. M16		lor	6 5 4	Color of Wire	œ	_	LG	5
Connector No.	Connector Name	Connector Color WHITE	H.S.	Terminal No.	9	7	8	12

		WIRE TO WIRE	WHITE		Signal Name	-
r	. Me		_	[Color of Wire	Μ
	Connector No.	Connector Name	Connector Color	明.S.	Terminal No.	9

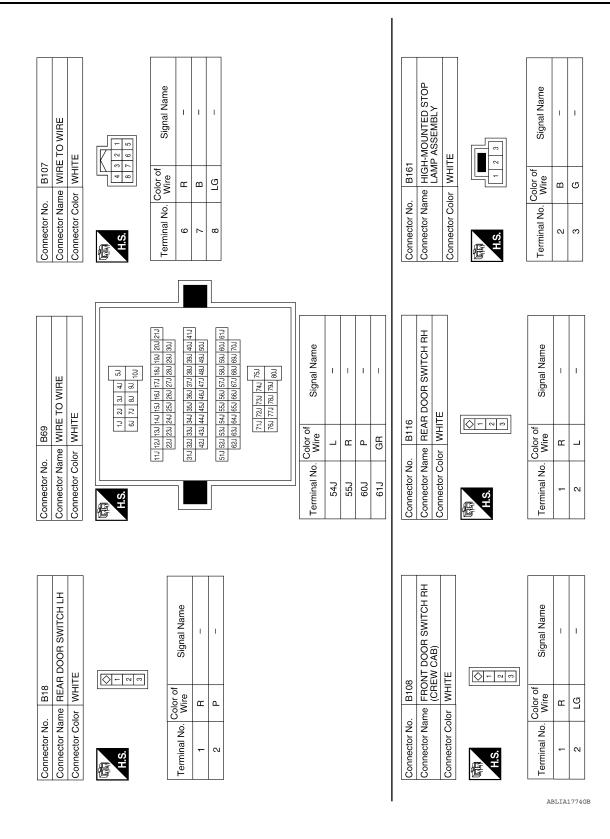
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WHITE	NTROL Connector No. M27 Connector Name KEY SWITCH Connector Color WHITE	H.S.	Name Terminal No. Wire Signal Name -USE) 1 B - OWER) 2 Y - (F/L) - -	Connector No. M71	Signal Name		
WHITE Signal Name WHITE Signal Name WHITE Signal Name Sign		S	minal No. Color of Wire Signal Name 57 R/Y BAT (FUSE) 67 B GND (POWER) 70 W BAT (F/L)	#18. M40 M18	Color of Wire	> 0	ר מ
<u> </u>	M19 BCM (BODY CONTROL MODULE)	VYT11 E	Signal Name DOOR SW (DR) DOOR SW (RL) CARGO LAMP OUTPUT	FE TO WIRE 117E 56 46 36 26 16 1106 96 86 76 96 1106 96 86 76 96 1106 96 86 76 96 1108 170 170 170 170 170 170 170 170 170 170	Signal Name		

INTERIOR ROOM LAMP

[WITHOUT POWER DOOR LOCKS]

Connector No. E10 Connector Name WIRE TO WIRE Connector Color WHITE	Connector No. B16 Connector No. B16 Connector Name WIRE TO WIRE Connector Color of WHITE Connector Color of WHITE Connector Color of WHITE Connector Color of B Color of B Color of Colo	
Connector No. M165 Connector Name CARGO LAMP RELAY Connector Color BLUE	Terminal No. Color of Signal Name 1	
Connector No. M139 Connector Name DIODE-6 Connector Color BLACK H.S.	1	Terminal No. Wire Signal Name



Signal Name

Color of Wire

Terminal No.

Signal Name

Color of Wire

Terminal No.

Signal Name

Color of Wire

Terminal No.

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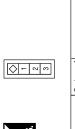
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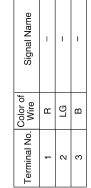
R9 FRONT ROOM/MAP LAMP ASSEMBLY WHITE		Signal Name	I	I	I				TO WIRE	ш	2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
		Color of Wire	R∕	\	В			D216	ne WIRE	or WHITE	1 6
Connector No. Connector Name Connector Color	H.S.	Terminal No.	-	2	ဇ			Connector No.	Connector Name WIRE TO WIRE	Connector Color	H.S.
									_	T]
R1 WIRE TO WIRE WHITE	20 19 18 17 16 15 14 13	Signal Name	ı	I	1				FRONT DOOR SWITCH LH	Ę.	
	24 23 22 21	Color of Wire	R/Υ	В	BR			D213			
Connector Name Connector Color	H.S.	Terminal No.	6	20	21			Connector No.	Connector Name	Connector Color	原 H.S.
										_	
TO WIRE	4 0 0 1 0 2	Signal Name	ı	1	1	I			ROOM LAMP 2ND ROW		
B162 ne WIRE T or WHITE	7 8 9	Color of Wire	œ	٦	LG	ŋ		B10		or WHITE	<u>-</u>
Connector No. B162 Connector Name WIRE TO WIRE Connector Color WHITE	H.S.	No.	9	7	8	12		Connector No.	Connector Name	Connector Color	所 H.S.

ABLIA1775GB

Revision: October 2009 INL-91 2010 Frontier







D302	nnector Name WIRE TO WIRE	WHITE	
nnector No.	nnector Name	nnector Color	





Signal Name	I	_	_
Color of Wire	Ж	В	57
Terminal No.	9	7	8

ABLIA1776GB

[WITHOUT POWER DOOR LOCKS] < COMPONENT DIAGNOSIS > **ILLUMINATION** Α Wiring Diagram INFOID:0000000005272854 В QB⟩:WITH QR25DE ⟨ZV⟩:WITH VQ40DE C COMBINATION METER M24 D METER ILLUMINATION Е UNIFIED METER CONTROL UNIT (WITH INFORMATION DISPLAY) F (M31 G S LAMP RELAY - Weil Н IGNITION RELAY 12 W257 W CPU J 20A 52 (M91 E26 K BCM (BODY CONTROL MODULE) (M18), (M20) INL FUSE BLOCK (J/B) (M4) M 10A COMBINATION SWITCH (LIGHTING AND TURN SIGNAL SWITCH) (M28) IGNITION SWITCH ON OR START Ν ₽ -0 ILLUMINATION

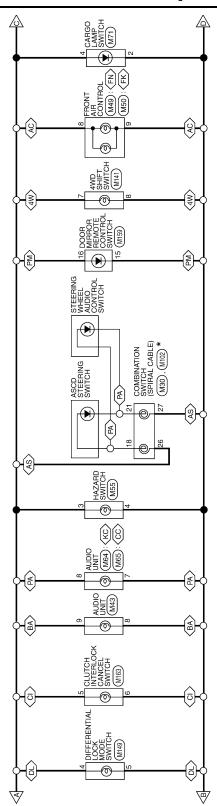
@₂₀

BATTERY

Р

ABLWA0600GB

- : WITH CLUTCH INTERLOCK CANCEL SWITCH
 - : WITH ELECTRONIC LOCKING REAR DIFFERENTIAL
 - (AS): WITH ASCD
 (AC): WITH AC
 (BA): WITH BASE AUDIO SYSTEM
 (CI): WITH CLUTCH INTERLOCK CANCEL
 (CC): CREW CAB
 (DL): WITH ELECTRONIC LOCKING REAR
 (FK): WITH VBC
 (KC): KING CAB
 (KC): KING CAB
 (KC): WITH PREMIUM AUDIO SYSTEM
 (PM): WITH PREMIUM AUDIO SYSTEM
 (PM): WITH POWER OUTSIDE MIRRORS
 (4W): WITH 4-WHEEL DRIVE WITH POWER OUTSIDE MIRRORS



THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT" OF PG SECTION. ABLWA0601GB (A):WITH AIT
(DC):WITH HILL DESCENT CONTROL
AND HILL START ASSIST
(HS):WITH HEATED SEATS
(WV):WITH VDC

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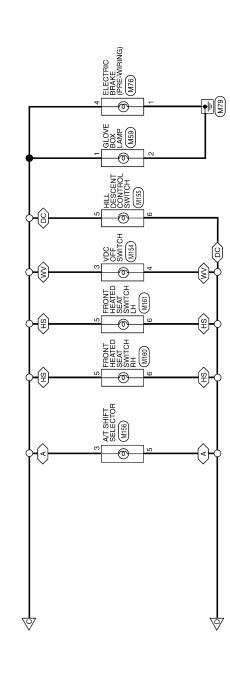
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ABLWA0602GB

Р



Connector Name BCM (BODY CONTROL MODULE)

M18

Connector No.

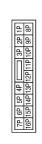
WHITE

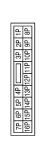
Connector Color

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ILLUMINATION CONNECTORS

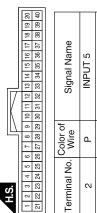
M6	WIRE TO WIRE	WHITE
Connector No.	Connector Name	Connector Color
M4	FUSE BLOCK (J/B)	WHITE
Connector No.	Connector Name	Connector Color







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



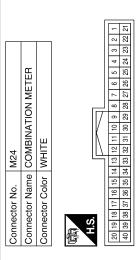
Signal Name

Color of Wire ≥

Terminal No.

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	Ь	SB	>	L	В	0	GR	9	BR	LG	W/R	٦	Д
Terminal No.	2	က	4	5	9	32	33	34	35	36	38	39	40

	Signal Name	BATTERY	CAN-L	CAN-H	GROUND	ILLUMINATION CONTROL	POWER GND
	Color of Wire	R/Υ	Ъ	7	GR	BR	В
	Terminal No. Wire	က	11	12	13	22	23
•							



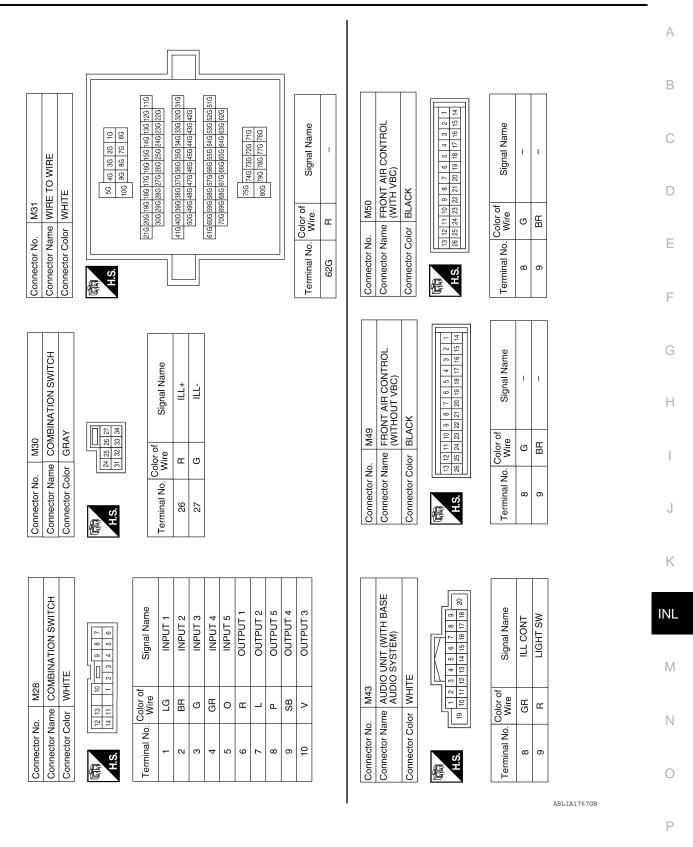


E

Connector No.

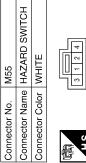
65 66 67 68 69 70	Signal Name	GND (POWER)	BAT (F/L)
9 99 99	Color of Wire	В	M
H.S.	Terminal No.	29	02

ABLIA1766GB



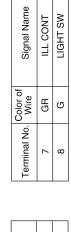
	8,0	
M64	AUDIO UNIT (KING CAB	WITH PREMIUM AUDIC
Connector No.	2	Connector Name
M59	Connector Name GLOVE BOX LAMP	BROWN
Connector No. M59	Connector Name	Connector Color BROWN

Connector Color WHITE



是 H.S.	

Signal Na)	1	
Color of	œ œ	BB	
Terminal No.	ю	4	



Signal Name	1	I	
Color of Wire	ш	В	
rminal No.	1	2	

Signal Nan	I	I	
Color of Wire	В	В	
Terminal No.	1	2	

Connector No.	M76
Connector Name	Connector Name ELECTRIC BRAKE (PR WIRING)
Connector Color WHITE	WHITE

	_	
COLLINGTING	Connector Color	原向 H.S.

	Signal Nam	GROUND	ILL (TAIL)
	Color of Wire	В	В
	Terminal No.	-	4
-			

	Connector Name CARGO LAMP SWITCH			Signal Name	ı	
. M71	me CAF	lor WH	4 - 2	Color of Wire	Ь	
Connector No.	Connector Na	Connector Color WHITE	同 H.S.	Terminal No.	2	

	Ī	
Connector No.	. M65	
Connector Name		AUDIO UNIT (CREW CAB WITH PREMIUM AUDIO SYSTEM)
Connector Color	lor WHITE	TE
H.S.	[0]+	3 5 6 7 9
Terminal No.	Color of Wire	Signal Name
7	GR	ILL CONT
8	9	LIGHT SW

ABLIA1768GB

ctor No. M91		Connector No. M102	M102		Conne	Connector No. M141	M141	
ctor Name WIRE TO WIRE	RE TO WIRE	Connector Nar	ne COME	Connector Name COMBINATION SWITCH	Conne	ctor Nam	e 4WD S	Connector Name 4WD SHIFT SWITCH
ector Color WHITE	IITE	Connector Color GRAY	or GRAY		Conne	Connector Color GRAY	GRAY	
7 6 5	1 2 2 1	E	14 15 16	14 15 16 17 18 19 20 21	E		123456	45678
2		H.S.			H.S.	_		
nal No. Wire	f Signal Name	Terminal No. Wire	Solor of Wire	Signal Name	Termi	Terminal No. Wire	olor of Wire	Signal Name
0 P	ı	18	Œ	I			œ	LIGHT_SW
1 -	ı	21	ŋ	ı		8	BR	GND

Connector No.	M155	5
Connector Na	me HILI SWI	Connector Name HILL DESCENT CONTROL SWITCH
Connector Color WHITE	lor WHI	11
明.S.		0 1 0
Terminal No.	Color of Wire	Signal Name
5	В	_
9	BR	1

	No. M154	Connector Name VDC OFF SWITCH	Solor GRAY	6 5 4 3 2 1	Color of Signal Name	ı	BB –
		√ am	or		Color	Œ	BB
	Connector No.	Connector Nai	Connector Color GRAY	呵奇 H.S.	Terminal No. Wire	3	4
۰							

Connector No.	. M149	6
onnector Na	me DIFF	Connector Name DIFFERENTIAL LOCK MODE SWITCH
Connector Color WHITE	lor WHI	TE
朝 H.S.	4 (7)	1
Terminal No.	Color of Wire	Signal Name
4	æ	ı
ĸ	BB	ı

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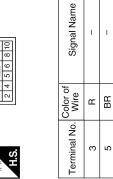
С

Signal Name	I	-
Color of Wire	SB	0
Terminal No.	5	9









2

Signal Name	-	_	
Color of Wire	SB	0	
inal No.	5	9	

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

E TO WIRE	正	T 0 @	Signal Name	ı
me WIR	lor WHI	- 4 C C	Color of Wire	>
Connector Name WIRE TO WIRE	Connector Color WHITE	南 H.S.	Terminal No.	9

Connector No. M163 Connector Name CLUTC CANCE Connector Color WHITE	Connector No. M163 Connector Name CLUTCH INTERLOCK CANCEL SWITCH Connector Color WHITE
E SH	5 6 2 1 4

Connector Name CLUTCH INTERLOCK CANCEL SWITCH	ITE	6 2 1 4	Signal Name	-	-
me CLU	lor WHITE	38	Color of Wire	В	BB
Connector Na	Connector Color	原 H.S.	Terminal No.	5	9

Connector No.	M161
Connector Name	Connector Name FRONT HEATED SEAT SWITCH LH
Connector Color WHITE	WHITE
南 H.S.	5 2 1 3

Signal Name	_	_
Color of Wire	В	BR
Ferminal No.	5	9

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	А
Signal Name TAIL LAMP GND (POWER)	В
CK CK CK	С
	D
Connector No. Connector Color Terminal No. Www. 57 G G 57 G G 59 L	Е
	F
POWER DISTRIBUTION MODULE ENGINE ROOM) WHITE To Signal Name GAN-H CAN-H CAN-L	G
POWER DISTR MODULE ENGINE WHITE WHITE or of Signa and	Н
	I
Connector No. Connector Color Connector Color 38 39 40 40	J
	К
WIRE 5 6 7 114 15 16 7 1 114 15 16 7 1 1 15 16 1 1 1 15 16 1 1 1 1 1 1 1 1	736 746 756 736 746 756 736
	776 776 776 776 776 776 776 777 778
Connector No. E26 Connector Name WIRE TO WIRE Connector Color 2 1 1 1 1 1 1 1 1	N Wire of B
Connector No. Connector Nam Connector Colo Terminal No. Connector No. Connector Nam C	Terminal No.
I	ablia1771gb

ECU DIAGNOSIS

BCM (BODY CONTROL MODULE)

Reference Value

VALUES ON THE DIAGNOSIS TOOL

Monitor Item	Condition	Value/Status
IGN ON SW	Ignition switch OFF or ACC	OFF
IGN ON SW	Ignition switch ON	ON
KEY ON SW	Mechanical key is removed from key cylinder	OFF
	Mechanical key is inserted to key cylinder	ON
CDL LOCK CW	Door lock/unlock switch does not operate	OFF
CDL LOCK SW	Press door lock/unlock switch to the lock side	ON
CDL LINI OCK SW	Door lock/unlock switch does not operate	OFF
CDL UNLOCK SW	Press door lock/unlock switch to the unlock side	ON
DOOD OW DD	Driver's door closed	OFF
DOOR SW-DR	Driver's door opened	ON
DOOD OW AC	Passenger door closed	OFF
DOOR SW-AS	Passenger door opened	ON
DOOD OW DD	Rear RH door closed	OFF
DOOR SW-RR	Rear RH door opened	ON
DOOD OW DI	Rear LH door closed	OFF
DOOR SW-RL	Rear LH door opened	ON
KEN ON TROM	Other than driver door key cylinder LOCK position	OFF
KEY CYL LK-SW	Driver door key cylinder LOCK position	ON
1/E)/ 0)/ 11N 0)//	Other than driver door key cylinder UNLOCK position	OFF
KEY CYL UN-SW	Driver door key cylinder UNLOCK position	ON
KEVI FOO LOOK	"LOCK" button of key fob is not pressed	OFF
KEYLESS LOCK	"LOCK" button of key fob is pressed	ON
	"UNLOCK" button of key fob is not pressed	OFF
KEYLESS UNLOCK	"UNLOCK" button of key fob is pressed	ON
A C C C A L C L A L	Ignition switch OFF	OFF
ACC ON SW	Ignition switch ACC or ON	ON
DEAD DEE OW	Rear window defogger switch OFF	OFF
REAR DEF SW	Rear window defogger switch ON	ON
LICHT OWAST	Lighting switch OFF	OFF
LIGHT SW 1ST	Lighting switch 1ST	ON
DLICKI E SW	The seat belt (driver side) is unfastened. [Seat belt switch (driver side) OFF]	OFF
BUCKLE SW	The seat belt (driver side) is fastened. [Seat belt switch (driver side) ON]	ON
KENI ESS DANIO	PANIC button of key fob is not pressed	OFF
KEYLESS PANIC	PANIC button of key fob is pressed	ON

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[WITHOUT POWER DOOR LOCKS]

Monitor Item	Condition	Value/Status
RKE LCK-UNLCK	LOCK/UNLOCK button of key fob is not pressed and held simultaneously	OFF
RRE LOR-UNLOR	LOCK/UNLOCK button of key fob is pressed and held simultaneously	ON
RKE KEEP UNLK	UNLOCK button of key fob is not pressed	OFF
RE REEP UNLK	UNLOCK button of key fob is pressed and held	ON
HI BEAM SW	Lighting switch OFF	OFF
TI BEAIN SW	Lighting switch HI	ON
HEAD LAMP SW 1	Lighting switch OFF	OFF
TEAD LAIVIP SVV I	Lighting switch 2ND	ON
IEAD LAMB OW	Lighting switch OFF	OFF
HEAD LAMP SW 2	Lighting switch 2ND	ON
	Lighting switch OFF	OFF
AUTO LIGHT SW Lighting switch OFF Lighting switch AUTO		ON
DA COINO OM	Other than lighting switch PASS	OFF
PASSING SW	Lighting switch PASS	ON
	Front fog lamp switch OFF	OFF
FR FOG SW	Front fog lamp switch ON	ON
	Turn signal switch OFF	OFF
TURN SIGNAL R	Turn signal switch RH	ON
	Turn signal switch OFF	OFF
ΓURN SIGNAL L	Turn signal switch LH	ON
	Cargo lamp switch OFF	OFF
CARGO LAMP SW	Cargo lamp switch ON	ON
	Bright outside vehicle	5V
OPTICAL SENSOR	Dark outside vehicle	0V
	Ignition switch OFF or ACC	OFF
GN SW CAN	Ignition switch ON	ON
	Front wiper switch OFF	OFF
FR WIPER HI	Front wiper switch HI	ON
	Front wiper switch OFF	OFF
FR WIPER LOW	Front wiper switch LO	ON
	Front wiper switch OFF	OFF
R WIPER INT	Front wiper switch INT	ON
	Front washer switch OFF	OFF
FR WASHER SW	Front washer switch ON	ON
NT VOLUME	Wiper intermittent dial is in a dial position 1 - 7	1 - 7
·	Any position other than front wiper stop position	OFF
FR WIPER STOP	Front wiper stop position	ON
/EHICLE SPEED	While driving	Equivalent to speedometer reading
· · · · · · · · · · · · · · · · · · ·	Hazard switch OFF	OFF
HAZARD SW	Hazard switch ON	ON
	Brake pedal is not depressed	OFF
BRAKE SW	Brake pedal is depressed	ON

INL-103 Revision: October 2009 2010 Frontier

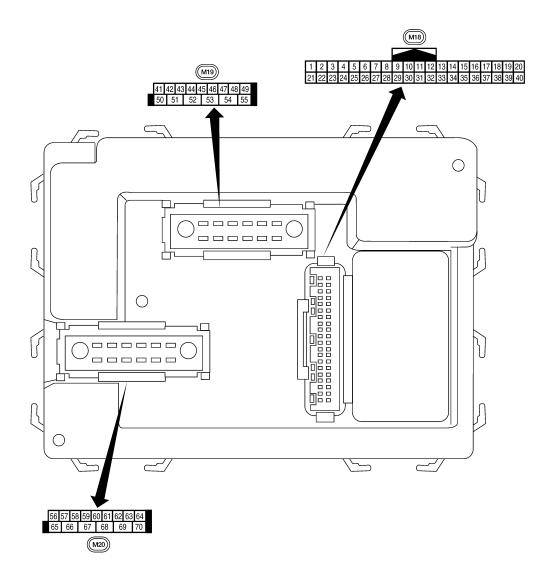
BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[WITHOUT POWER DOOR LOCKS]

Monitor Item	Condition	Value/Status
FAN ON SIG	Blower fan motor switch OFF	OFF
FAIN OIN SIG	Blower fan motor switch ON (other than OFF)	ON
AIR COND SW	Compressor ON is not requested from auto amp. (A/C indicator OFF, blower fan motor switch OFF or etc.)	OFF
AIR COIND SW	Compressor ON is requested from auto amp. (A/C indicator ON and blower fan motor switch ON).	ON
OIL PRESS SW	Ignition switch OFF or ACC Engine running	OFF
	Ignition switch ON	ON
AIR PRESS FL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front LH tire
AIR PRESS FR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of front RH tire
AIR PRESS RR	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear RH tire
AIR PRESS RL	Ignition switch ON (Only when the signal from the transmitter is received)	Air pressure of rear LH tire
ID REGST FL1	ID of front LH tire transmitter is registered	DONE
ID REGOT FLT	ID of front LH tire transmitter is not registered	YET
D DECCT ED4	ID of front RH tire transmitter is registered	DONE
D REGST FR1	ID of front RH tire transmitter is not registered	YET
D REGST RR1	ID of rear RH tire transmitter is registered	DONE
ID REGOT KKT	ID of rear RH tire transmitter is not registered	YET
ID DECST DI 4	ID of rear LH tire transmitter is registered	DONE
ID REGST RL1	ID of rear LH tire transmitter is not registered	YET
WARNING LAMP	Tire pressure indicator OFF	OFF
WAINING LAWP	Tire pressure indicator ON	ON
BUZZER	Tire pressure warning alarm is not sounding	OFF
DULLER	Tire pressure warning alarm is sounding	ON

Terminal Layout



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Physical Values

			Signal		Measuring condition	
Terminal	Wire color	Item	input/ output	Ignition switch	Operation or condition	Reference value or waveform (Approx.)
1	BR	Ignition keyhole illumi-	Output	OFF	Door is locked (SW OFF)	Battery voltage
	DI	nation	Output	OFF	Door is unlocked (SW ON)	0V
2	Р	Combination switch input 5	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 6 4 2 0 +-5ms SKIA5291E
3	SB	Combination switch input 4	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 6 4 2 0 ++5ms SKIA5292E
4	V	Combination switch input 3	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 6 4 2 0 + 5ms SKIA5291E
6	L R	Combination switch input 2 Combination switch input 1	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 6 4 2 0 ++5ms SKIA5292E
		Front door lock as-			ON (open, 2nd turn)	Momentary 1.5V
7	GR	sembly LH (key cylin- der switch) unlock	Input		OFF (closed)	0V
		Front door lock as-		OFF	On (open)	Momentary 1.5V
8	SB	sembly LH (key cylin- der switch) lock	Input		OFF (closed)	0V
9	Y	Rear window defogger	Input	ON	Rear window defogger switch ON	0V
Č	•	switch	прис	CIN	Rear window defogger switch OFF	5V
11	G/B	Ignition switch (ACC or ON)	Input	ACC or ON	Ignition switch ACC or ON	Battery voltage
		Front door switch RH (All)			ON (open)	OV
12	LG	Rear door switch up- per RH (King Cab) Rear door switch low- er RH (King Cab)	Input	OFF	OFF (closed)	Battery voltage

BCM (BODY CONTROL MODULE)

< ECU DIAGNOSIS >

[WITHOUT POWER DOOR LOCKS]

_ Wire			Signal		Measuring condition	Reference value or waveform				
Terminal	color	Item	input/ output	Ignition switch	Operation or condition	(Approx.)				
12		Rear door switch RH	lnnut	OFF	ON (open)	0V				
13	13 L (Crew Cab)		Input	OFF	OFF (closed)	Battery voltage				
15	W	Tire pressure warning check connector	Input	OFF	_	5V				
18	BR	Remote keyless entry receiver (Ground)	Output	OFF	_	0V				
19	V	Remote keyless entry receiver (power sup- ply)	Output	OFF	Ignition switch OFF	(V) 6 4 2 0 +-50 ms LIIA1893E				
20	G	Remote keyless entry		Remote keyless entry receiver signal (Sig- nal)	lnout	OFF	Stand-by (keyfob buttons released)	(V) 6 4 2 0 ++50 ms		
20			nal)				nal)	Input		When remote keyless entry receiver receives signal from keyfob (keyfob buttons pressed)
21	GR	NATS antenna amp.	Input	OFF → ON	Ignition switch (OFF \rightarrow ON)	Just after turning ignition switch ON: Pointer of tester should move.				
23	G	Security indicator lamp	Output	OFF	Goes OFF → illuminates (Every 2.4 seconds)	Battery voltage → 0V				
25	BR	NATS antenna amp.	Input	OFF → ON	Ignition switch (OFF \rightarrow ON)	Just after turning ignition switch ON: Pointer of tester should move.				
27	W	Compressor ON sig-	Input	ON	A/C switch OFF	5V				
۷.	V V	nal	mpat	nput ON	A/C switch ON	0V				
28	R	Front blower monitor	Input	ON	Front blower motor OFF	Battery voltage				
20		1 TOTAL DIGWEL HIGHIA	mpat	J.11	Front blower motor ON	0V				
29	G	Hazard switch	Innut	OFF	ON	0V				
23	_	TIAZATA SWILCIT	Input		OFF	5V				
31 GP		Cargo lamp switch	Cargo lamp switch	GR Cargo lamp switch In	Cargo lamp quitch	Input	OFF	ON	0V	
SI GK	31	mput			011	OFF	Battery voltage			

BCM (BODY CONTROL MODULE)

[WITHOUT POWER DOOR LOCKS]

Wiro			Signal	Measuring condition		Deference value or weveform	
Terminal	Wire color	Item	input/ output	Ignition switch	Operation or condition	Reference value or waveform (Approx.)	
32	0	Combination switch output 5	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 6 4 2 0 	
33	GR	Combination switch output 4	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 6 4 2 0 5ms	
34	G	Combination switch output 3	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 6 4 2 0 	
35	BR	Combination switch output 2				0.0	
36	LG	Combination switch output 1	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	(V) 6 4 2 0 **5ms	
37	В	Key switch	Input	OFF	Key inserted	Battery voltage	
38	W/R	Ignition switch (ON)	Input	ON	Key removed	0V Battery voltage	
39	L	CAN-H	-		_	Dattery Voltage	
40	Р	CAN-L			_	_	
45	V	Lock switch	Input	OFF	ON (lock) OFF	0V Battery voltage	
46	LG	Unlock switch	Input	OFF	ON (unlock) OFF	0V Battery voltage	
	47 GR	Front door switch LH (All) Rear door switch upper LH (King Cab) Rear door switch lower LH (King Cab)		ON (open)	oV		
47			Input O	OFF	OFF (sleeped)	Rattony voltage	
					OFF (closed)	Battery voltage	
48 P	Poor door switch I H	Input	OFF	ON (open)	0V		
				OFF (closed)	Battery voltage		
50 P	Cargo lamp	Output	OFF	Any door open (ON)	0V		
		5 ·· r	- 10		All doors closed (OFF)	Battery voltage	

< ECU DIAGNOSIS >

[WITHOUT POWER DOOR LOCKS]

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	Wire		Signal		Measuring cond	dition	Reference value or waveform		
Terminal	color	Item	input/ output	Ignition switch	Operation	or condition	(Approx.)		
51	0	Trailer turn signal (right)	Output	ON	Turn right ON		(V) 15 10 500 ms SKIA3009J		
52	LG	Trailer turn signal (left)	Output	ON	Turn left ON		Turn left ON		(V) 15 10 500 ms SKIA3009J
56	R/Y	Battery saver output	Output	OFF	30 minutes after switch is turned		0V		
			1	ON	_	_	Battery voltage		
57	R/Y	Battery power supply	Input	_	-	_	Battery voltage		
58	W	Optical sensor	Input	ON	When optical sensor is illuminated		3.1V or more		
					When optical sensor is not illuminated		0.6V or less		
59	GR	Front door lock as- sembly LH (unlock)	Output	OFF	OFF (neutral)		0V		
60	LG	Turn signal (left)	Output	ON	ON (unlock) Turn left ON		Battery voltage (V) 15 10 500 ms SKIA3009J		
61	G	Turn signal (right)	Output	ON	Turn right ON		(V) 15 10 5 5 0 SKIA3009J		
63	BR	Interior room/map lamp	Output	OFF	Any door switch ON (open) OFF (closed)		0V Battery voltage		
65	V	All door lock actuators (lock)	Output	OFF	OFF (neutral)		0V Battery voltage		
		Front door lock actua-			ON (lock) OFF (neutral)		0V		
66	L	tor RH, rear door lock actuators LH/RH (un- lock)	Output	OFF	ON (unlock)				Battery voltage
		i l		<u> </u>	1	l	i		

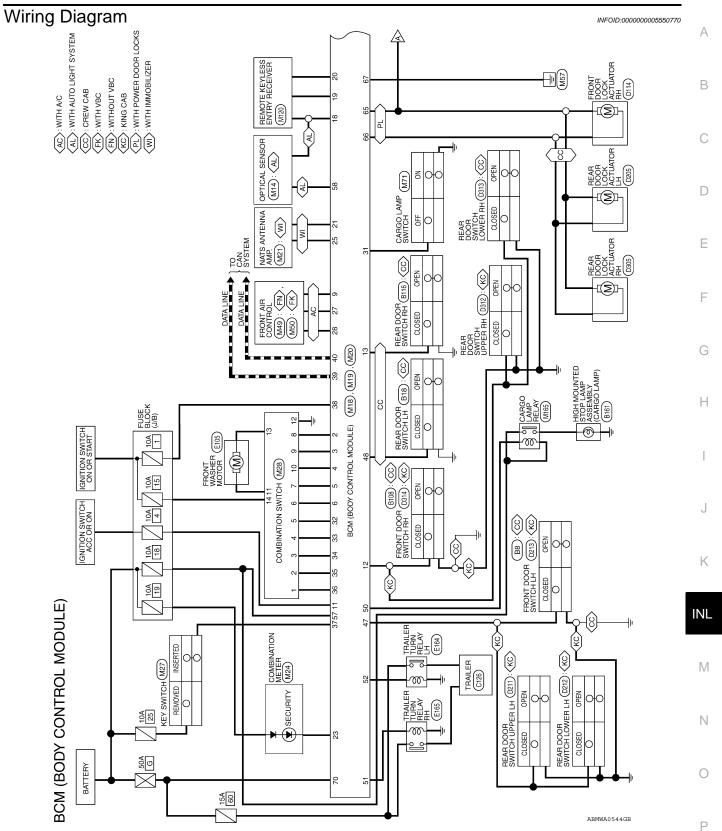
< ECU DIAGNOSIS >

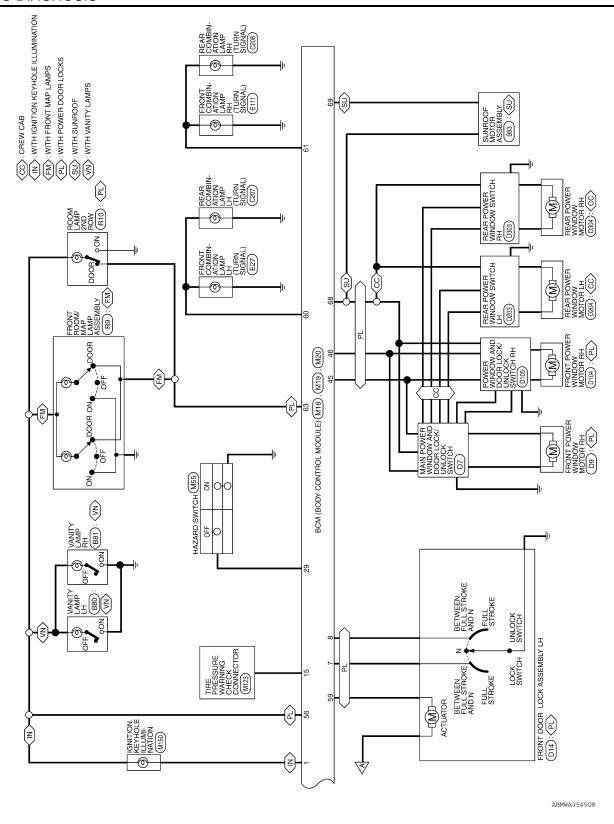
[WITHOUT POWER DOOR LOCKS]

	Wire		Signal		Measuring condition	Reference value or waveform
Terminal	color	Item	input/ output	Ignition switch	Operation or condition	(Approx.)
					Ignition switch ON	Battery voltage
					Within 45 seconds after ignition switch OFF	Battery voltage
68 ¹	0	Power window power supply (RAP)	Output	_	More than 45 seconds after ignition switch OFF	0V
					When front door LH or RH is open or power window timer operates	0V
					Ignition switch ON	Battery voltage
					Within 45 seconds after ignition switch OFF	Battery voltage
68 ²	SB	Power window power supply (RAP)	Output	_	More than 45 seconds after ignition switch OFF	0V
			When front door LH or RH is open or power window timer operates		0V	
69	Р	Power window power supply (BAT)	Output	OFF	_	Battery voltage
70	W	Battery power supply	Input	OFF	_	Battery voltage

^{1:} King cab (with power door lock system)

^{2:} Crew cab (with power door lock system)



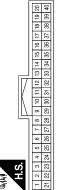


M19	Connector Name BCM (BODY CONTROL MODULE)	WHITE	41 42 43 44 45 46 47 48 49
Connector No.	Connector Name	Connector Color WHITE	

H.S.	20 4	41 42 43 44 49 46 47 48 49 50 51 52 53 54 55
rminal No.	Color of Wire	Signal Name
41	ı	I
42	ı	I
43	ı	I
44	ı	I
45	>	CDL LOCK SW
46	ГG	CDL UNLOCK SW
47	GR	DOOR SW (DR)
48	Ь	DOOR SW (RL)
49	ı	ı
50	Ь	CARGO LAMP OUTPUT
51	0	TRAILER FLASHER OUTPUT (RIGHT)
52	LG	TRAILER FLASHER OUTPUT (LEFT)
53	1	ı
54	ı	I
22	ı	ı

Signal Name	KEYLESS TUNER SIGNAL	IMMOBILIZER ANTENNA SIGNAL (CLOCK)	ı	SECURITY INDICATOR OUTPUT	ı	IMMOBILIZER ANTENNA SIGNAL (RX,TX)	ı	AIRCON SW	BLOWER FAN SW	HAZARD SW	1	CARGO LAMP SW	OUTPUT 5	OUTPUT 4	OUTPUT 3	OUTPUT 2	OUTPUT 1	KEY SW	IGN SW	CAN-H	CAN-L
Color of Wire	g	GR	1	g	ı	BR	1	>	ш	g	1	GR	0	GR	ŋ	BB	LG	В	W/B	_	۵
Terminal No.	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

TORS	Terminal			50	
CONNEC					I
BCM (BODY CONTROL MODULE) CONNECTORS	M18	BCM (BODY CONTBOL	MODULE)	WHITE	
SM (BODY CC	Connector No. M18	Connector Name		Connector Color WHITE	
ă					



	Signal Name	KEY RING OUTPUT	INPUT 5	INPUT 4	INPUT 3	INPUT 2	INPUT 1	KEY CYLINDER UNLOCK SW	KEY CYLINDER LOCK SW	RR DEFOGGER SW	I	ACC SW	DOOR SW (AS)	DOOR SW (RR)	1	TPMS MODE TRIGGER SW	1	1	KEYLESS & AUTO LIGHT SENSOR GND	KEYLESS TUNER POWER SUPPLY OUTPUT
10,00	Wire	BB	۵	SB	^	_	æ	GR	SB	>	1	G/B	ГВ	٦	_	M	_	-	BR	>
	Terminal No.	-	2	က	4	5	9	2	80	6	10	11	12	13	14	15	16	17	18	19

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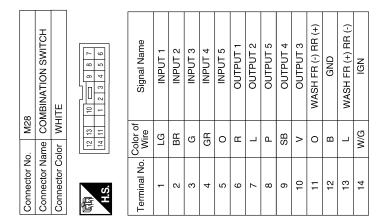
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Signal Name	DOOR LOCK OUTPUT (ALL)	DOOR UNLOCK OUTPUT (OTHER)	GND (POWER)	POWER WINDOW POWER SUPPLY OUTPUT (LINKED TO RAP) (WITH POWER DOOR LOCK SYSTEM)	POWER WINDOW POWER SUPPLY OUTPUT (LINKED TO RAPIO (CREW CAB WITHOUT POWER DOOR LOCK SYSTEM)	POWER WINDOW POWER SUPPLY OUTPUT (BAT)	BAT (F/L)
Color of Wire	>	Г	В	0	SB	А	W
Terminal No.	65	99	29	89	89	69	70

	BCM (BODY CONTROL MODULE)	BLACK	86 76 88 89 70 88 68 70 88 69 70 88 89 70 89 89 70 89 89 70 89 89 70 89 89 70 89 89 70 89 89 70 89 70 89 89 70 89 89 70 89 89 70 89 89 70 89 89 70 89 89 70 89 89 70 89 89 70 89 70 89 70 89 89 89 89 89 89 89 8	Signal Name	BATTERY SAVER OUTPUT	BAT (FUSE)	AUTO LIGHT SENSOR INPUT 2	DOOR UNLOCK OUTPUT (DR)	FLASHER OUTPUT (LEFT)	FLASHER OUTPUT (RIGHT)	1	ROOM LAMP OUTPUT	I
. M20			565758	Color of Wire	R/Y	R/Υ	W	GR	LG	G	ı	BR	_
Connector No.	Connector Name	Connector Color	呵引 H.S.	Terminal No.	56	57	58	59	09	61	62	63	64

ABMIA1432GB

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Fail Safe

Fail-safe index

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

< ECU DIAGNOSIS >

[WITHOUT POWER DOOR LOCKS]

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

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

DTC Index INFOID:0000000005550773

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 \rightarrow ON again.

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

CONSULT display	Fail-safe	Tire pressure monitor warning lamp ON	Reference page
No DTC is detected. further testing may be required.	_	_	_
U1000: CAN COMM CIRCUIT	_	_	BCS-28

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[WITHOUT POWER DOOR LOCKS]

CONSULT display	Fail-safe	Tire pressure monitor warning lamp ON	Reference page
B2190: NATS ANTTENA AMP	_	_	<u>SEC-18</u>
B2191: DIFFERENCE OF KEY	_	_	<u>SEC-21</u>
B2192: ID DISCORD BCM-ECM	_	_	<u>SEC-22</u>
B2193: CHAIN OF BCM-ECM	_	_	<u>SEC-24</u>
C1708: [NO DATA] FL	_	_	<u>WT-14</u>
C1709: [NO DATA] FR	_	_	<u>WT-14</u>
C1710: [NO DATA] RR	_	_	<u>WT-14</u>
C1711: [NO DATA] RL	_	_	<u>WT-14</u>
C1712: [CHECKSUM ERR] FL	_	_	<u>WT-16</u>
C1713: [CHECKSUM ERR] FR	_	_	<u>WT-16</u>
C1714: [CHECKSUM ERR] RR	_	_	<u>WT-16</u>
C1715: [CHECKSUM ERR] RL	_	_	<u>WT-16</u>
C1716: [PRESSDATA ERR] FL	_	_	<u>WT-18</u>
C1717: [PRESSDATA ERR] FR	_	_	<u>WT-18</u>
C1718: [PRESSDATA ERR] RR	_	_	<u>WT-18</u>
C1719: [PRESSDATA ERR] RL	_	_	<u>WT-18</u>
C1720: [CODE ERR] FL	_	_	<u>WT-16</u>
C1721: [CODE ERR] FR	_	_	<u>WT-16</u>
C1722: [CODE ERR] RR	_	_	<u>WT-16</u>
C1723: [CODE ERR] RL	_	_	<u>WT-16</u>
C1724: [BATT VOLT LOW] FL	_	_	<u>WT-16</u>
C1725: [BATT VOLT LOW] FR	_	_	<u>WT-16</u>
C1726: [BATT VOLT LOW] RR	_	_	<u>WT-16</u>
C1727: [BATT VOLT LOW] RL	_	_	<u>WT-16</u>
C1729: VHCL SPEED SIG ERR	_	_	<u>WT-19</u>
C1735: IGNITION SIGNAL	_	_	_

INTERIOR LIGHTING SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[WITHOUT POWER DOOR LOCKS]

SYMPTOM DIAGNOSIS

INTERIOR LIGHTING SYSTEM SYMPTOMS

Symptom Table

CAUTION:

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

Symptom	Possible cause	Inspection item
interior room lamps do not turn ON/OFF • Front room/map lamp assembly (if equipped) • Room lamp 2nd row	Harness between fuse block (J/B) and each interior room lamp Harness between each interior room lamp and door switches Door switches	Interior room lamp Refer to INL-80.
Cargo lamp does not turn ON/OFF	Harness between fuse block (J/B) and cargo lamp relay Harness between cargo lamp relay and cargo lamp Harness between BCM and cargo lamp relay BCM	Cargo lamp control circuit Refer to <u>INL-82</u> .

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PRECAUTION

PRECAUTIONS

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

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

WARNING:

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

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

WARNING:

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

General precautions for service operations

- INFOID:0000000005272863
- When removing or disassembling any part, be careful not to damage or deform it. Protect parts which may
 get in the way with cloth.
- When removing parts with a screw driver or other tool, protect parts by wrapping them with vinyl or tape.
- Keep removed parts protected with cloth.
- If an non-reuseable part is removed, replace it with a new one.
- After re-assembly has been completed, make sure each part functions correctly.
- · Never work with wet hands.
- Turn the lighting switch OFF before disconnecting and connecting the connector.
- Do not use organic solvent (paint thinner or gasoline) to clean lamps or remove sealant residue.

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ON-VEHICLE REPAIR

INTERIOR ROOM LAMP

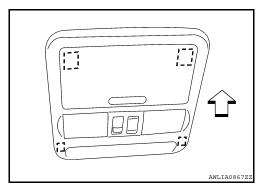
Removal and Installation

FRONT ROOM/MAP LAMP ASSEMBLY

Removal

The map lamp is replaced as part of the overhead console assembly. Refer to INT-24, "Removal and Installation".

: Metal clip



Installation

Installation is in the reverse order of removal.

Bulb Replacement

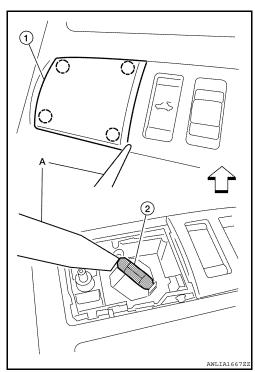
1. Using a suitable tool (A), remove map lamp lens (1).

(): Pawl CAUTION:

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

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

Map lamp bulb : 12V - 8W



VANITY MIRROR LAMP

Removal

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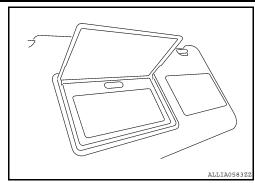
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INTERIOR ROOM LAMP

< ON-VEHICLE REPAIR >

[WITHOUT POWER DOOR LOCKS]

The vanity mirror lamp is replaced as part of the sunvisor assembly. Refer to INT-24, "Removal and Installation".



Installation

Installation is in the reverse order of removal.

Bulb Replacement

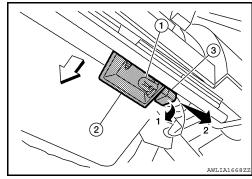
The vanity mirror lamp bulb is replaced as part of the sunvisor assembly. Refer to INT-24, "Removal and Installation".

GLOVE BOX LAMP

Removal

- 1. Remove lower instrument panel RH and glove box. Refer to IP-11, "Removal and Installation".
- Rotate glove box lamp socket (3) with bulb (1) counterclockwise, then pull away from lamp shield (2) on steering member to remove.

∀
 □: Vehicle front



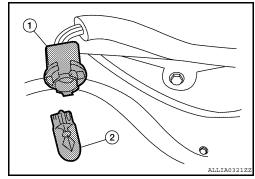
Installation

Installation is in the reverse order of removal.

Bulb Replacement

- 1. Remove glove box lamp.
- 2. Pull bulb (2) straight out from glove box lamp socket (1) to remove.

Glove box lamp bulb : 12V - 3.4W



ROOM LAMP

Removal

INTERIOR ROOM LAMP

< ON-VEHICLE REPAIR >

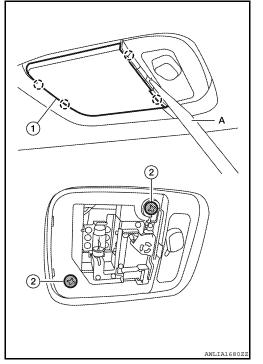
[WITHOUT POWER DOOR LOCKS]

1. Using a suitable tool (A), release the pawls and remove the room lamp lens (1).

(): Pawl CAUTION:

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

- 2. Remove room lamp screws (2).
- 3. Disconnect the connector, then remove room lamp.



Installation

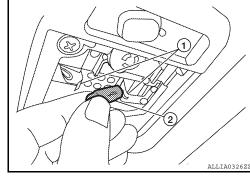
Installation is in the reverse order of removal.

Bulb Replacement

1. Using a suitable tool, release the pawls and remove the room lamp lens.

2. Release the room lamp bulb retainers (1), then pull bulb (2) straight out to remove.

Room lamp bulb : 12V - 8W



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ILLUMINATION

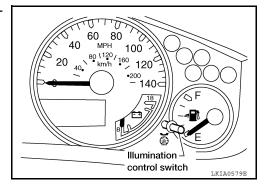
Removal and Installation

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ILLUMINATION CONTROL SWITCH

Removal

The illumination control switch is replaced as a part of the combination meter assembly. Refer to MWI-95, "Removal and Installation".



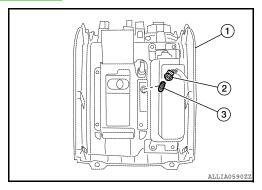
Installation

Installation is in the reverse order of removal.

A/T FINISHER LAMP

Removal

- 1. Remove A/T finisher from center console. Refer to IP-17, "Exploded View".
- 2. Rotate A/T finisher lamp socket (2) with bulb (3) counterclockwise, then pull away from finisher (1).



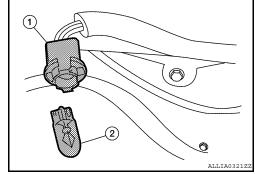
Installation

Installation is in the reverse order of removal.

Bulb Replacement

- Remove A/T finisher from center console. Refer to <u>IP-17</u>, "Exploded View".
- 2. Remove A/T finisher lamp socket (1), then pull bulb (2) straight out away from socket.

AT finisher lamp bulb : 12V - 3W



BULB SPECIFICATIONS

< SERVICE DATA AND SPECIFICATIONS (SDS)

[WITHOUT POWER DOOR LOCKS]

SERVICE DATA AND SPECIFICATIONS (SDS)

BULB SPECIFICATIONS

Interior Lamp/Illumination

Item	Wattage (W)*	
Map lamp	8	
Vanity lamp	*	
Glove box lamp	3.4	
Room lamp	8	
A/T finisher lamp	3	

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

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