SECTION INL
INTERIOR LIGHTING SYSTEM

CONTENTS

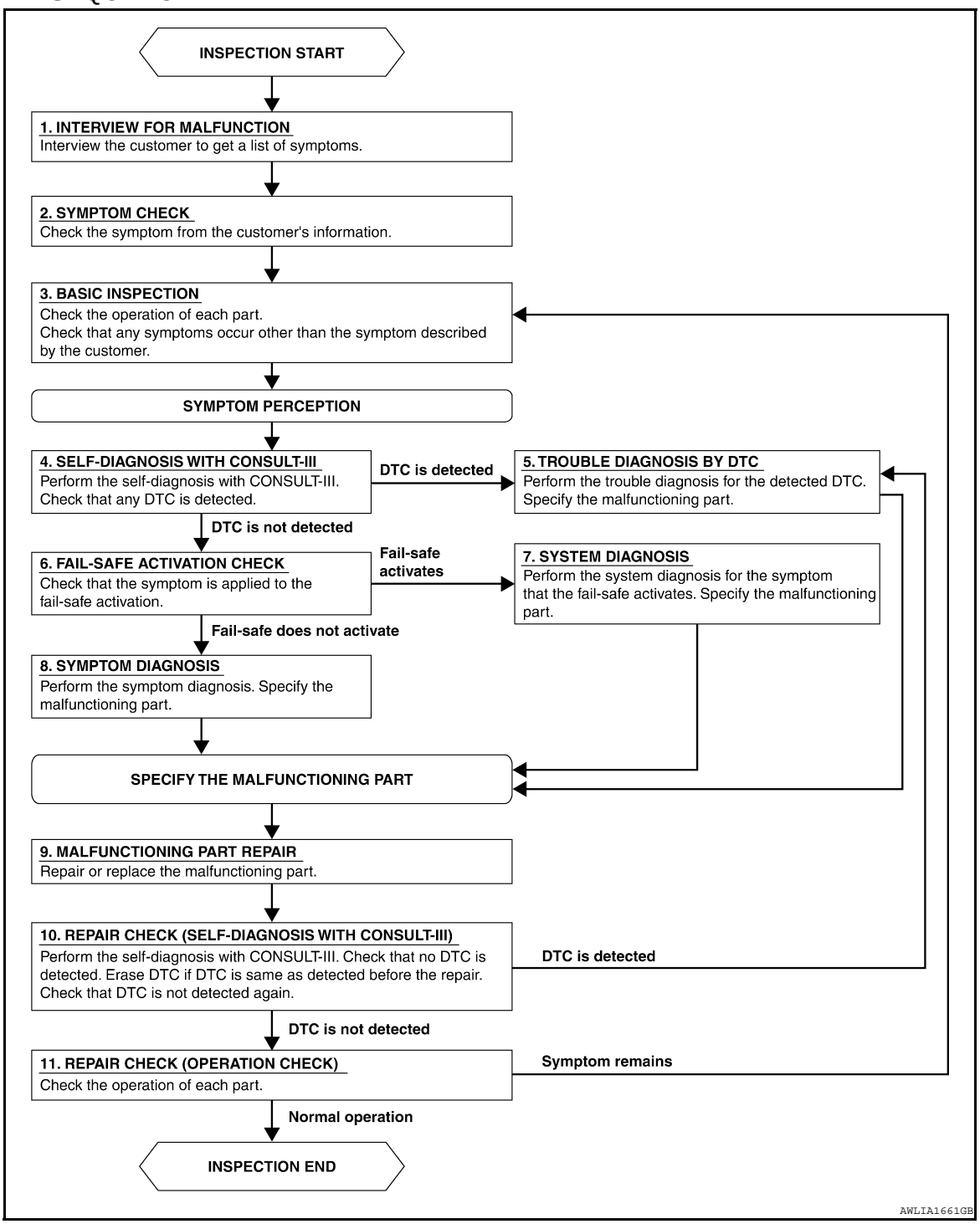
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:0000000005272798

OVERALL SEQUENCE



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

NO >> GO TO 11

11. REPAIR CHECK (OPERATION CHECK)

Check the operation of each part.

Does it operate normally?

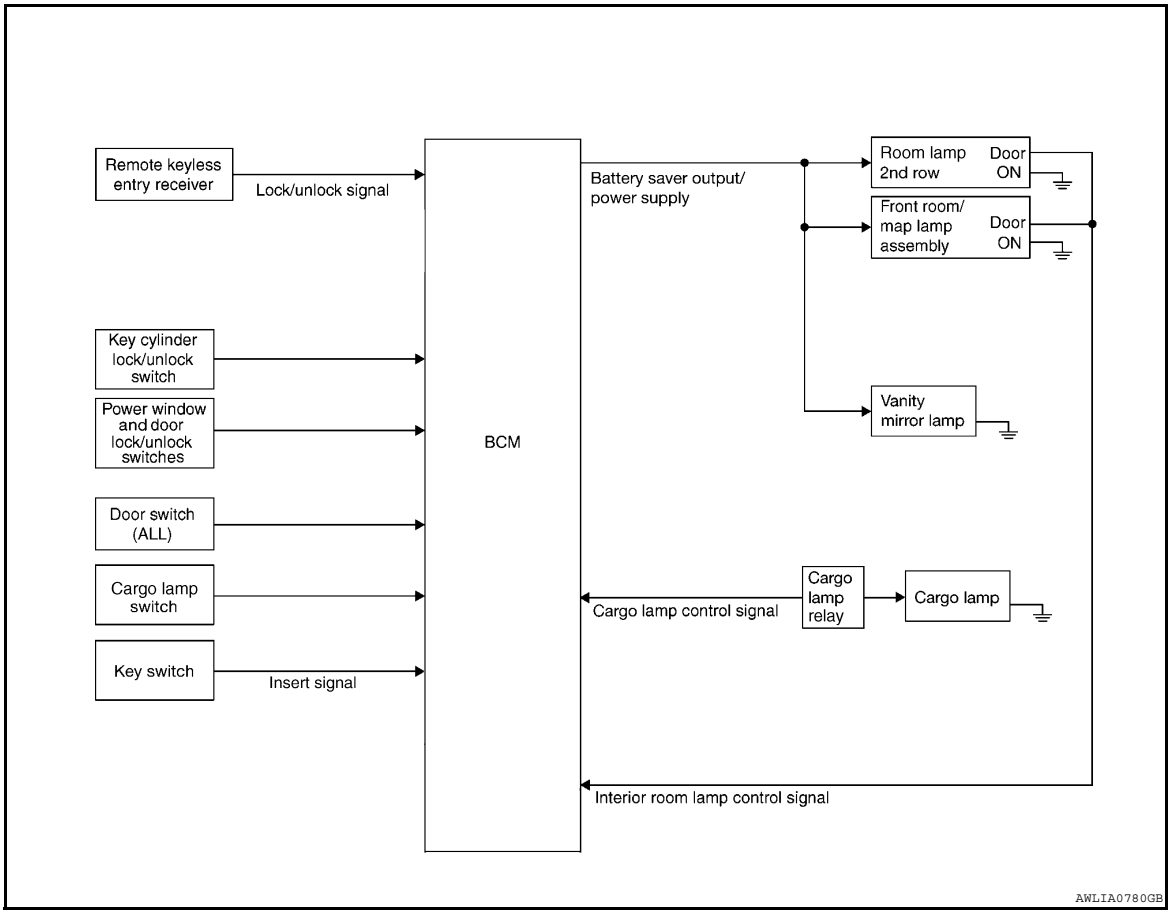
YES >> Inspection End
NO >> GO TO 3

FUNCTION DIAGNOSIS

INTERIOR ROOM LAMP CONTROL SYSTEM

System Diagram

INFOID:0000000005272799



System Description

INFOID:0000000005272800

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

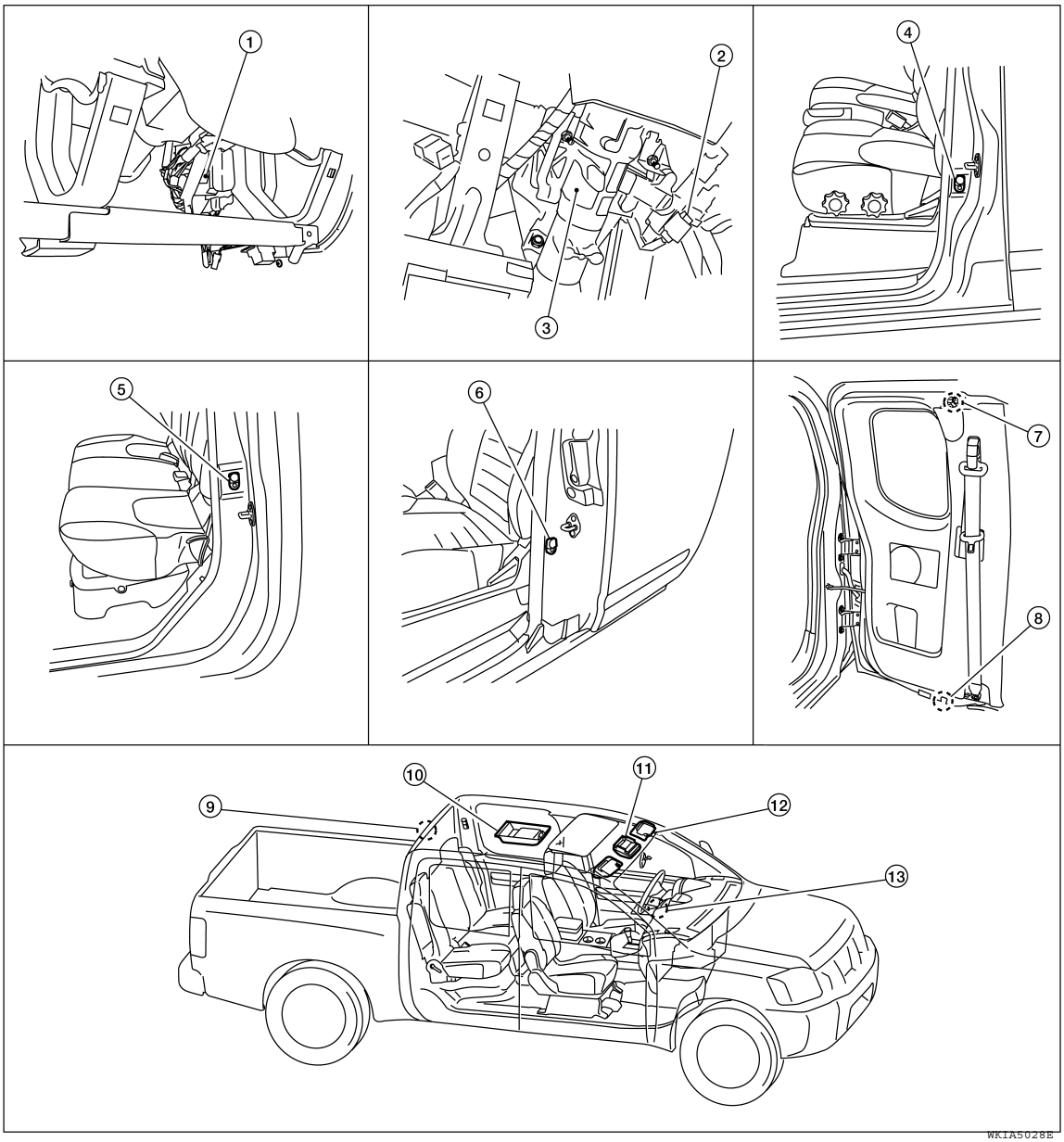
If an interior lamp is left ON and does not turn OFF even when the doors are closed, the BCM turns off power to the interior lamps automatically to save the battery 30 minutes after the ignition switch is turned OFF.
The BCM controls power and ground to all interior lamps.
After the battery saver system 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

INFOID:0000000005272801



1. BCM M18, M19, M20 (view with lower instrument panel LH removed)
2. Key switch M27
3. Steering column assembly
4. Front door switch LH B8 (crew cab) Front door switch RH B108 (crew cab)
5. Rear door switch LH B18 (crew cab) Rear door switch RH B116 (crew cab)
6. Front door switch LH D213 (king cab) Front door switch RH D316 (king cab)
7. Rear door switch upper LH D211 (king cab) Rear door switch upper LH D312 (king cab)
8. Rear door switch lower LH D212 (king cab) Rear door switch lower LH D313 (king cab)
9. Cargo lamp B161

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

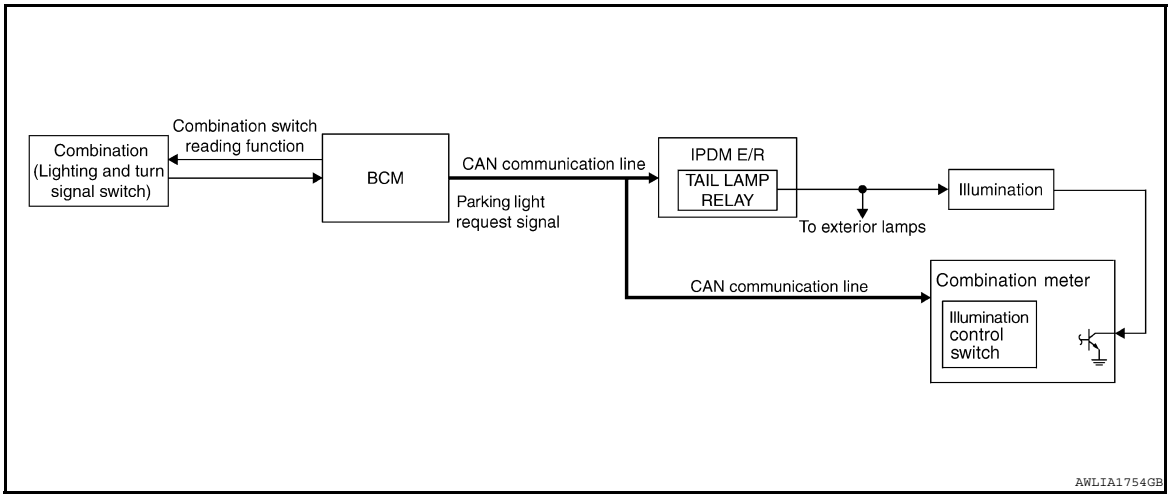
INFOID:0000000005272802

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	Provides door lock/unlock position switch status to the BCM.
Power window and door lock/unlock switch RH	
Front door lock assembly LH (key cylinder switch)	Provides door lock/unlock status to the BCM.

ILLUMINATION CONTROL SYSTEM

System Diagram

INFOID:0000000005550741



System Description

INFOID:0000000005550742

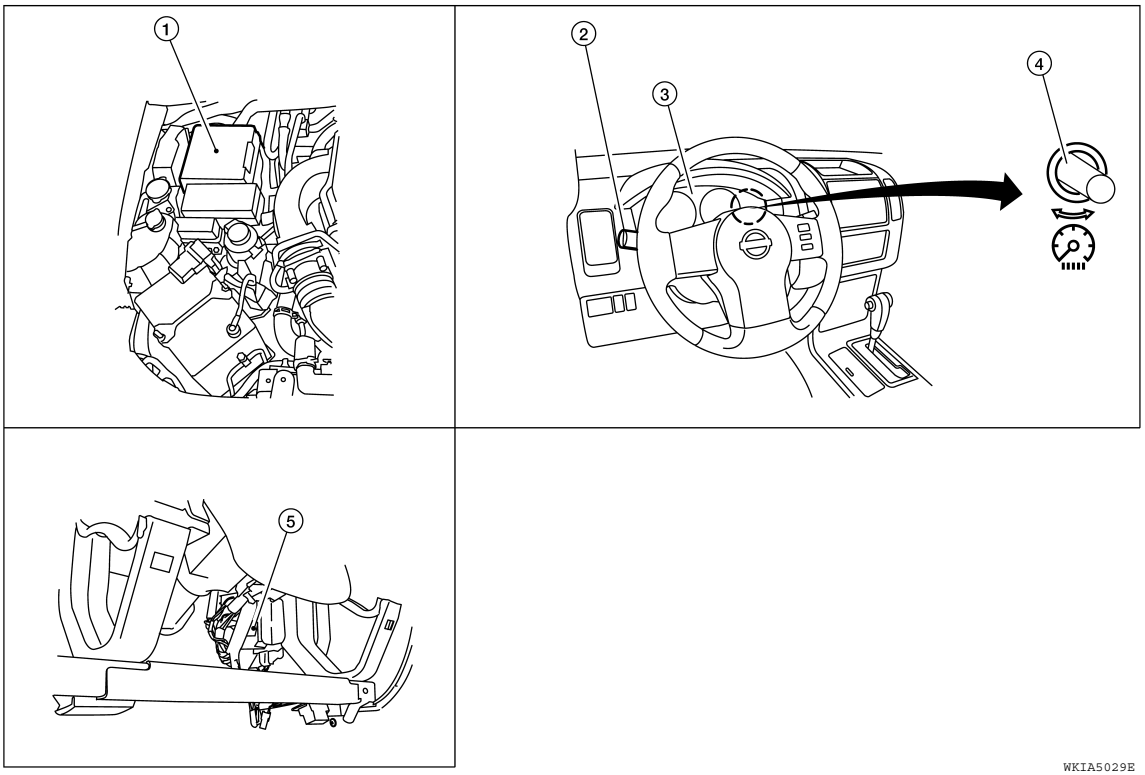
The illumination lamps operation is dependent upon the position of the combination switch (lighting and turn signal switch). When the combination switch (lighting and turn signal switch) is placed in the 1ST or 2ND position (or if the auto light system is activated) the BCM (body control module) receives 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.

Component Parts Location

INFOID:0000000005272805



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

Component Description

INFOID:0000000005272806

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

INFOID:0000000005550744

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.

NOTE:

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

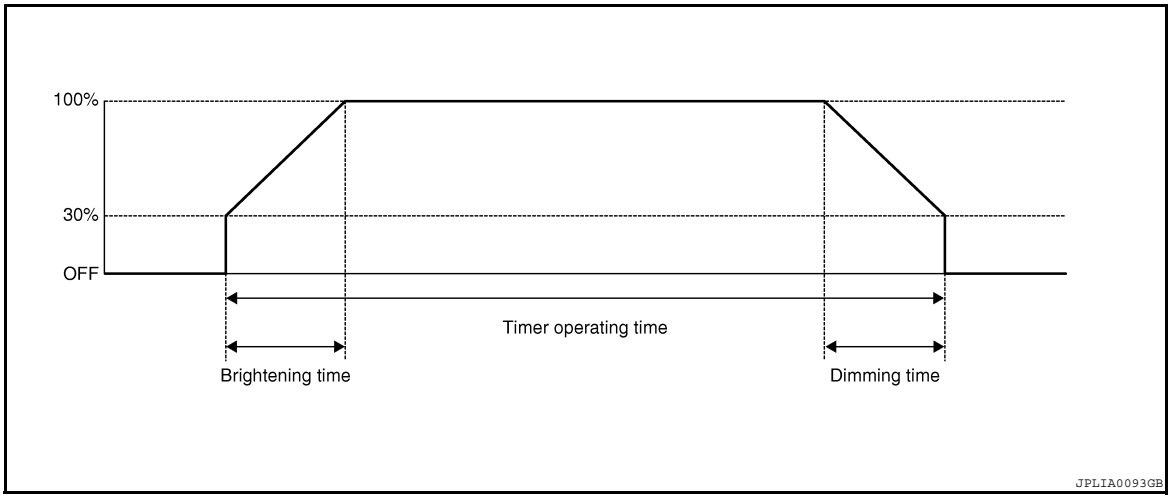
System	Sub system selection item	Diagnosis mode		
		WORK SUPPORT	DATA MONITOR	ACTIVE TEST
BCM	BCM	×		
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER		×	×
Warning chime	BUZZER		×	×
Interior room lamp timer	INT LAMP	×	×	×
Remote keyless entry system	MULTI REMOTE ENT	×	×	×
Exterior lamp	HEAD 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:0000000005550745

WORK SUPPORT



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

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	ON	Outputs the ignition keyhole illumination control signal to turn the ignition keyhole illumination lamp ON.
	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.
	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

WORK SUPPORT

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

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

*: Each lamp switch is in ON position.

COMPONENT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

BCM

BCM : Diagnosis Procedure

INFOID:0000000005550754

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.

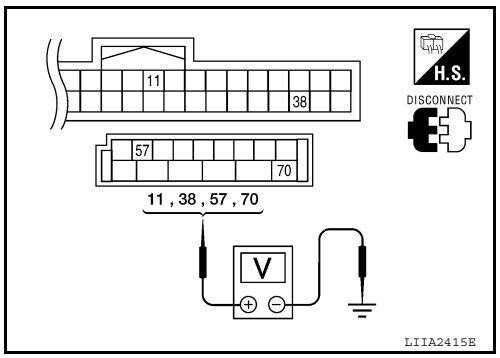
Terminal No.	Signal name	Fuses and fusible link No.
57	Battery power supply	18 (10A)
70		G (50A)
11	Ignition ACC or ON	4 (10A)
38	Ignition ON or START	1 (10A)

Is the fuse blown?

YES >> Replace the blown fuse or fusible link after repairing the affected circuit.
NO >> GO TO 2

2. CHECK POWER SUPPLY CIRCUIT

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



Connector	Terminals (+)	Terminals (-)	Power source	Condition	Voltage (V) (Approx.)
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
	70	Ground	Battery power supply	Ignition switch OFF	Battery voltage

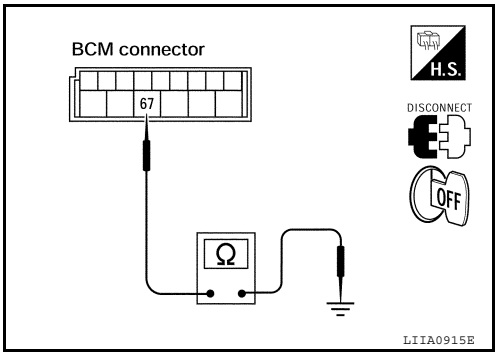
Is the measurement value normal?

YES >> GO TO 3
NO >> Repair or replace harness.

3. CHECK GROUND CIRCUIT

Check continuity between BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M20	67		Yes



Does continuity exist?

YES >> Inspection End.
NO >> Repair or replace harness.

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

CONSULT-III
1. Turn ignition switch ON.
2. Turn each interior room lamp ON.
- Front room/map lamp assembly (if equipped)
- Vanity lamps (if equipped)
- Room lamp 2nd row
3. Select “BATTERY SAVER” of BCM (BATTERY SAVER) active test item.
4. While operating the test item, check that each interior room lamp turns ON/OFF.

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

Is the inspection result normal?

YES >> Battery saver output/power supply circuit is normal.
NO >> Refer to INL-17, "Diagnosis Procedure".

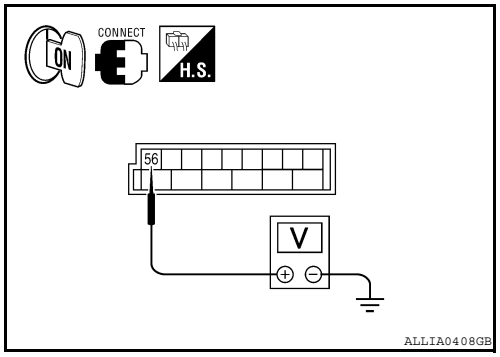
Diagnosis Procedure

INFOID:0000000005272813

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

1.CHECK BATTERY SAVER OUTPUT/POWER SUPPLY OUTPUT

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



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

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

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

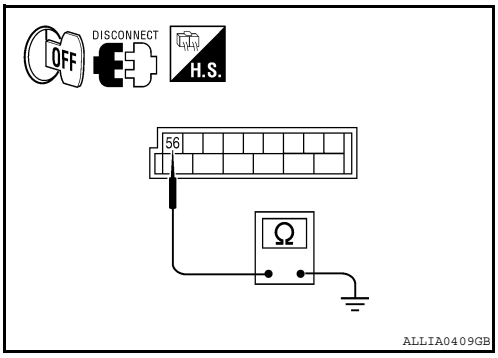
Is the inspection result normal?

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 INL-64, "Removal and Installation".
NO >> Repair the harness or connectors.

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

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**

1. CHECK INTERIOR ROOM LAMP CONTROL FUNCTION

CONSULT-III
1. Switch the front room/map lamp assembly (if equipped) and room lamp 2nd row switches to DOOR.
2. 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".

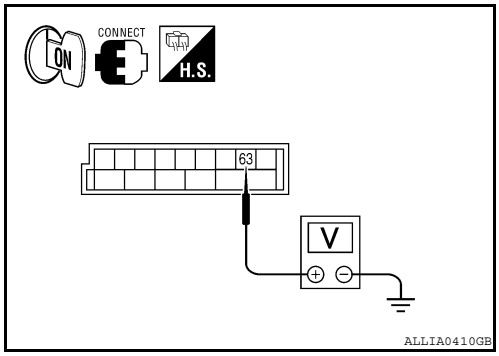
Diagnosis Procedure

INFOID:0000000005272816

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

1. CHECK INTERIOR ROOM LAMP CONTROL OUTPUT

CONSULT-III
1. Turn ignition switch ON.
2. Select “INT LAMP” of BCM (INT LAMP) active test item.
3. While operating the test item, check voltage between BCM connector M20 terminal 63 and ground.



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

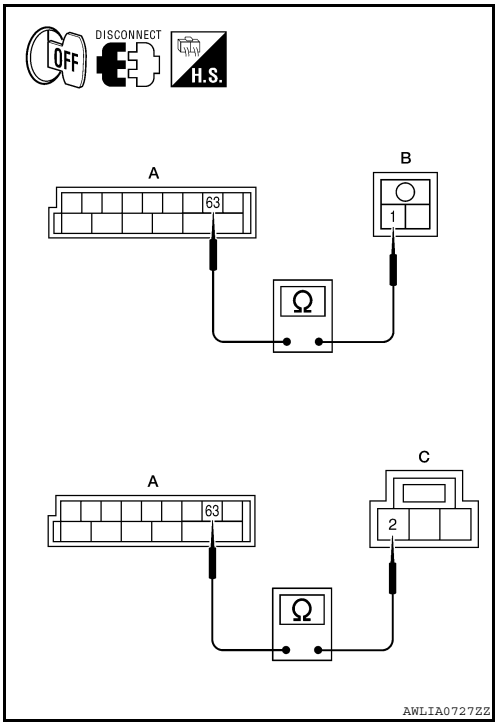
Is the inspection result normal?

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

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.

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



Is the inspection result normal?

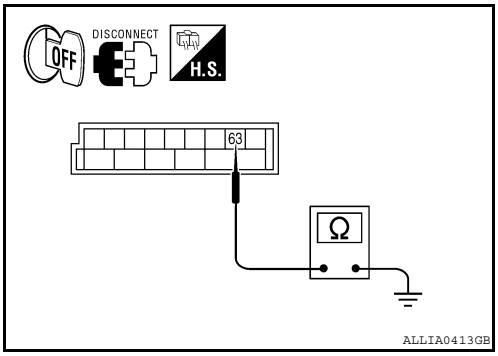
YES >> Check interior room lamp for an open. If OK, replace the BCM. Refer to BCS-54, "Removal and Installation". If NG, replace the interior room lamp. Refer to INL-64, "Removal and Installation".

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).
3. 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 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

Description

INFOID:0000000005272817

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

Diagnosis Procedure

INFOID:0000000005272818

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 DLK-27, "KING CAB : Description" (king cab), DLK-29, "CREW CAB : Description" (crew cab).
- Inoperative from keyfob only, refer to DLK-51, "Description".

2. CHECK CARGO LAMP SWITCH

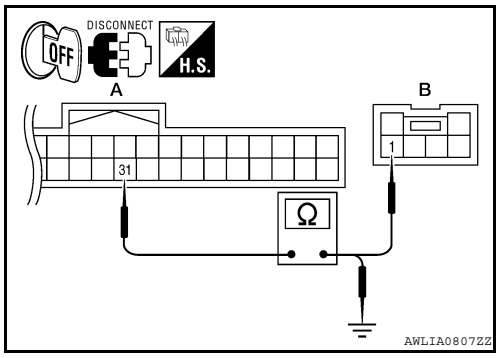
Check the cargo lamp switch. Refer to INL-23, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 3
NO >> Replace the cargo lamp switch.

3. CHECK CARGO LAMP SWITCH CIRCUIT

1. 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.



BCM		Cargo lamp switch		Continuity
Connector	Terminal	Connector	Terminal	
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

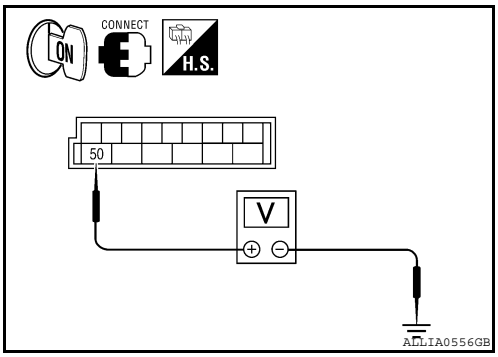
Check the cargo lamp relay. Refer to INL-23, "Component Inspection".

Is the inspection result normal?

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.



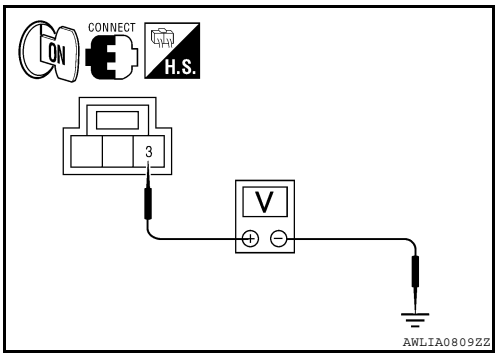
Connector	Terminal	—	Cargo lamp switch	Voltage
M19	50	Ground	ON	0V
			OFF	Battery voltage

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.



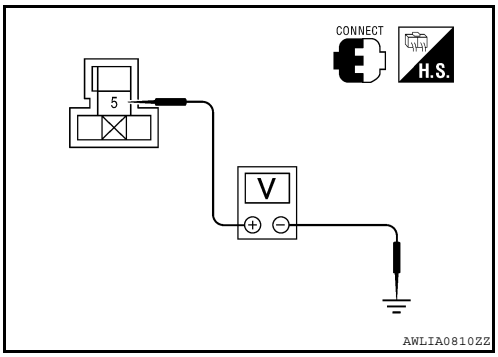
Connector	Terminal	—	Cargo lamp switch	Voltage
B161	3	Ground	ON	Battery voltage

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.



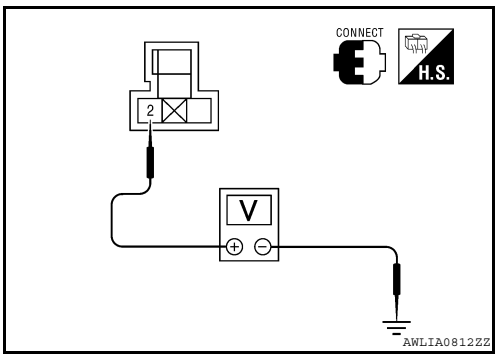
Cargo lamp relay		Ground	Voltage
Connector	Terminal		
M165	5		Battery voltage

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 lamp relay		Ground	Voltage
Connector	Terminal		
M165	2		Battery voltage

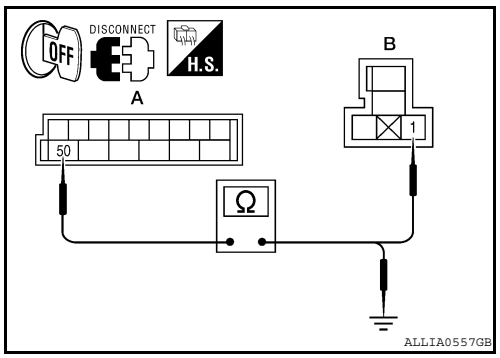
Is the inspection result normal?

YES >> GO TO 9
NO >> Repair harness or connectors.

9.CHECK CARGO LAMP RELAY CONTROL CIRCUIT

1. 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	
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

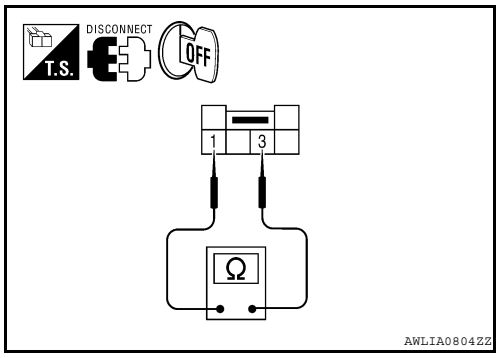
INFOID:0000000005272819

CARGO LAMP SWITCH

1. CHECK CARGO LAMP SWITCH

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

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



Is the inspection result normal?

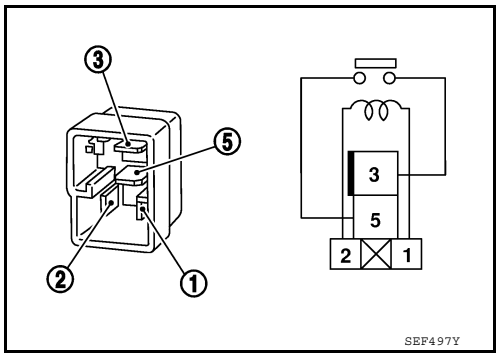
YES >> Inspection End
NO >> Replace cargo lamp switch.

CARGO LAMP RELAY

1. CHECK CARGO LAMP RELAY

1. Turn ignition switch OFF.
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.

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



Is the inspection result normal?

YES >> Inspection End
NO >> Replace cargo lamp relay.

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

CONSULT-III
1. Turn the ignition switch ON.
2. Select “IGN ILLUM” of BCM (INT LAMP) active test item.
3. 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".

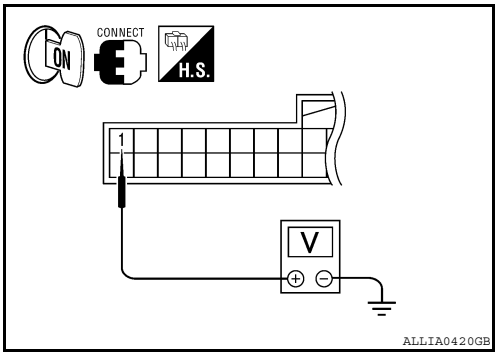
Diagnosis Procedure

INFOID:0000000005272822

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

1.CHECK IGNITION KEYHOLE OUTPUT

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



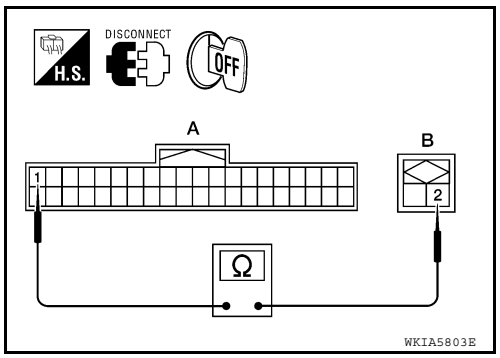
Connector	Terminal	—	IGN ILLUM	Voltage
M18	1	Ground	ON	0V
			OFF	Battery voltage

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

1. Turn ignition switch OFF.
2. 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	
M18 (A)	1	M150 (B)	2	Yes

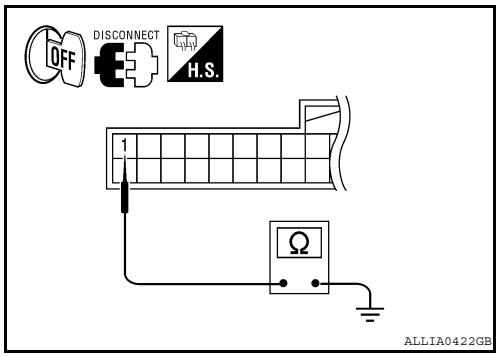
Is the inspection result normal?

YES >> Check the ignition keyhole illumination for an open. If OK, replace the BCM. Refer to BCS-54, "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?

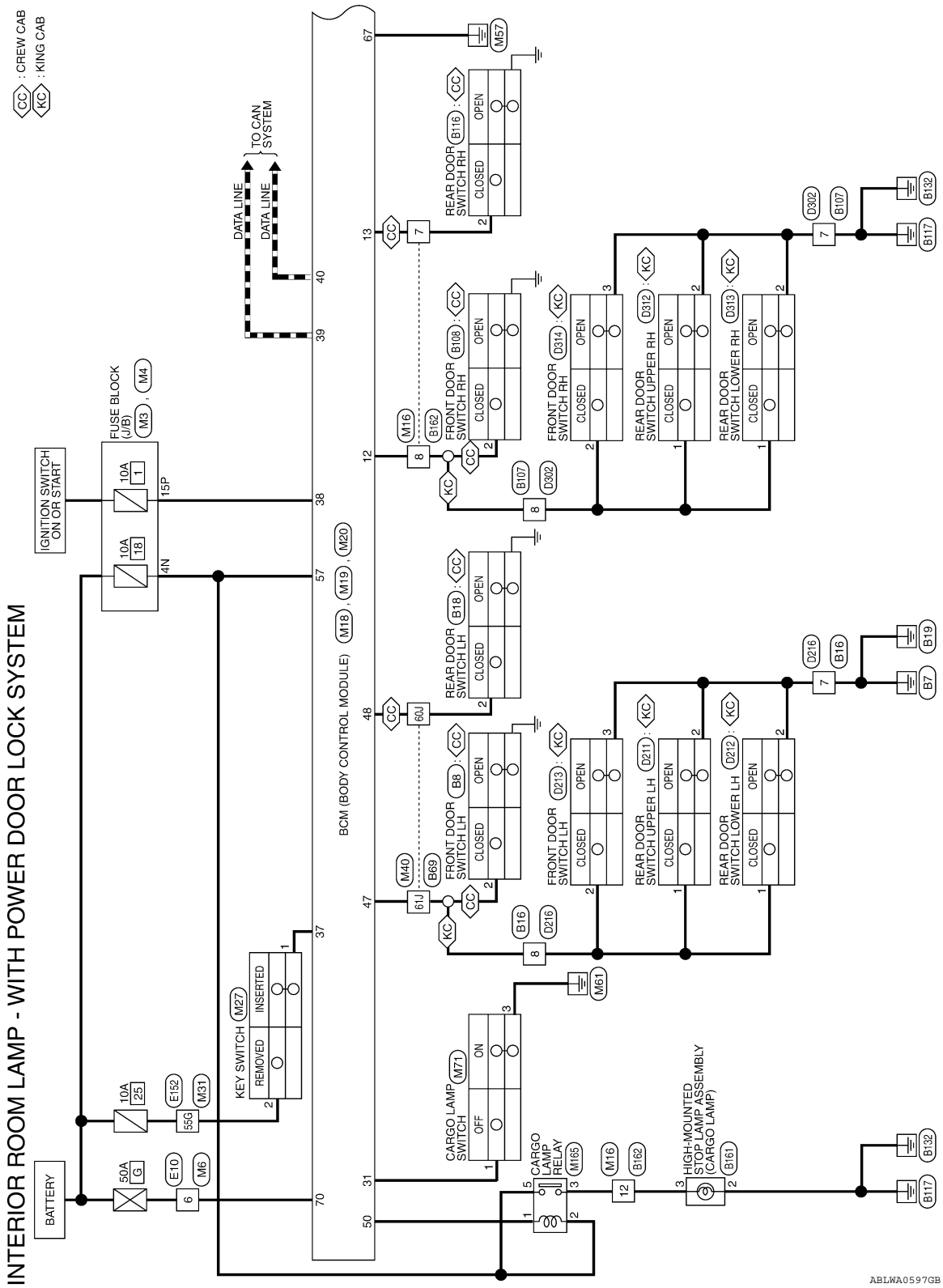
YES >> Check the ignition keyhole illumination for a short circuit. If OK, replace the BCM. Refer to BCS-54, "Removal and Installation". If NG, replace ignition keyhole illumination.

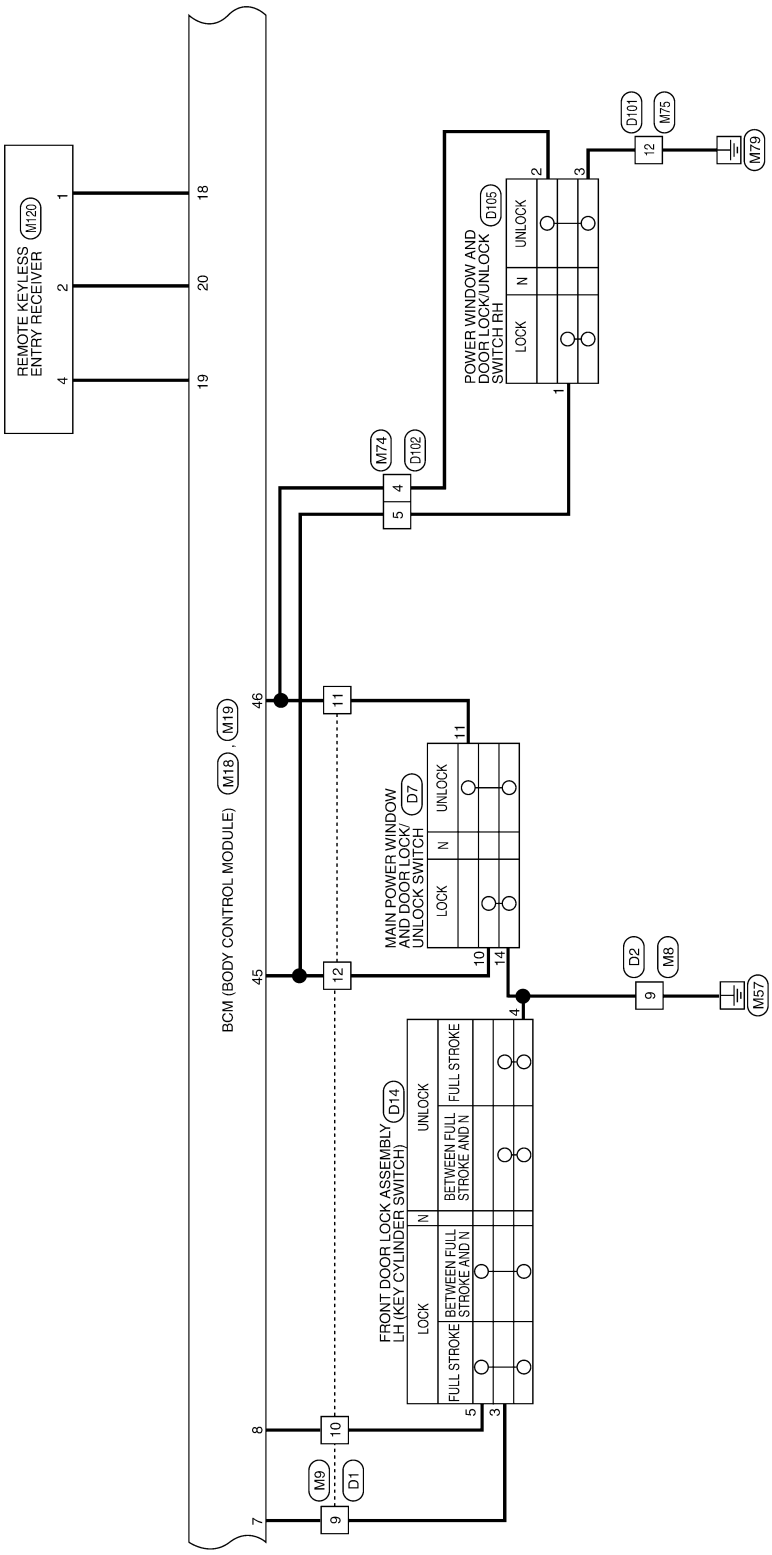
NO >> Repair harness or connectors.

INTERIOR ROOM LAMP CONTROL SYSTEM

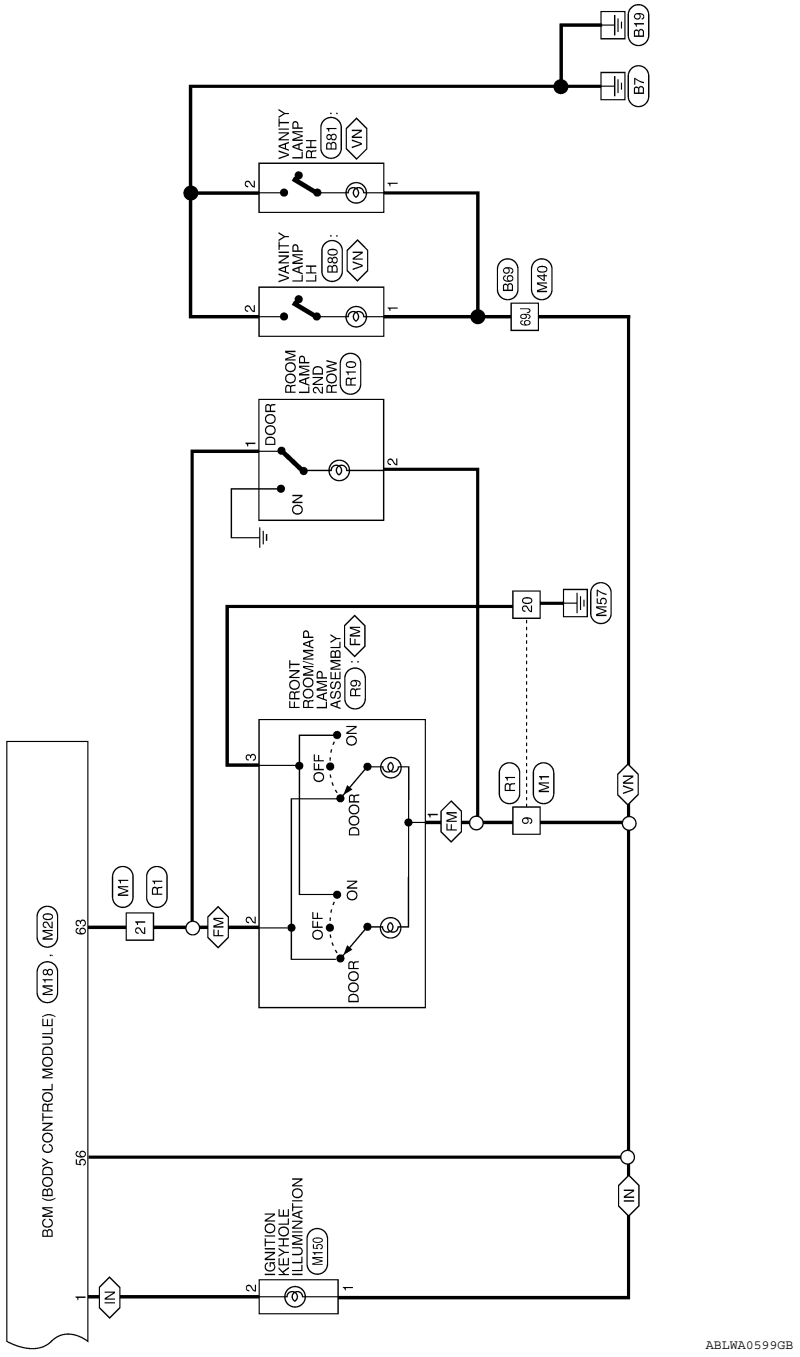
Wiring Diagram

INFOID:0000000005272823




REMOTE KEYLESS ENTRY RECEIVER M120
1
2
4
18
20
19
BCM (BODY CONTROL MODULE) M18, M19
46
45
8
7
11
12
10
9
M74
D102
4
5
POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH D105
LOCK
N
UNLOCK
1
2
3
D101
M75
12
M79
MAIN POWER WINDOW AND DOOR LOCK/ UNLOCK SWITCH D7
LOCK
N
UNLOCK
11
10
14
D2
M8
9
M57
FRONT DOOR LOCK ASSEMBLY LH (KEY CYLINDER SWITCH) D14
LOCK
FULL STROKE
BETWEEN FULL STROKE AND N
N
UNLOCK
BETWEEN FULL STROKE AND N
FULL STROKE
5
3
4
M9
D1
ABLWA0598GB

FM : WITH FRONT MAP LAMPS
IN : WITH IGNITION KEYHOLE ILLUMINATION
VN : WITH VANITY LAMPS



INTERIOR ROOM LAMP CONNECTORS - WITH POWER DOOR LOCK SYSTEM

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

H.S.

1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24

Terminal No.	Color of Wire	Signal Name
9	R/Y	–
20	B	–
21	BR	–

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

H.S.

3N		2N	1N
8N	7N	6N	5N	4N

Terminal No.	Color of Wire	Signal Name
4N	R/Y	–

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

H.S.

7P	6P	5P	4P	3P	2P	1P
16P	15P	14P	13P	12P	11P	10P	9P	8P

Terminal No.	Color of Wire	Signal Name
15P	W/R	–

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

3	2	1
6	5	4

Terminal No.	Color of Wire	Signal Name
6	W	–

Connector No.	M8
Connector Name	WIRE TO WIRE
Connector Color	BROWN

H.S.

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

Terminal No.	Color of Wire	Signal Name
9	B	–

Connector No.	M9
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

8	7	6	5	4	3	2	1
16	15	14	13	12	11	10	9

Terminal No.	Color of Wire	Signal Name
9	GR	–
10	SB	–
11	LG	–
12	V	–

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Connector No.	M16
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
7	L	–
8	LG	–
12	G	–

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

H.S.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

Terminal No.	Color of Wire	Signal Name
1	BR	KEY RING OUTPUT
7	GR	KEY CYLINDER UNLOCK SW
8	SB	KEY CYLINDER LOCK SW
12	LG	DOOR SW (AS)
13	L	DOOR SW (RR)

Terminal No.	Color of Wire	Signal Name
18	BR	KEYLESS & AUTO LIGHT SENSOR GND
19	V	KEYLESS TUNER POWER SUPPLY OUTPUT
20	G	KEYLESS TUNER SIGNAL
31	GR	CARGO LAMP SW
37	B	KEY SW
38	W/R	IGN SW
39	L	CAN-H
40	P	CAN-L

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

H.S.

41	42	43	44	45	46	47	48	49
50	51	52	53	54	55			

Terminal No.	Color of Wire	Signal Name
45	V	CDL LOCK SW
46	LG	CDL UNLOCK SW
47	GR	DOOR SW (DR)
48	P	DOOR SW (RL)
50	P	CARGO LAMP OUTPUT

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

H.S.

56	57	58	59	60	61	62	63	64
65	66	67	68	69	70			

Terminal No.	Color of Wire	Signal Name
56	R/Y	BATTERY SAVER OUTPUT
57	R/Y	BAT (FUSE)
63	BR	ROOM LAMP OUTPUT
67	B	GND (POWER)
70	W	BAT (F/L)

Connector No.	M27
Connector Name	KEY SWITCH
Connector Color	WHITE

H.S.

2	1

Terminal No.	Color of Wire	Signal Name
1	B	–
2	Y	–

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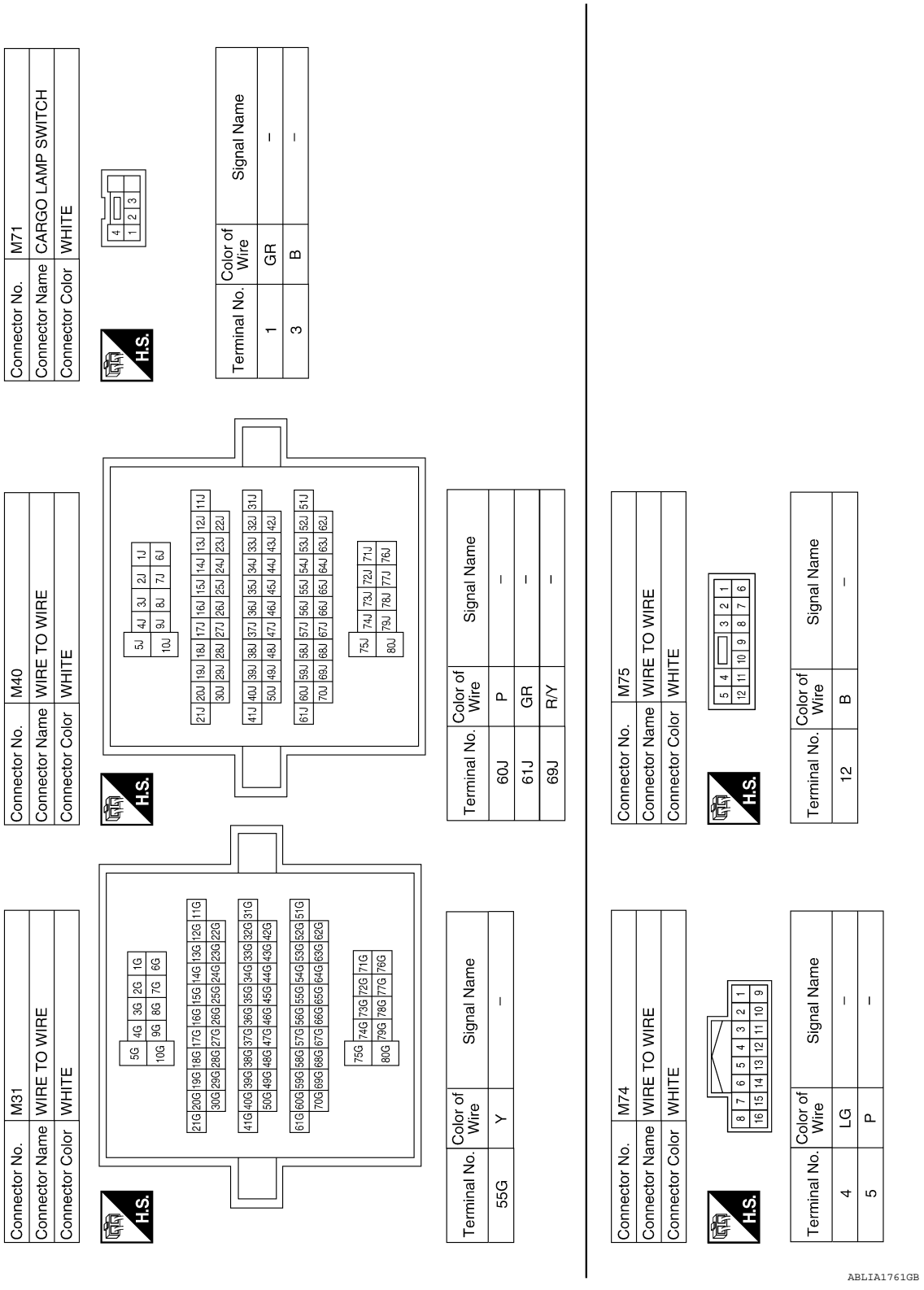

Connector No. M71
Connector Name CARGO LAMP SWITCH
Connector Color WHITE
H.S.
4 1 2 3
Terminal No. Color of Wire Signal Name
1 GR –
3 B –
Connector No. M40
Connector Name WIRE TO WIRE
Connector Color WHITE
H.S.
5J 4J 3J 2J 1J
9J 8J 7J 6J
10J
21J 20J 19J 18J 17J 16J 15J 14J 13J 12J 11J
30J 29J 28J 27J 26J 25J 24J 23J 22J
41J 40J 38J 38J 37J 36J 35J 34J 33J 32J 31J
50J 49J 48J 47J 46J 45J 44J 43J 42J
61J 60J 59J 58J 57J 56J 55J 54J 53J 52J 51J
70J 69J 68J 67J 66J 65J 64J 63J 62J
75J 74J 73J 72J 71J
80J 79J 78J 77J 76J
Terminal No. Color of Wire Signal Name
60J P –
61J GR –
69J R/Y –
Connector No. M31
Connector Name WIRE TO WIRE
Connector Color WHITE
H.S.
5G 4G 3G 2G 1G
10G 9G 8G 7G 6G
21G 20G 19G 18G 17G 16G 15G 14G 13G 12G 11G
30G 29G 28G 27G 26G 25G 24G 23G 22G
41G 40G 39G 38G 37G 36G 35G 34G 33G 32G 31G
50G 49G 48G 47G 46G 45G 44G 43G 42G
61G 60G 59G 58G 57G 56G 55G 54G 53G 52G 51G
70G 69G 68G 67G 66G 65G 64G 63G 62G
75G 74G 73G 72G 71G
80G 79G 78G 77G 76G
Terminal No. Color of Wire Signal Name
55G Y –
Connector No. M75
Connector Name WIRE TO WIRE
Connector Color WHITE
H.S.
5 4 3 2 1
12 11 10 9 8 7 6
Terminal No. Color of Wire Signal Name
12 B –
Connector No. M74
Connector Name WIRE TO WIRE
Connector Color WHITE
H.S.
8 7 6 5 4 3 2 1
16 15 14 13 12 11 10 9
Terminal No. Color of Wire Signal Name
4 LG –
5 P –
ABLIA1761GB

Connector No.	M120
Connector Name	REMOTE KEYLESS ENTRY RECEIVER
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	BR	GND
2	G	SIGNAL
4	V	PWR

Connector No.	M150
Connector Name	IGNITION KEYHOLE ILLUMINATION
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	R/Y	–
2	BR	–

Connector No.	M165
Connector Name	CARGO LAMP RELAY
Connector Color	BLUE

H.S.

Terminal No.	Color of Wire	Signal Name
1	P	–
2	R/Y	–
3	G	–
5	R/Y	–

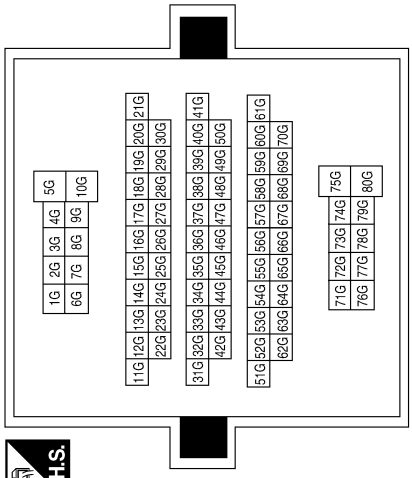
Connector No.	E10
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
6	W	–

Connector No.	E152
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
55G	Y	–

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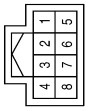
Connector No.	B8
Connector Name	FRONT DOOR SWITCH LH (CREW CAB)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
2	GR	–

Connector No.	B16
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
7	B	–
8	GR	–

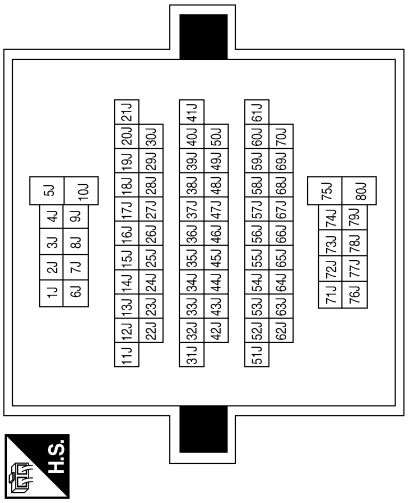
Connector No.	B18
Connector Name	REAR DOOR SWITCH LH
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
2	P	–

Connector No.	B69
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
60J	P	–
61J	GR	–
69J	R/Y	–

Connector No.	B80
Connector Name	VANITY LAMP LH
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	R/Y	–
2	B	–

ABLIA1763GB

Connector No.	B81
Connector Name	VANITY LAMP RH
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	R/Y	–
2	B	–

Connector No.	B116
Connector Name	REAR DOOR SWITCH RH
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
2	L	–

Connector No.	B107
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
7	B	–
8	LG	–

Connector No.	B161
Connector Name	HIGH-MOUNTED STOP LAMP ASSEMBLY
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
2	B	–
3	G	–

Connector No.	B108
Connector Name	FRONT DOOR SWITCH RH (CREW CAB)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
2	LG	–

Connector No.	B162
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
7	L	–
8	LG	–
12	G	–

ABLIA1764GB

Connector No.	R1
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

12	11	10	9	8	7	6	5	4	3	2	1
24	23	22	21	20	19	18	17	16	15	14	13

Terminal No.	Color of Wire	Signal Name
9	R/Y	–
20	B	–
21	BR	–

Connector No.	R9
Connector Name	FRONT ROOM/MAP LAMP ASSEMBLY
Connector Color	WHITE

H.S.

2	3	1

Terminal No.	Color of Wire	Signal Name
1	R/Y	–
2	Y	–
3	B	–

Connector No.	R10
Connector Name	ROOM LAMP 2ND ROW
Connector Color	WHITE

H.S.

1	2

Terminal No.	Color of Wire	Signal Name
1	BR	–
2	R/Y	–

Connector No.	D1
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2	3	4	5	6	7	8
9	10	11	12	13	14	15	16

Terminal No.	Color of Wire	Signal Name
9	R/W	–
10	SB	–
11	W	–
12	LG	–

Connector No.	D2
Connector Name	WIRE TO WIRE
Connector Color	BROWN

H.S.

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

Terminal No.	Color of Wire	Signal Name
9	B	–

Connector No.	D7
Connector Name	MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH
Connector Color	WHITE

H.S.

1	2	3	4		5	6	7
8	9	10	11	12	13	14	15	16

Terminal No.	Color of Wire	Signal Name
10	LG	–
11	W	–
14	B	–

ABLIA0581GB

Connector No.	D14
Connector Name	FRONT DOOR LOCK ASSEMBLY LH
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
3	R/W	–
4	B	–
5	SB	–

Connector No.	D101
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
12	B	–

Connector No.	D102
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
4	W	–
5	LG	–

Connector No.	D105
Connector Name	POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	LG	–
2	W	–
3	B	–

Connector No.	D211
Connector Name	REAR DOOR SWITCH UPPER LH
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	LG	–
2	B	–

Connector No.	D212
Connector Name	REAR DOOR SWITCH LOWER LH
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	L	–
2	B	–

ABLIA0582GB

Connector No.	D213
Connector Name	FRONT DOOR SWITCH LH (KING CAB)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
2	LG	–
3	B	–

Connector No.	D216
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
7	B	–
8	LG	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
7	B	–
8	LG	–

Connector No.	D312
Connector Name	REAR DOOR SWITCH UPPER RH
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	L	–
2	B	–

Connector No.	D313
Connector Name	REAR DOOR SWITCH LOWER RH
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	L	–
2	B	–

Connector No.	D314
Connector Name	FRONT DOOR SWITCH RH (KING CAB)
Connector Color	WHITE

H.S.

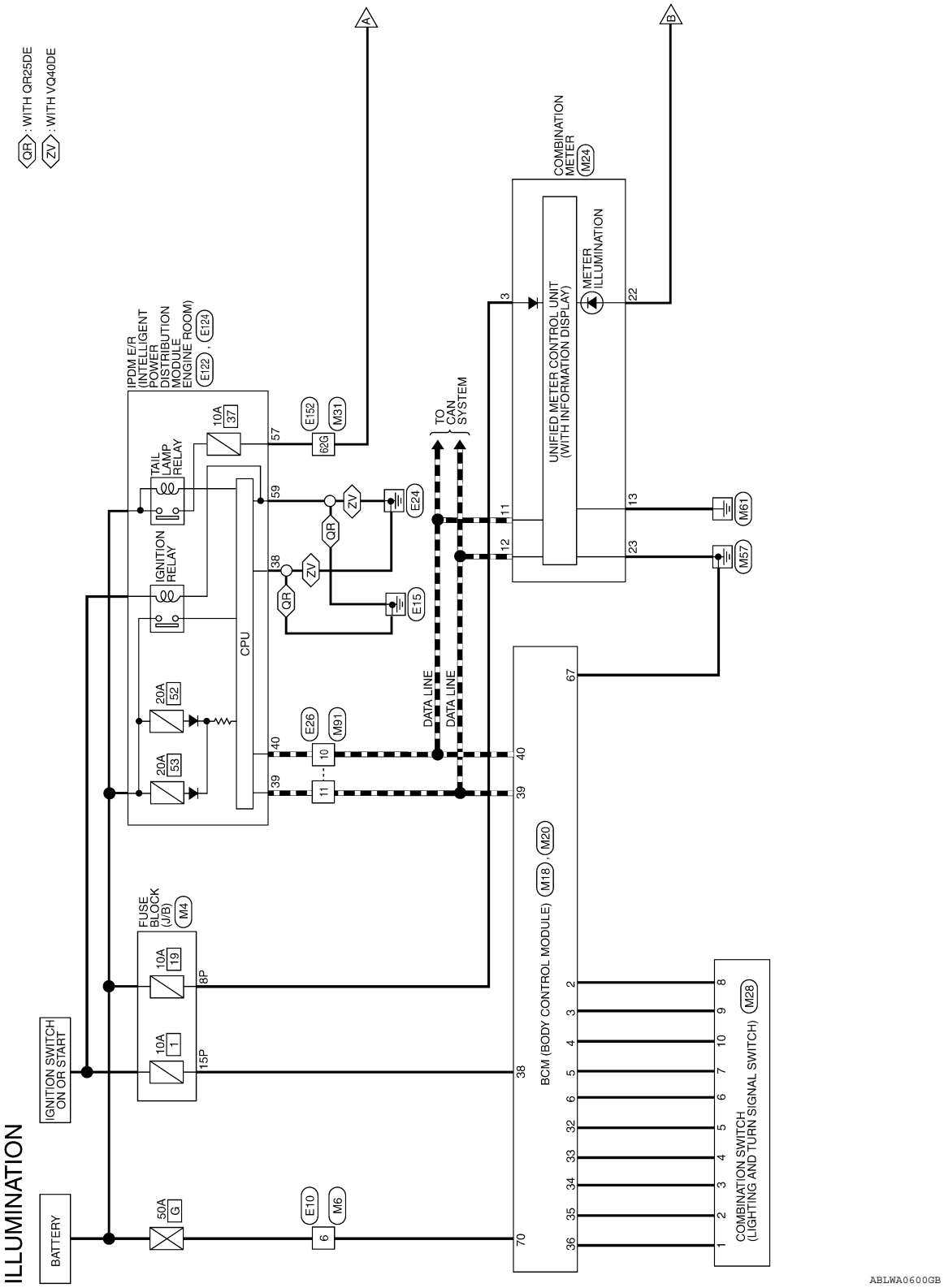
Terminal No.	Color of Wire	Signal Name
2	LG	–
3	B	–

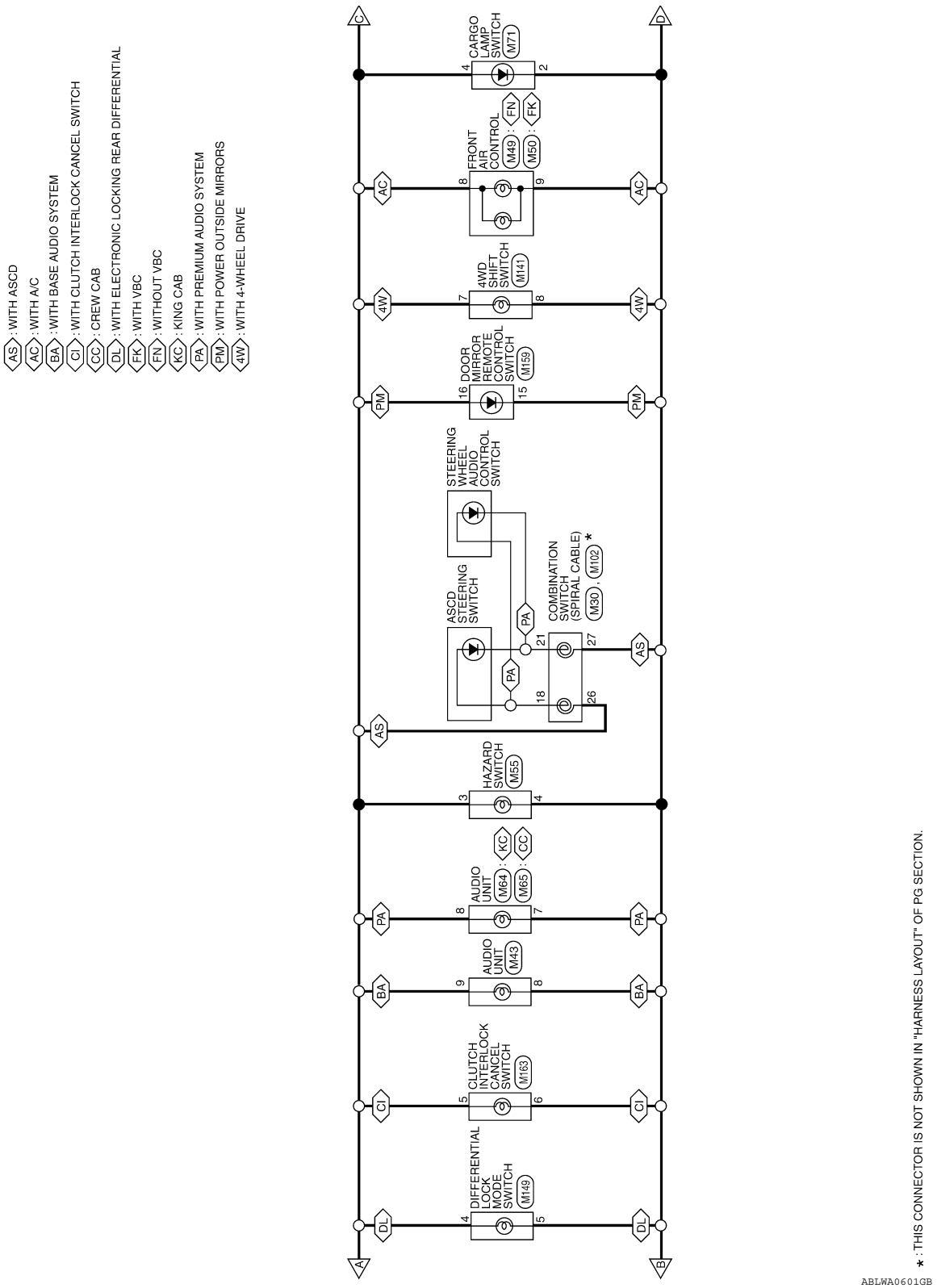
ABLIA1765GB

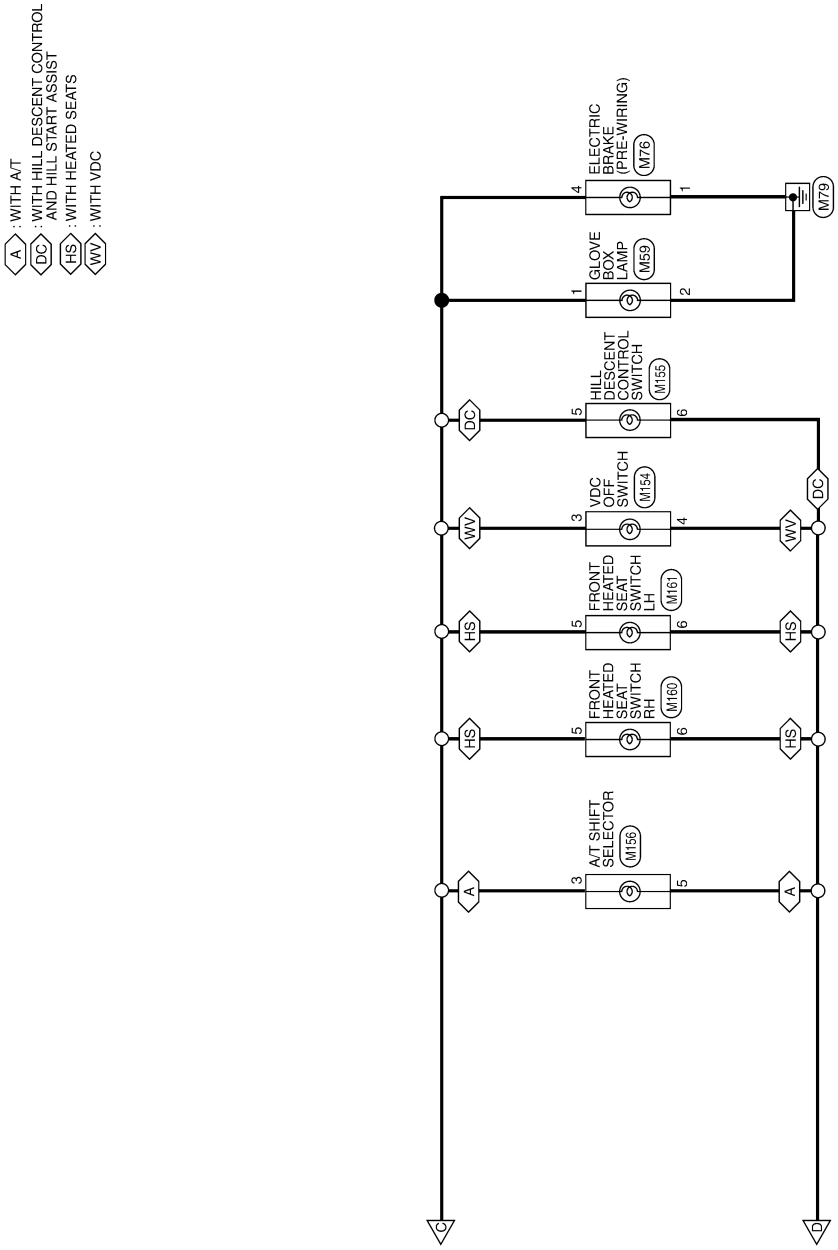
ILLUMINATION

Wiring Diagram

INFOID:0000000005272824




AS : WITH ASCD
AC : WITH A/C
BA : WITH BASE AUDIO SYSTEM
CI : WITH CLUTCH INTERLOCK CANCEL SWITCH
CC : CREW CAB
DL : WITH ELECTRONIC LOCKING REAR DIFFERENTIAL
FK : WITH VBC
FN : WITHOUT VBC
KC : KING CAB
PA : WITH PREMIUM AUDIO SYSTEM
PM : WITH POWER OUTSIDE MIRRORS
4W : WITH 4-WHEEL DRIVE
CARGO LAMP SWITCH (M71)
FRONT AIR CONTROL (M49) : FN (M50) : FK
4WD SHIFT SWITCH (M141)
DOOR MIRROR REMOTE CONTROL SWITCH (M159)
STEERING WHEEL AUDIO CONTROL SWITCH
ASCD STEERING SWITCH
COMBINATION SWITCH (SPIRAL CABLE) * (M30), (M102)
HAZARD SWITCH (M55)
AUDIO UNIT (M64) : KC (M65) : CC
AUDIO UNIT (M43)
CLUTCH INTERLOCK CANCEL SWITCH (M163)
DIFFERENTIAL LOCK MODE SWITCH (M149)
* : THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT" OF PG SECTION.
ABLWA0601GB



ABLWA0602GB

ILLUMINATION CONNECTORS

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

H.S.

7P 6P 5P 4P 3P 2P 1P
16P 15P 14P 13P 12P 11P 10P 9P 8P

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

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

3 2 1
6 5 4

Terminal No.	Color of Wire	Signal Name
6	W	–

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

H.S.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

Terminal No.	Color of Wire	Signal Name
2	P	INPUT 5
3	SB	INPUT 4
4	V	INPUT 3
5	L	INPUT 2
6	R	INPUT 1
32	O	OUTPUT 5
33	GR	OUTPUT 4
34	G	OUTPUT 3
35	BR	OUTPUT 2
36	LG	OUTPUT 1
38	W/R	IGN SW
39	L	CAN-H
40	P	CAN-L

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE

H.S.

20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21

Terminal No.	Color of Wire	Signal Name
3	R/Y	BATTERY
11	P	CAN-L
12	L	CAN-H
13	GR	GROUND
22	BR	ILLUMINATION CONTROL
23	B	POWER GND

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

H.S.

56 57 58 59 60 61 62 63 64
65 66 67 68 69 70

Terminal No.	Color of Wire	Signal Name
67	B	GND (POWER)
70	W	BAT (F/L)

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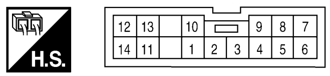
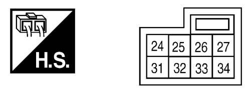
Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE



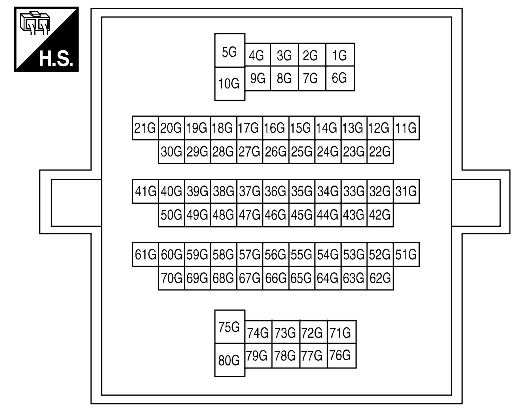
Terminal No.	Color of Wire	Signal Name
1	LG	INPUT 1
2	BR	INPUT 2
3	G	INPUT 3
4	GR	INPUT 4
5	O	INPUT 5
6	R	OUTPUT 1
7	L	OUTPUT 2
8	P	OUTPUT 5
9	SB	OUTPUT 4
10	V	OUTPUT 3

Connector No.	M30
Connector Name	COMBINATION SWITCH
Connector Color	GRAY



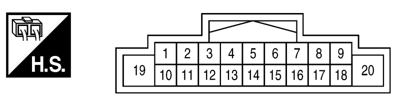
Terminal No.	Color of Wire	Signal Name
26	R	ILL+
27	G	ILL-

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



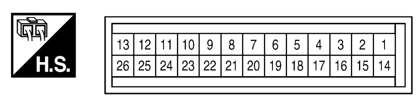
Terminal No.	Color of Wire	Signal Name
62G	R	–

Connector No.	M43
Connector Name	AUDIO UNIT (WITH BASE AUDIO SYSTEM)
Connector Color	WHITE



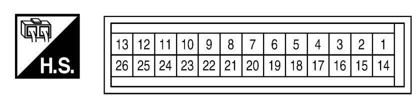
Terminal No.	Color of Wire	Signal Name
8	GR	ILL CONT
9	R	LIGHT SW

Connector No.	M49
Connector Name	FRONT AIR CONTROL (WITHOUT VBC)
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
8	G	–
9	BR	–

Connector No.	M50
Connector Name	FRONT AIR CONTROL (WITH VBC)
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
8	G	–
9	BR	–

ABLIA1767GB

Connector No.	M55
Connector Name	HAZARD SWITCH
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
3	R	–
4	BR	–

Connector No.	M59
Connector Name	GLOVE BOX LAMP
Connector Color	BROWN

H.S.

Terminal No.	Color of Wire	Signal Name
1	R	–
2	B	–

Connector No.	M64
Connector Name	AUDIO UNIT (KING CAB WITH PREMIUM AUDIO SYSTEM)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
7	GR	ILL CONT
8	G	LIGHT SW

Connector No.	M65
Connector Name	AUDIO UNIT (CREW CAB WITH PREMIUM AUDIO SYSTEM)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
7	GR	ILL CONT
8	G	LIGHT SW

Connector No.	M71
Connector Name	CARGO LAMP SWITCH
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
2	P	–
4	V	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	GROUND
4	R	ILL (TAIL)

ABLIA1768GB

Connector No.	M91
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

7	6	5	4		3	2	1
16	15	14	13	12	11	10	9	8

Terminal No.	Color of Wire	Signal Name
10	P	–
11	L	–

Connector No.	M102
Connector Name	COMBINATION SWITCH
Connector Color	GRAY

H.S.

14	15	16	17	18	19	20	21

Terminal No.	Color of Wire	Signal Name
18	R	–
21	G	–

Connector No.	M141
Connector Name	4WD SHIFT SWITCH
Connector Color	GRAY

H.S.

1	2	3	4	5	6	7	8

Terminal No.	Color of Wire	Signal Name
7	R	LIGHT_SW
8	BR	GND

Connector No.	M149
Connector Name	DIFFERENTIAL LOCK MODE SWITCH
Connector Color	WHITE

H.S.

4	1
2	5	3

Terminal No.	Color of Wire	Signal Name
4	R	–
5	BR	–

Connector No.	M154
Connector Name	VDC OFF SWITCH
Connector Color	GRAY

H.S.

6	5	4	3	2	1

Terminal No.	Color of Wire	Signal Name
3	R	–
4	BR	–

Connector No.	M155
Connector Name	HILL DESCENT CONTROL SWITCH
Connector Color	WHITE

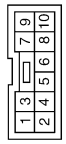
H.S.

5	2
6	1

Terminal No.	Color of Wire	Signal Name
5	R	–
6	BR	–

ABLIA1769GB

Connector No.	M156
Connector Name	A/T SHIFT SELECTOR
Connector Color	WHITE

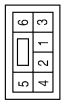


Terminal No.	Color of Wire	Signal Name
3	R	–
5	BR	–

Connector No.	M159
Connector Name	DOOR MIRROR REMOTE CONTROL SWITCH
Connector Color	WHITE

Terminal No.	Color of Wire	Signal Name
15	BR	–
16	R	–

Connector No.	M160
Connector Name	FRONT HEATED SEAT SWITCH RH
Connector Color	BROWN

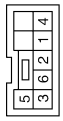


Terminal No.	Color of Wire	Signal Name
5	SB	–
6	O	–

Connector No.	M161
Connector Name	FRONT HEATED SEAT SWITCH LH
Connector Color	WHITE

Terminal No.	Color of Wire	Signal Name
5	R	–
6	BR	–

Connector No.	M163
Connector Name	CLUTCH INTERLOCK CANCEL SWITCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5	R	–
6	BR	–

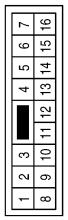
Connector No.	E10
Connector Name	WIRE TO WIRE
Connector Color	WHITE

Terminal No.	Color of Wire	Signal Name
6	W	–

ABLIA1770GB

Connector No.	E26
Connector Name	WIRE TO WIRE
Connector Color	WHITE

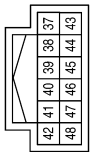
H.S.



Terminal No.	Color of Wire	Signal Name
10	P	–
11	L	–

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

H.S.



Terminal No.	Color of Wire	Signal Name
38	B	GND (SIGNAL)
39	L	CAN-H
40	P	CAN-L

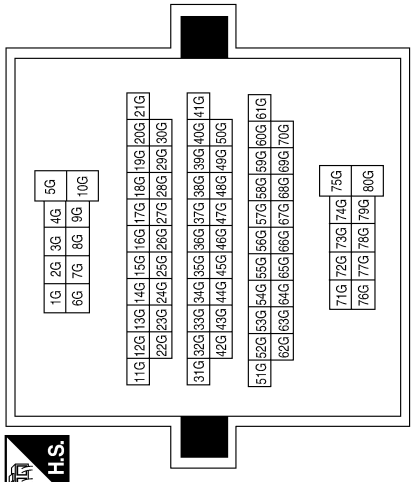
Connector No.	E124
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
57	GR	TAIL LAMP
59	B	GND (POWER)

Connector No.	E152
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
62G	R	–

ABLIA1771GB

ECU DIAGNOSIS

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:0000000005550756

VALUES ON THE DIAGNOSIS TOOL

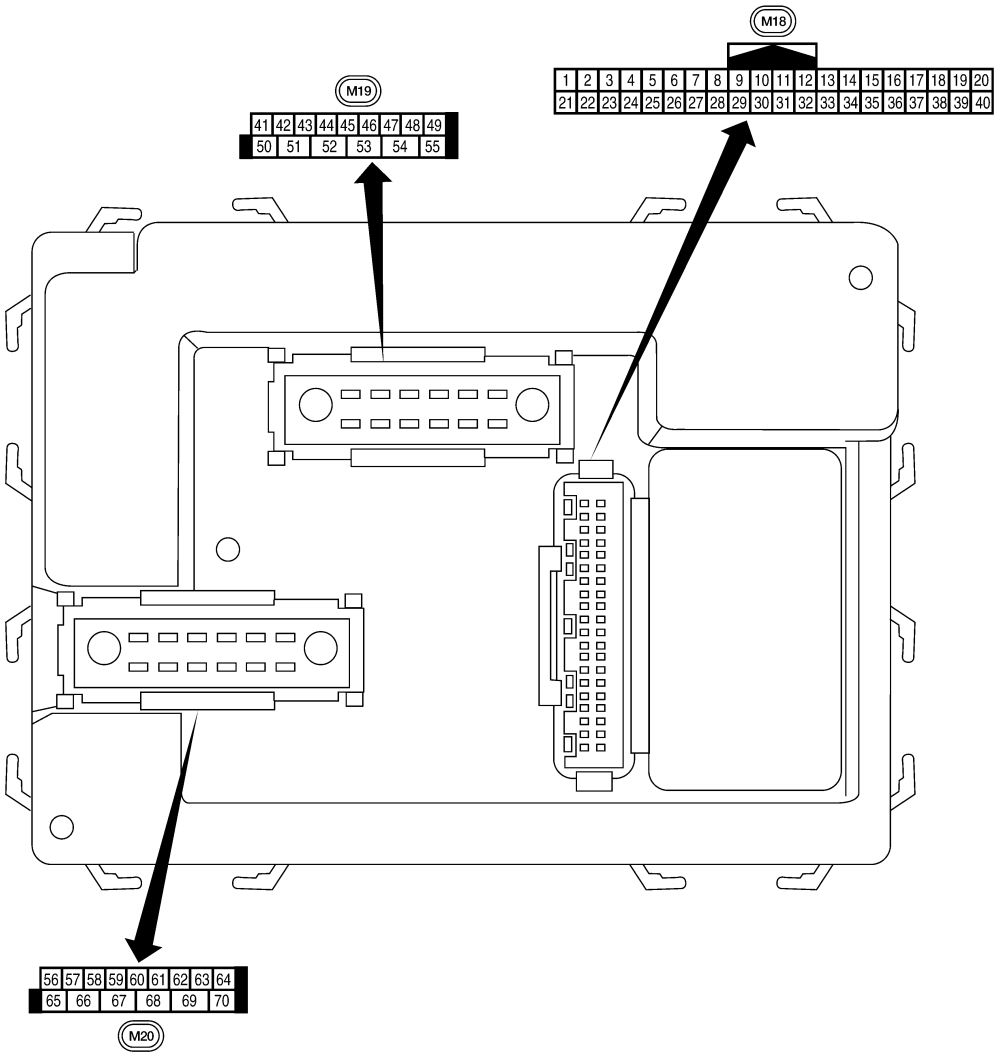
Monitor Item	Condition	Value/Status
IGN ON SW	Ignition switch OFF or ACC	OFF
	Ignition switch ON	ON
KEY ON SW	Mechanical key is removed from key cylinder	OFF
	Mechanical key is inserted to key cylinder	ON
CDL LOCK SW	Door lock/unlock switch does not operate	OFF
	Press door lock/unlock switch to the lock side	ON
CDL UNLOCK SW	Door lock/unlock switch does not operate	OFF
	Press door lock/unlock switch to the unlock side	ON
DOOR SW-DR	Driver's door closed	OFF
	Driver's door opened	ON
DOOR SW-AS	Passenger door closed	OFF
	Passenger door opened	ON
DOOR SW-RR	Rear RH door closed	OFF
	Rear RH door opened	ON
DOOR SW-RL	Rear LH door closed	OFF
	Rear LH door opened	ON
KEY CYL LK-SW	Other than driver door key cylinder LOCK position	OFF
	Driver door key cylinder LOCK position	ON
KEY CYL UN-SW	Other than driver door key cylinder UNLOCK position	OFF
	Driver door key cylinder UNLOCK position	ON
KEYLESS LOCK	“LOCK” button of key fob is not pressed	OFF
	“LOCK” button of key fob is pressed	ON
KEYLESS UNLOCK	“UNLOCK” button of key fob is not pressed	OFF
	“UNLOCK” button of key fob is pressed	ON
ACC ON SW	Ignition switch OFF	OFF
	Ignition switch ACC or ON	ON
REAR DEF SW	Rear window defogger switch OFF	OFF
	Rear window defogger switch ON	ON
LIGHT SW 1ST	Lighting switch OFF	OFF
	Lighting switch 1ST	ON
BUCKLE SW	The seat belt (driver side) is unfastened. [Seat belt switch (driver side) OFF]	OFF
	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
	PANIC button of key fob is pressed	ON

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

Monitor Item	Condition	Value/Status
FAN ON SIG	Blower fan motor switch OFF	OFF
	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
	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 of front LH tire transmitter is not registered	YET
ID REGST FR1	ID of front RH tire transmitter is registered	DONE
	ID of front RH tire transmitter is not registered	YET
ID REGST RR1	ID of rear RH tire transmitter is registered	DONE
	ID of rear RH tire transmitter is not registered	YET
ID REGST RL1	ID of rear LH tire transmitter is registered	DONE
	ID of rear LH tire transmitter is not registered	YET
WARNING LAMP	Tire pressure indicator OFF	OFF
	Tire pressure indicator ON	ON
BUZZER	Tire pressure warning alarm is not sounding	OFF
	Tire pressure warning alarm is sounding	ON

Terminal Layout

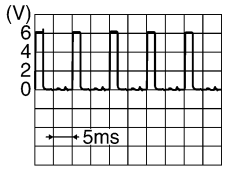
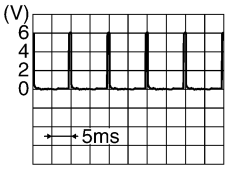
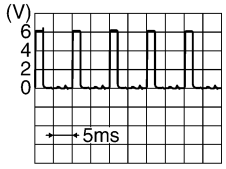
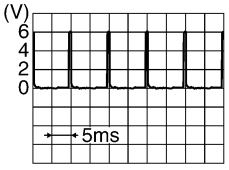
INFOID:0000000005550757

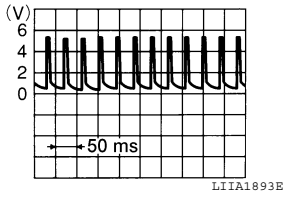
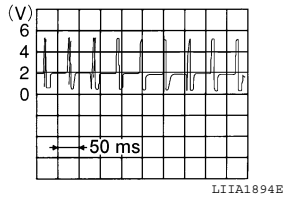
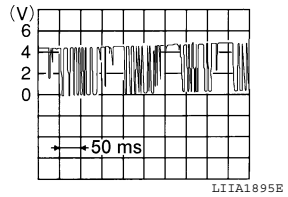


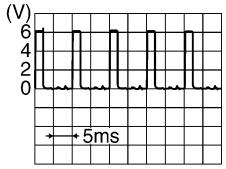
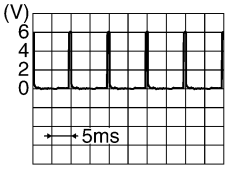
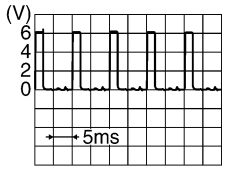
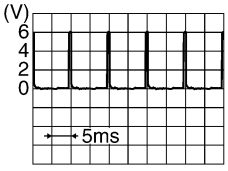
LIIA2443E

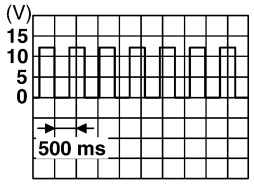
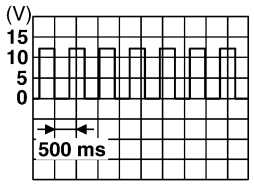
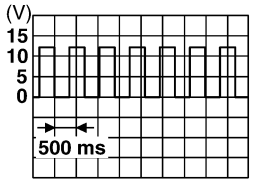
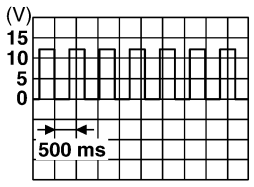
Physical Values

INFOID:0000000005550758

Terminal	Wire color	Item	Signal input/ output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
1	BR	Ignition keyhole illumination	Output	OFF	Door is locked (SW OFF)	Battery voltage
					Door is unlocked (SW ON)	0V
2	P	Combination switch input 5	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5291E
3	SB	Combination switch input 4	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5292E
4	V	Combination switch input 3	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5291E
5	L	Combination switch input 2	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5292E
6	R	Combination switch input 1				
7	GR	Front door lock assembly LH (key cylinder switch) unlock	Input	OFF	ON (open, 2nd turn)	Momentary 1.5V
					OFF (closed)	0V
8	SB	Front door lock assembly LH (key cylinder switch) lock	Input		On (open)	Momentary 1.5V
					OFF (closed)	0V
9	Y	Rear window defogger switch	Input	ON	Rear window defogger switch ON	0V
					Rear window defogger switch OFF	5V
11	G/B	Ignition switch (ACC or ON)	Input	ACC or ON	Ignition switch ACC or ON	Battery voltage
12	LG	Front door switch RH (All)	Input	OFF	ON (open)	0V
		Rear door switch upper RH (King Cab)			OFF (closed)	Battery voltage
		Rear door switch lower RH (King Cab)				

Terminal	Wire color	Item	Signal input/ output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
13	L	Rear door switch RH (Crew Cab)	Input	OFF	ON (open)	0V
					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 supply)	Output	OFF	Ignition switch OFF	
20	G	Remote keyless entry receiver signal (Signal)	Input	OFF	Stand-by (keyfob buttons released)	
					When remote keyless entry receiver receives signal from keyfob (keyfob buttons pressed)	
21	GR	NATS antenna amp.	Input	OFF → ON	Ignition switch (OFF → 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 → ON)	Just after turning ignition switch ON: Pointer of tester should move.
27	W	Compressor ON signal	Input	ON	A/C switch OFF	5V
					A/C switch ON	0V
28	R	Front blower monitor	Input	ON	Front blower motor OFF	Battery voltage
					Front blower motor ON	0V
29	G	Hazard switch	Input	OFF	ON	0V
					OFF	5V
31	GR	Cargo lamp switch	Input	OFF	ON	0V
					OFF	Battery voltage

Terminal	Wire color	Item	Signal input/ output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
32	O	Combination switch output 5	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5291E
33	GR	Combination switch output 4	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5292E
34	G	Combination switch output 3	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5291E
35	BR	Combination switch output 2	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5292E
36	LG	Combination switch output 1				
37	B	Key switch	Input	OFF	Key inserted	Battery voltage
					Key removed	0V
38	W/R	Ignition switch (ON)	Input	ON	—	Battery voltage
39	L	CAN-H	—	—	—	—
40	P	CAN-L	—	—	—	—
45	V	Lock switch	Input	OFF	ON (lock)	0V
					OFF	Battery voltage
46	LG	Unlock switch	Input	OFF	ON (unlock)	0V
					OFF	Battery voltage
47	GR	Front door switch LH (All)	Input	OFF	ON (open)	0V
		Rear door switch upper LH (King Cab)			OFF (closed)	Battery voltage
		Rear door switch lower LH (King Cab)				
48	P	Rear door switch LH (Crew Cab)	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage
50	P	Cargo lamp	Output	OFF	Any door open (ON)	0V
					All doors closed (OFF)	Battery voltage

Terminal	Wire color	Item	Signal input/ output	Measuring condition			Reference value or waveform (Approx.)
				Ignition switch	Operation or condition		
51	O	Trailer turn signal (right)	Output	ON	Turn right ON		
52	LG	Trailer turn signal (left)	Output	ON	Turn left ON		
56	R/Y	Battery saver output	Output	OFF	30 minutes after ignition switch is turned OFF		0V
				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 assembly LH (unlock)	Output	OFF	OFF (neutral)		0V
					ON (unlock)		Battery voltage
60	LG	Turn signal (left)	Output	ON	Turn left ON		
61	G	Turn signal (right)	Output	ON	Turn right ON		
63	BR	Interior room/map lamp	Output	OFF	Any door switch	ON (open)	0V
						OFF (closed)	Battery voltage
65	V	All door lock actuators (lock)	Output	OFF	OFF (neutral)		0V
					ON (lock)		Battery voltage
66	L	Front door lock actuator RH, rear door lock actuators LH/RH (unlock)	Output	OFF	OFF (neutral)		0V
					ON (unlock)		Battery voltage
67	B	Ground	Input	ON	—		0V

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

Wiring Diagram

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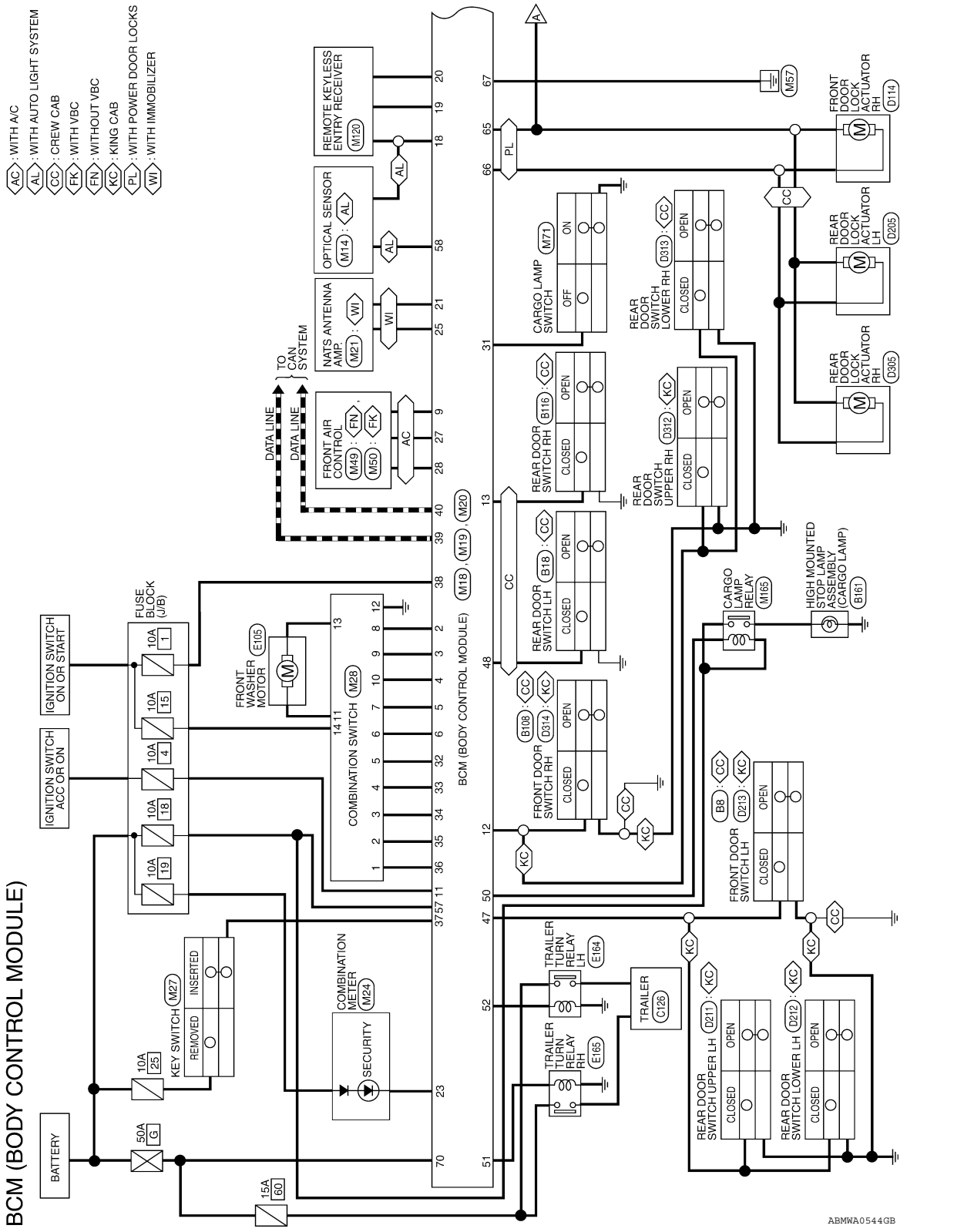
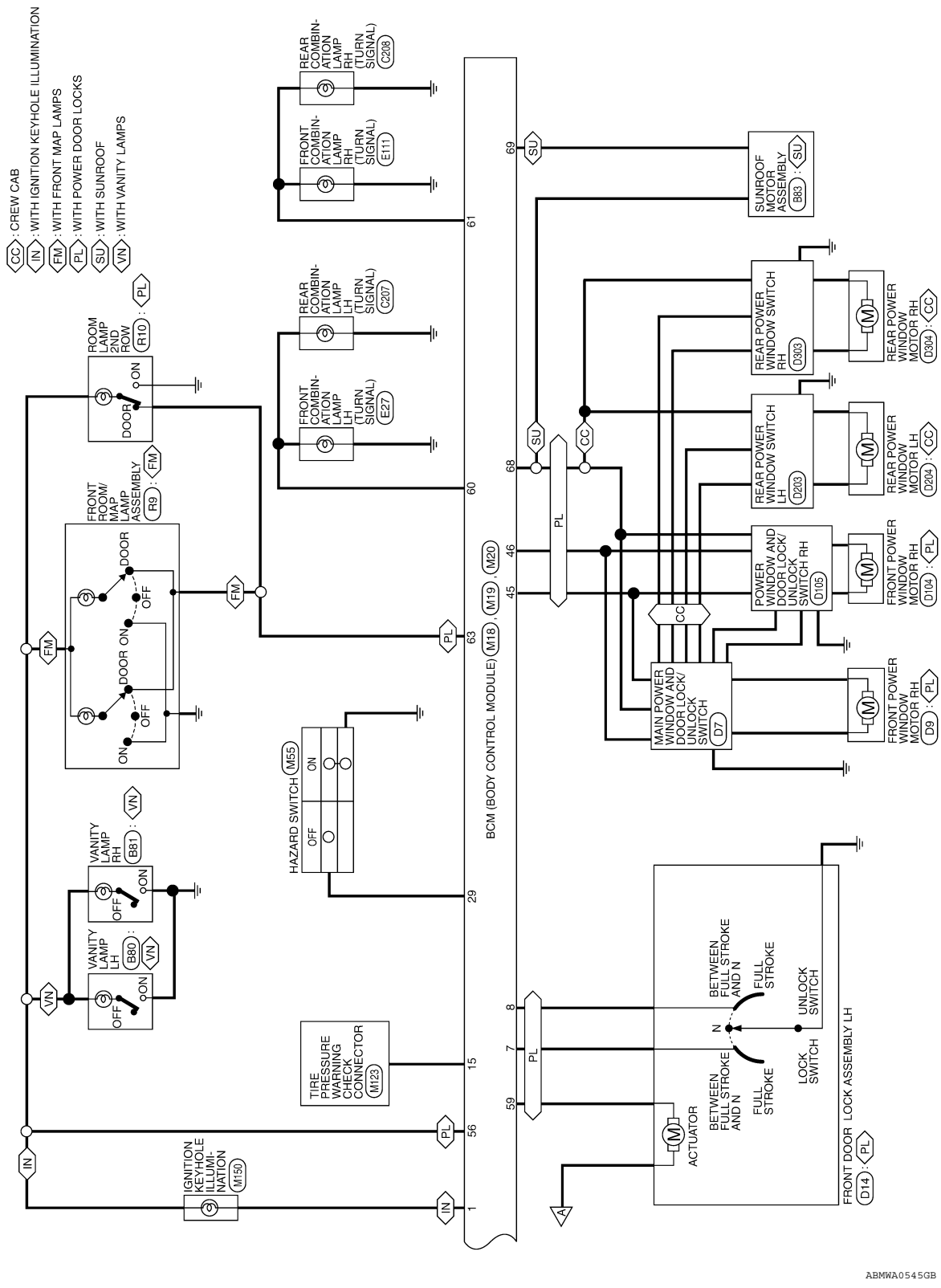
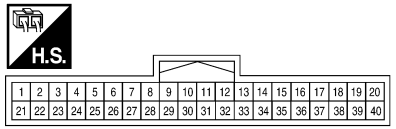



CC : CREW CAB
IN : WITH IGNITION KEYHOLE ILLUMINATION
FM : WITH FRONT MAP LAMPS
PL : WITH POWER DOOR LOCKS
SU : WITH SUNROOF
VN : WITH VANITY LAMPS
BCM (BODY CONTROL MODULE) M18, M19, M20
REAR COMBINATION LAMP RH (TURN SIGNAL) C208
FRONT COMBINATION LAMP RH (TURN SIGNAL) E111
REAR COMBINATION LAMP LH (TURN SIGNAL) C207
FRONT COMBINATION LAMP LH (TURN SIGNAL) E27
SUNROOF MOTOR ASSEMBLY B83
REAR POWER WINDOW SWITCH RH D303
REAR POWER WINDOW SWITCH LH D203
POWER WINDOW AND DOOR LOCK/ UNLOCK SWITCH RH D105
MAIN POWER WINDOW AND DOOR LOCK/ UNLOCK SWITCH D7
REAR POWER WINDOW MOTOR RH D304
REAR POWER WINDOW MOTOR LH D204
FRONT POWER WINDOW MOTOR RH D104
FRONT POWER WINDOW MOTOR RH D9
ROOM LAMP 2ND ROW R10
FRONT ROOM/ MAP LAMP ASSEMBLY R9
VANITY LAMP RH B81
VANITY LAMP LH B80
HAZARD SWITCH M55
TIRE PRESSURE WARNING CHECK CONNECTOR M123
IGNITION KEYHOLE ILLUMINATION M150
FRONT DOOR LOCK ASSEMBLY LH D14
ACTUATOR
UNLOCK SWITCH
LOCK SWITCH
BETWEEN FULL STROKE AND N
FULL STROKE
ABMWA0545GB

BCM (BODY CONTROL MODULE) CONNECTORS

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



Terminal No.	Color of Wire	Signal Name
1	BR	KEY RING OUTPUT
2	P	INPUT 5
3	SB	INPUT 4
4	V	INPUT 3
5	L	INPUT 2
6	R	INPUT 1
7	GR	KEY CYLINDER UNLOCK SW
8	SB	KEY CYLINDER LOCK SW
9	Y	RR DEFOGGER SW
10	–	–
11	G/B	ACC SW
12	LG	DOOR SW (AS)
13	L	DOOR SW (RR)
14	–	–
15	W	TPMS MODE TRIGGER SW
16	–	–
17	–	–
18	BR	KEYLESS & AUTO LIGHT SENSOR GND
19	V	KEYLESS TUNER POWER SUPPLY OUTPUT
20	G	KEYLESS TUNER SIGNAL
21	GR	IMMOBILIZER ANTENNA SIGNAL (CLOCK)
22	–	–
23	G	SECURITY INDICATOR OUTPUT
24	–	–
25	BR	IMMOBILIZER ANTENNA SIGNAL (RX,TX)
26	–	–
27	W	AIRCON SW
28	R	BLOWER FAN SW
29	G	HAZARD SW
30	–	–
31	GR	CARGO LAMP SW
32	O	OUTPUT 5
33	GR	OUTPUT 4
34	G	OUTPUT 3
35	BR	OUTPUT 2
36	LG	OUTPUT 1
37	B	KEY SW
38	W/R	IGN SW
39	L	CAN-H
40	P	CAN-L

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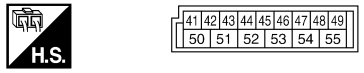
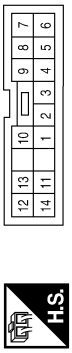
Connector No.	M19
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
41	–	–
42	–	–
43	–	–
44	–	–
45	V	CDL LOCK SW
46	LG	CDL UNLOCK SW
47	GR	DOOR SW (DR)
48	P	DOOR SW (RL)
49	–	–
50	P	CARGO LAMP OUTPUT
51	O	TRAILER FLASHER OUTPUT (RIGHT)
52	LG	TRAILER FLASHER OUTPUT (LEFT)
53	–	–
54	–	–
55	–	–

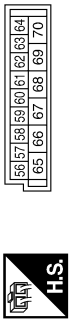
Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	LG	INPUT 1
2	BR	INPUT 2
3	G	INPUT 3
4	GR	INPUT 4
5	O	INPUT 5
6	R	OUTPUT 1
7	L	OUTPUT 2
8	P	OUTPUT 5
9	SB	OUTPUT 4
10	V	OUTPUT 3
11	O	WASH FR (-) RR (+)
12	B	GND
13	L	WASH FR (+) RR (-)
14	W/G	IGN

Terminal No.	Color of Wire	Signal Name
65	V	DOOR LOCK OUTPUT (ALL)
66	L	DOOR UNLOCK OUTPUT (OTHER)
67	B	GND (POWER)
68	O	POWER WINDOW POWER SUPPLY OUTPUT (LINKED TO RAP) (WITH POWER DOOR LOCK SYSTEM)
68	SB	POWER WINDOW POWER SUPPLY OUTPUT (LINKED TO RAP) (CREW CAB WITHOUT POWER DOOR LOCK SYSTEM)
69	P	POWER WINDOW POWER SUPPLY OUTPUT (BAT)
70	W	BAT (F/L)

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



Terminal No.	Color of Wire	Signal Name
56	R/Y	BATTERY SAVER OUTPUT
57	R/Y	BAT (FUSE)
58	W	AUTO LIGHT SENSOR INPUT 2
59	GR	DOOR UNLOCK OUTPUT (DR)
60	LG	FLASHER OUTPUT (LEFT)
61	G	FLASHER OUTPUT (RIGHT)
62	–	–
63	BR	ROOM LAMP OUTPUT
64	–	–

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Fail Safe

INFOID:0000000005550760

Fail-safe index

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

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

DTC Inspection Priority Chart

INFOID: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] RL • C1712: [CHECKSUM ERR] FL • C1713: [CHECKSUM ERR] FR • C1714: [CHECKSUM ERR] RR • C1715: [CHECKSUM ERR] RL • C1716: [PRESSDATA ERR] FL • C1717: [PRESSDATA ERR] FR • C1718: [PRESSDATA ERR] RR • C1719: [PRESSDATA ERR] RL • C1720: [CODE ERR] FL • C1721: [CODE ERR] FR • C1722: [CODE ERR] RR • C1723: [CODE ERR] RL • C1724: [BATT VOLT LOW] FL • C1725: [BATT VOLT LOW] FR • C1726: [BATT VOLT LOW] RR • C1727: [BATT VOLT LOW] RL

DTC Index

INFOID:0000000005550762

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

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

SYMPTOM DIAGNOSIS

INTERIOR LIGHTING SYSTEM SYMPTOMS

Symptom Table

INFOID:0000000005272831

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"

INFOID:0000000005567994

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:0000000005272833

- 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.

ON-VEHICLE REPAIR

INTERIOR ROOM LAMP

Removal and Installation

INFOID:0000000005272834

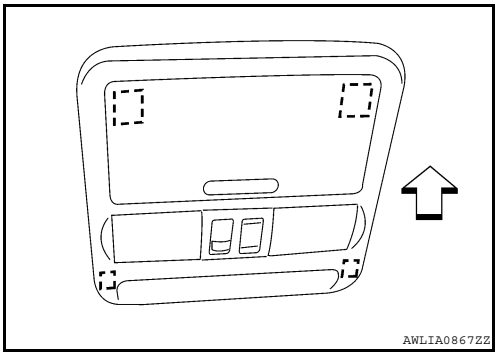
FRONT ROOM/MAP LAMP ASSEMBLY

Removal

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

⇦: Vehicle front

⬚: Metal clip



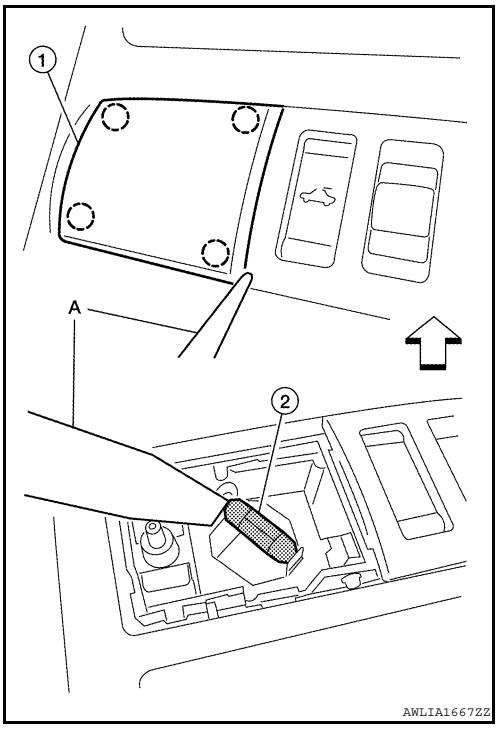
Installation

Installation is in the reverse order of removal.

Bulb Replacement

1. Using a suitable tool (A), remove map lamp lens (1).
   ⇦: Vehicle front
   ◌: 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.

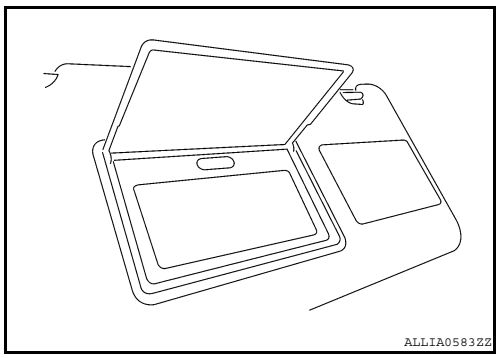
Map lamp bulb : 12V - 8W



VANITY MIRROR LAMP

Removal

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.

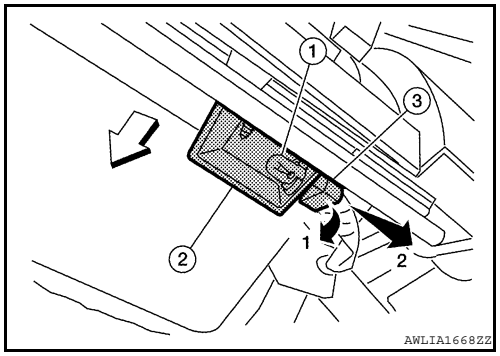
Bulb Replacement
The vanity mirror lamp bulb is replaced as part of the sunvisor assembly. Refer to INT-24, "Removal and Installation".

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

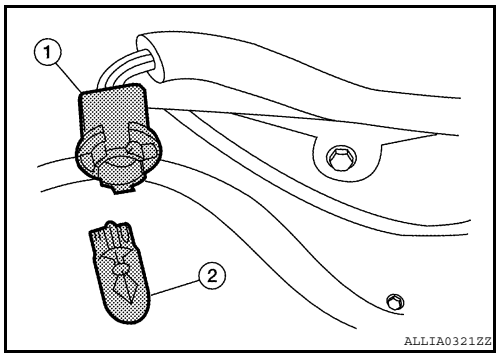


Installation
Installation is in the reverse order of removal.

Bulb Replacement

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

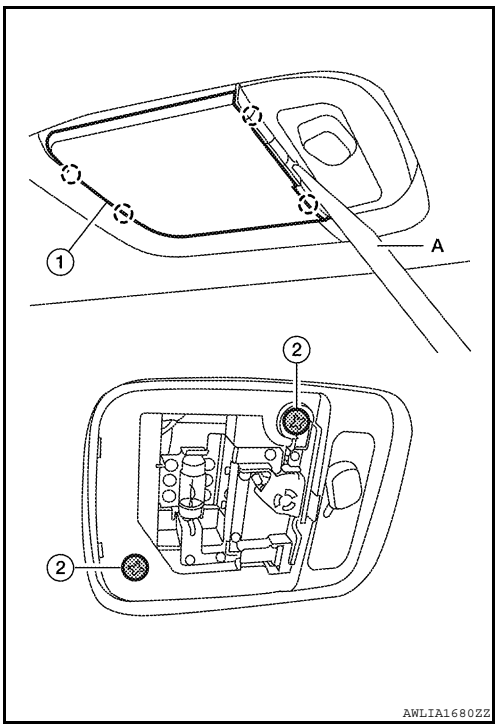
Glove box lamp bulb : 12V - 3.4W



ROOM LAMP

Removal

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.

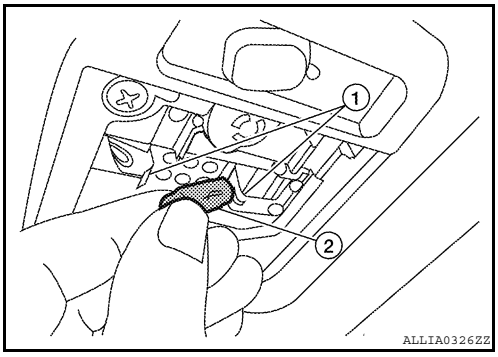


Installation
Installation is in the reverse order of removal.

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



ILLUMINATION

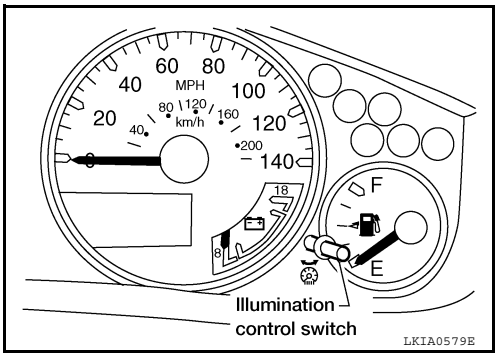
Removal and Installation

INFOID:0000000005272835

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".



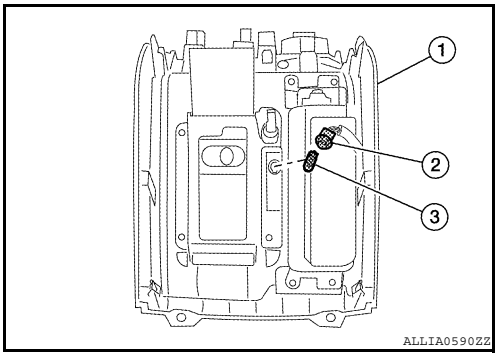
Installation

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).



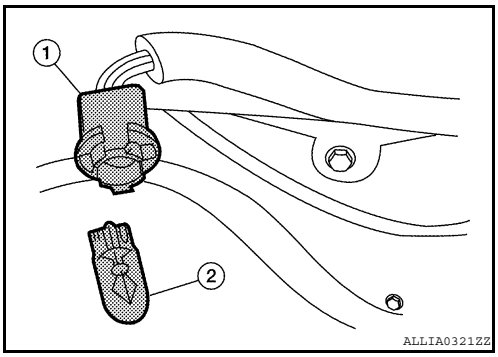
Installation

Installation is in the reverse order of removal.

Bulb Replacement

1. Remove A/T finisher from center console. Refer to IP-17, "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



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.

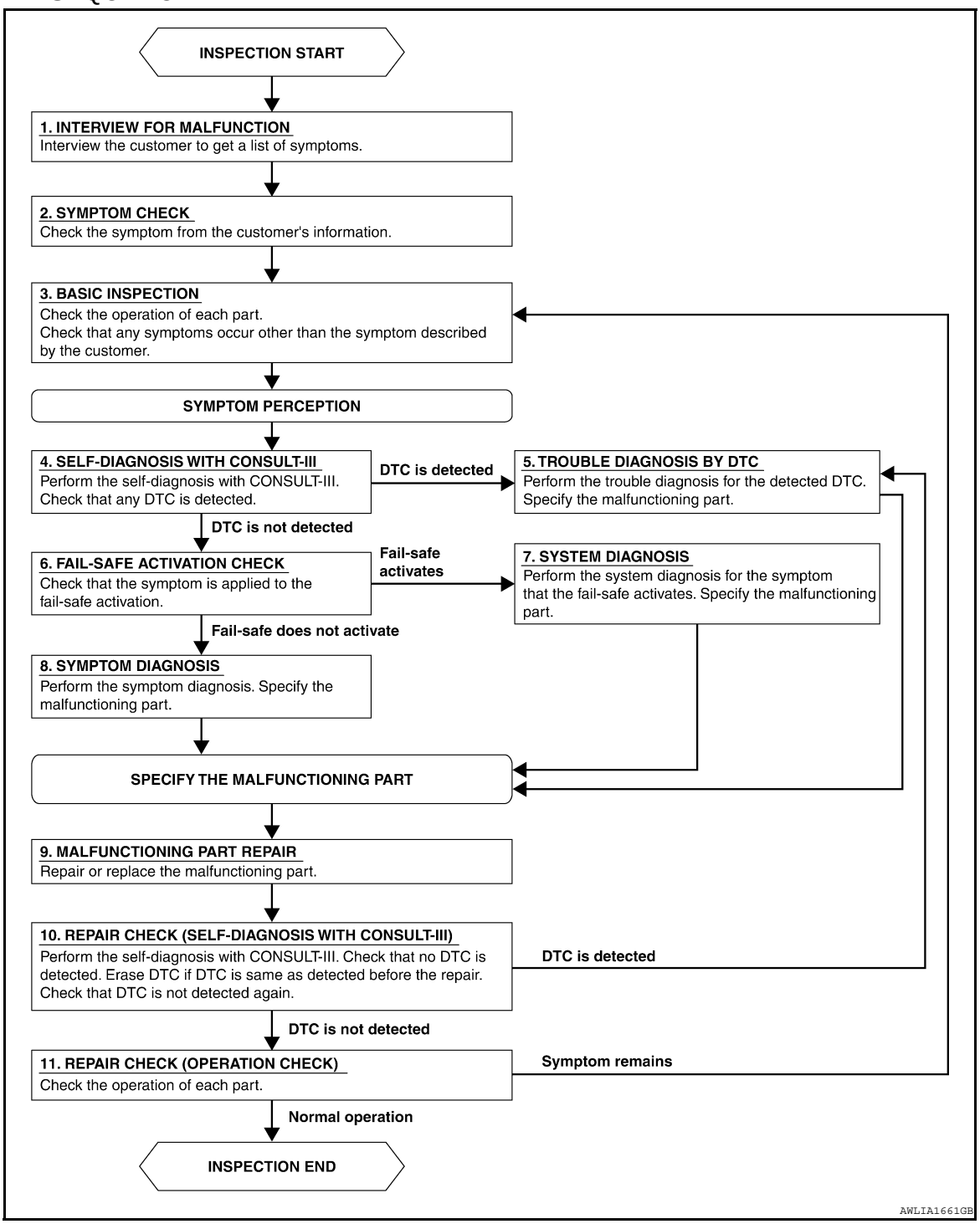
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:0000000005550764

OVERALL SEQUENCE



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

NO >> GO TO 11

11. REPAIR CHECK (OPERATION CHECK)

Check the operation of each part.

Does it operate normally?

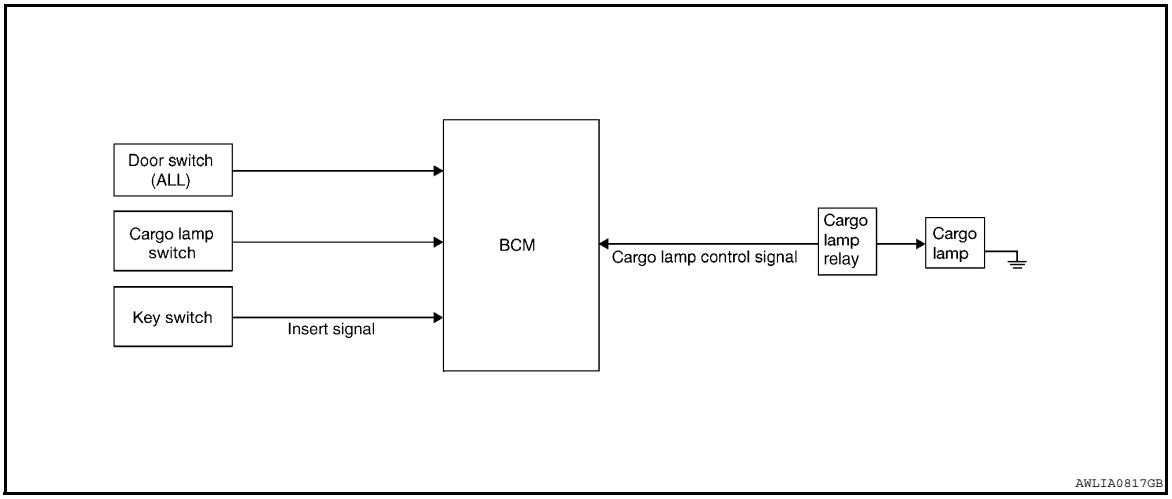
YES >> Inspection End
NO >> GO TO 3

FUNCTION DIAGNOSIS

INTERIOR ROOM LAMP

System Diagram

INFOID:0000000005272838



System Description

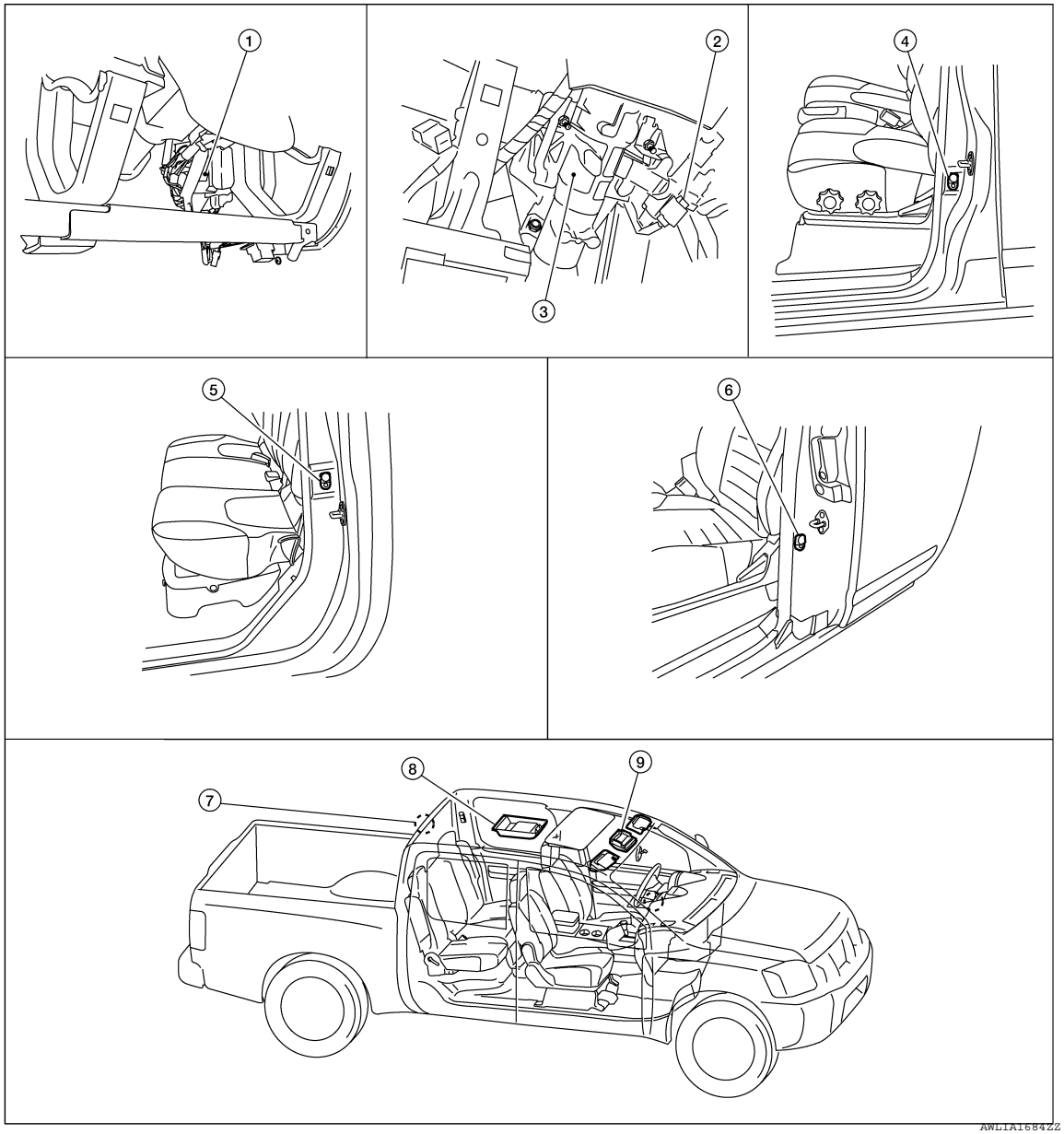
INFOID:0000000005272839

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

INFOID:0000000005272840



1. BCM M18, M19, M20 (view with lower instrument panel LH removed)
2. Key switch M27
3. Steering column assembly
4. Front door switch LH B8 (crew cab) Front door switch RH B108 (crew cab)
5. Rear door switch LH B18 (crew cab) Rear door switch RH B116 (crew cab)
6. Front door switch LH D213 (king cab) Front door switch RH D314 (king cab)
7. Cargo lamp B161
8. Room lamp 2nd row R10
9. Front room/map lamp assembly (with front map lamps) R9

Component Description

INFOID:0000000005272841

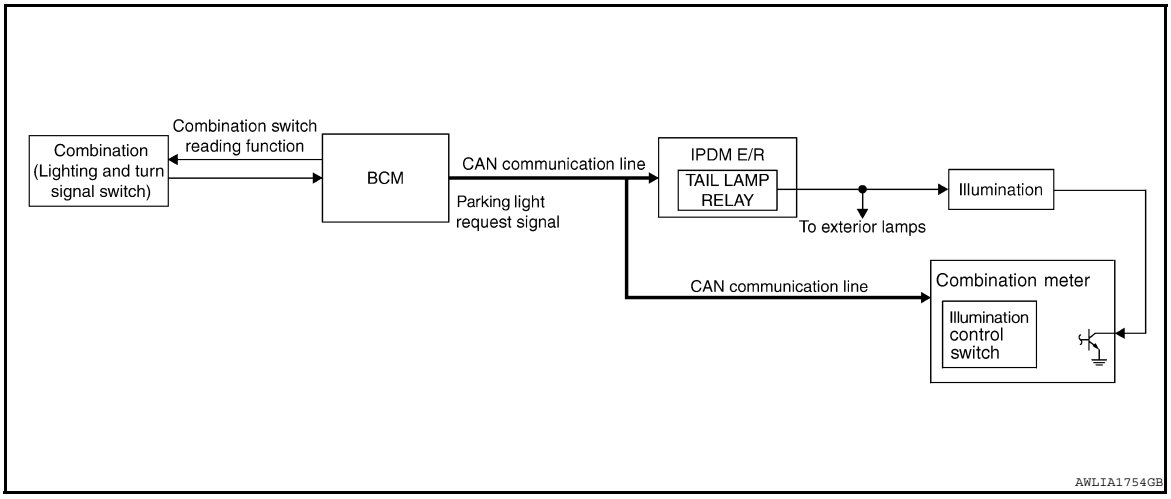
Part name	Description
BCM	Provides ground for the cargo lamp relay.

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

INFOID:0000000005550765



System Description

INFOID:0000000005550766

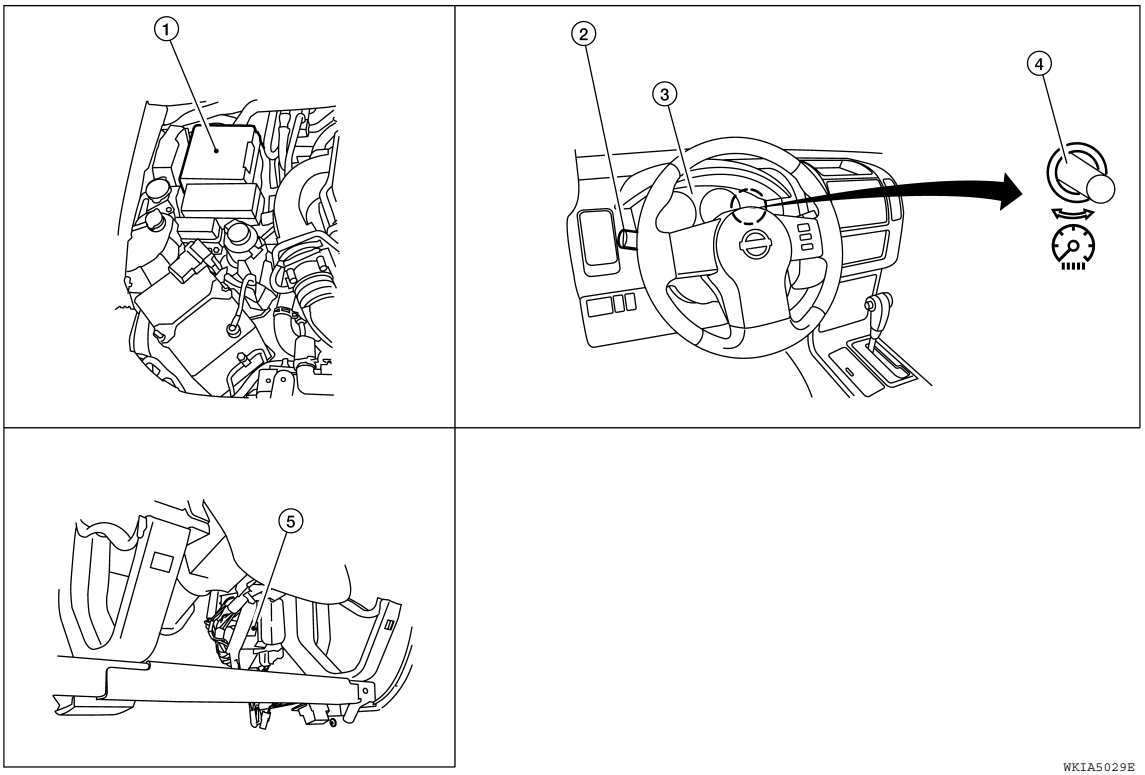
The illumination lamps operation is dependent upon the position of the combination switch (lighting and turn signal switch). When the combination switch (lighting and turn signal switch) is placed in the 1ST or 2ND position (or if the auto light system is activated) the BCM (body control module) receives 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.

Component Parts Location

INFOID:0000000005272844



1. IPDM E/R E122, E124
2. Combination switch (lighting and turn signal switch) M28
3. Combination meter M24
4. Illumination control switch (built into combination meter)
5. 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)
COMMON ITEM
COMMON ITEM : CONSULT-III Function (BCM - COMMON ITEM)

INFOID:0000000005561351

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.

NOTE:

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

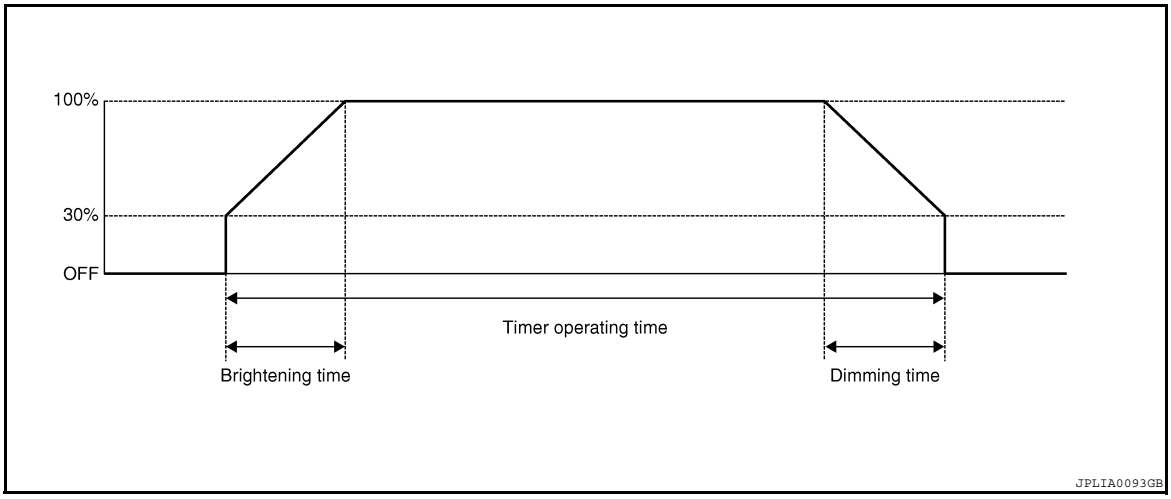
System	Sub system selection item	Diagnosis mode		
		WORK SUPPORT	DATA MONITOR	ACTIVE TEST
BCM	BCM	×		
Door lock	DOOR LOCK	×	×	×
Rear window defogger	REAR DEFOGGER		×	×
Warning chime	BUZZER		×	×
Interior room lamp timer	INT LAMP	×	×	×
Remote keyless entry system	MULTI REMOTE ENT	×	×	×
Exterior lamp	HEAD 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	
	OFF	Without the interior room lamp timer function	
ROOM LAMP ON TIME SET	MODE 1	0.5 sec.	Sets the interior room lamp gradual brightening time.
	MODE 2*	1 sec.	
	MODE 3	2 sec.	
	MODE 4	3 sec.	
	MODE 5	4 sec.	
	MODE 6	5 sec.	
	MODE 7	0 sec.	
ROOM LAMP OFF TIME SET	MODE 1	0.5 sec.	Sets the interior room lamp gradual dimming time.
	MODE 2	1 sec.	
	MODE 3	2 sec.	
	MODE 4*	3 sec.	
	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

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	ON	Outputs the ignition keyhole illumination control signal to turn the ignition keyhole illumination lamp ON.
	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.
	OFF	Stops the interior room lamp control signal to turn the interior room lamps OFF.

COMPONENT DIAGNOSIS

INTERIOR ROOM LAMP

Diagnosis Procedure

INFOID:0000000005272848

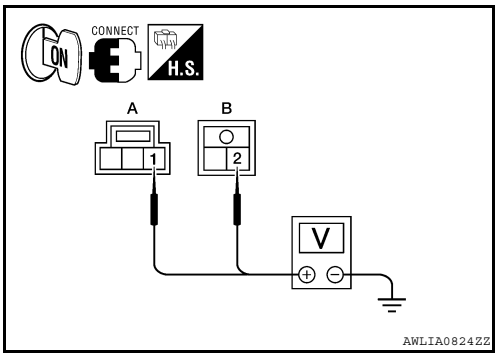
Regarding Wiring Diagram information, refer to INL-85, "Wiring Diagram".

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



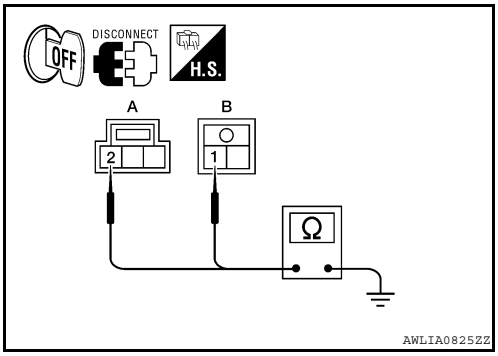
Is the inspection result normal?

YES >> GO TO 2
NO >> Repair the harness or connectors.

2. CHECK INTERIOR ROOM LAMP GROUND

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

Component	(+)		(-)	Door switches	Continuity
	Connector	Terminal			
Front room/map lamp (if equipped)	R9 (A)	2	Ground	Open	Yes
				Closed	No
Room lamp 2nd row	R10 (B)	1		Open	Yes
				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)".

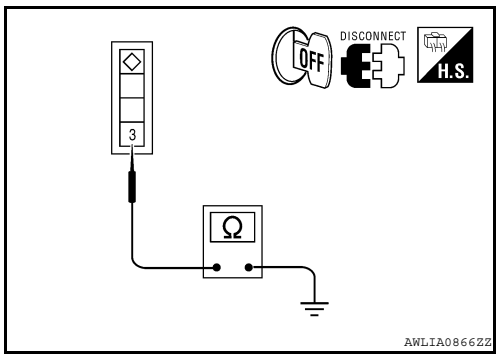
Is the inspection result normal?

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)

Check continuity between door switch connectors and ground.

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



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.

Component Inspection (Door Switch)

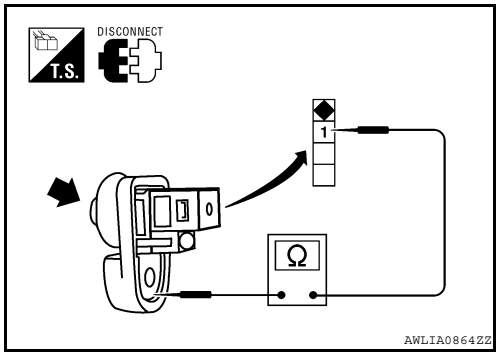
INFOID:0000000005272849

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
		Closed	No



Is the inspection result normal?

YES >> Inspection End

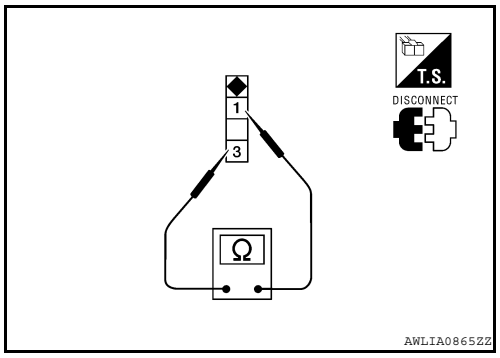
NO >> Replace door switch.

KING CAB

1. CHECK DOOR SWITCHES

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

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



Is the inspection result normal?

YES >> Inspection End

NO >> Replace door switch.

CARGO LAMP CONTROL CIRCUIT

Description

INFOID:0000000005272850

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 DLK-27, "KING CAB : Description" (king cab), DLK-29, "CREW CAB : Description" (crew cab).

2. CHECK CARGO LAMP SWITCH

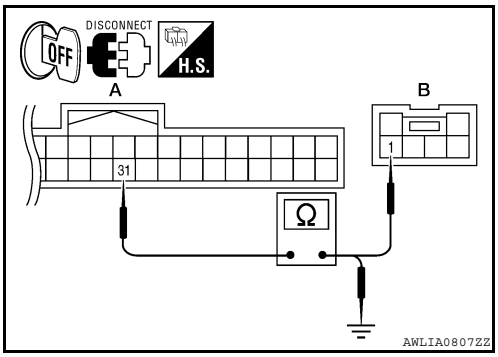
Check the cargo lamp switch. Refer to INL-84, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 3
NO >> Replace the cargo lamp switch.

3. CHECK CARGO LAMP SWITCH CIRCUIT

1. 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.



BCM		Cargo lamp switch		Continuity
Connector	Terminal	Connector	Terminal	
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-84, "Component Inspection".

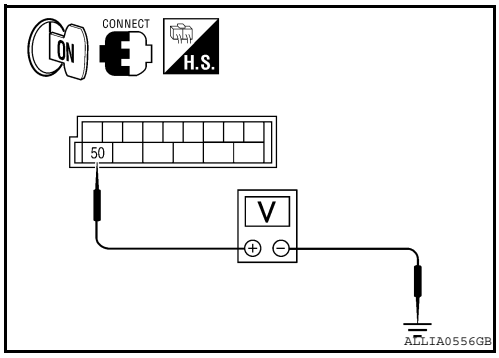
Is the inspection result normal?

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.



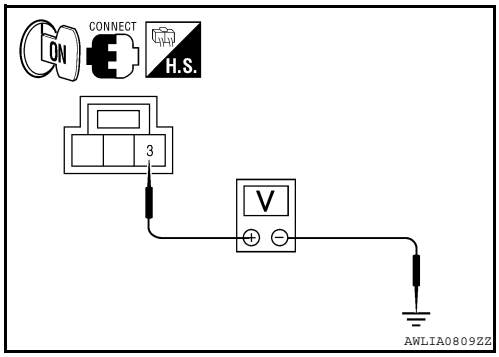
Connector	Terminal	—	Cargo lamp switch	Voltage
M19	50	Ground	ON	0V
			OFF	Battery voltage

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.



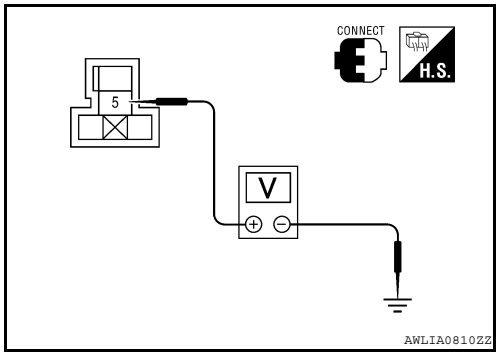
Connector	Terminal	—	Cargo lamp switch	Voltage
B161	3	Ground	ON	Battery voltage

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.



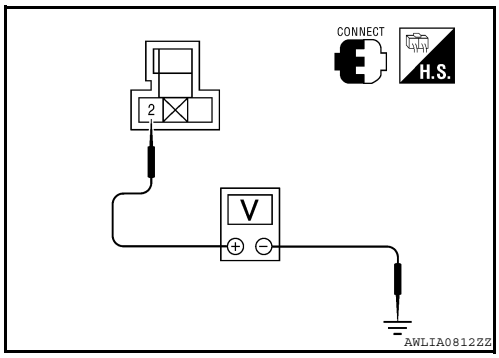
Cargo lamp relay		Ground	Voltage
Connector	Terminal		
M165	5		Battery voltage

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.



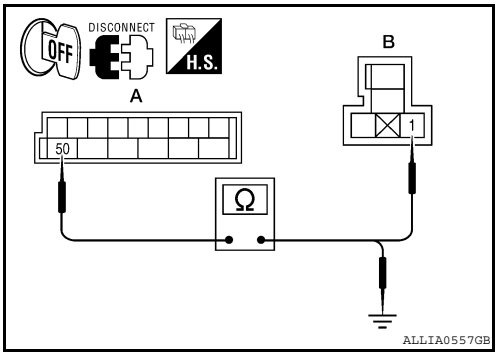
Cargo lamp relay		Ground	Voltage
Connector	Terminal		
M165	2		Battery voltage

Is the inspection result normal?

YES >> GO TO 9
NO >> Repair harness or connectors.

9.CHECK CARGO LAMP RELAY CONTROL CIRCUIT

1. 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	
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.

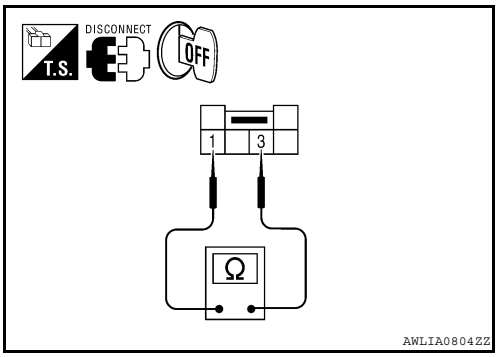
Component Inspection

INFOID:0000000005272852

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 Terminal	Condition	Continuity
1 – 3	ON	Yes
	OFF	No

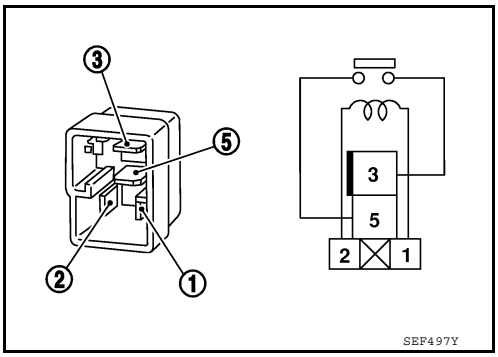
Is the inspection result normal?

YES >> Inspection End
NO >> Replace cargo lamp switch.

CARGO LAMP RELAY

1. CHECK CARGO LAMP RELAY

1. Turn ignition switch OFF.
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.



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

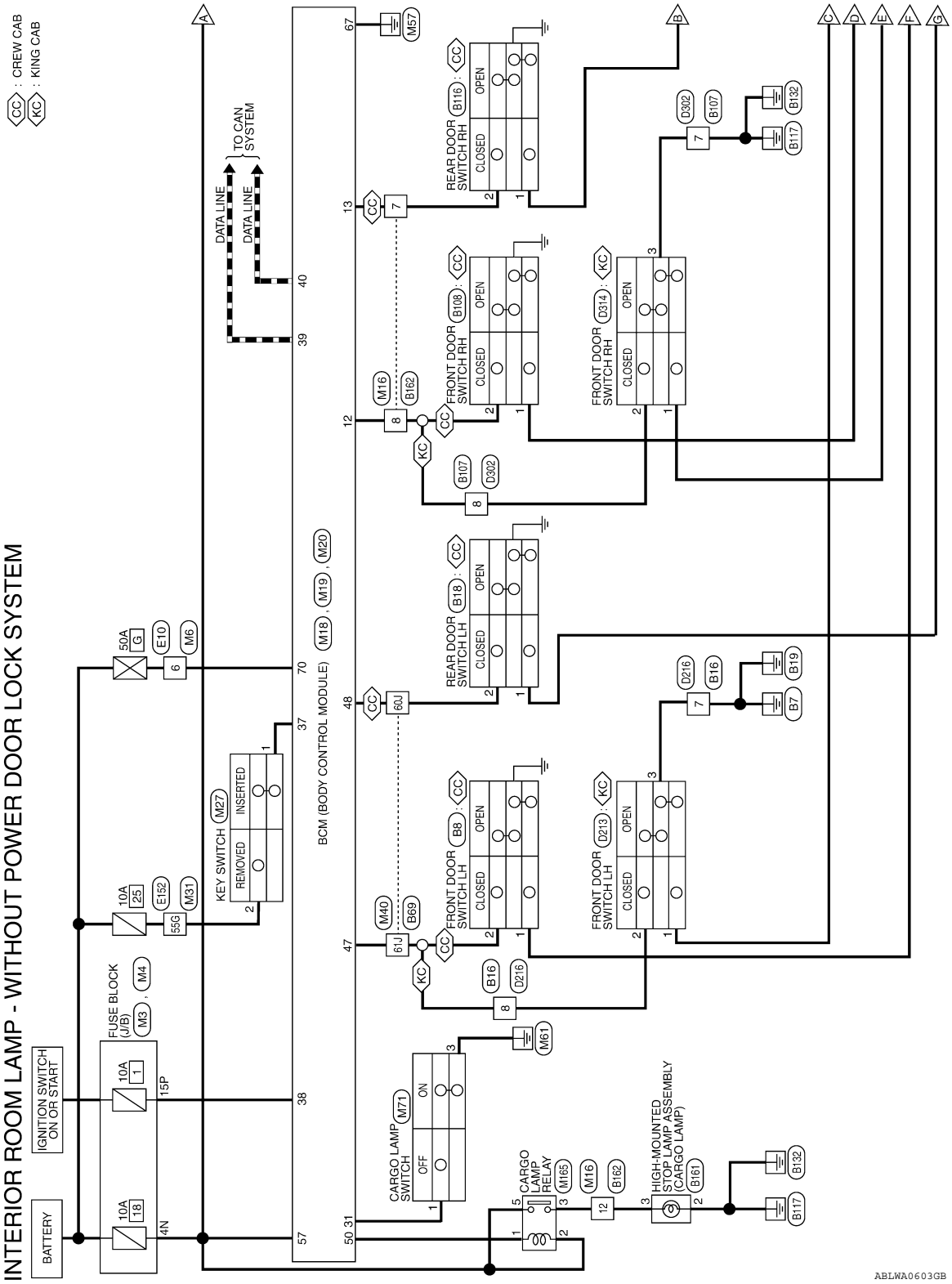
Is the inspection result normal?

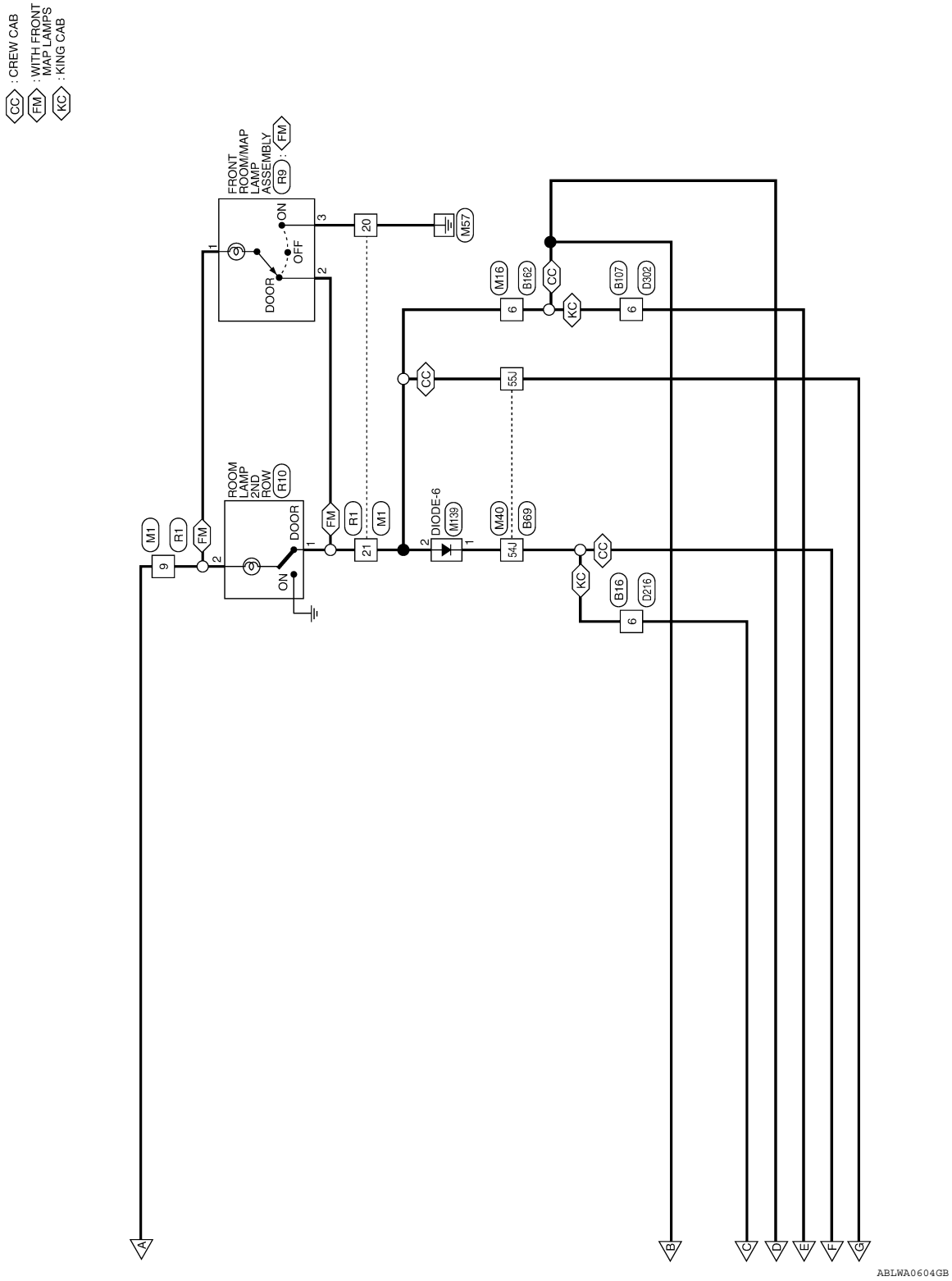
YES >> Inspection End
NO >> Replace cargo lamp relay.

INTERIOR ROOM LAMP

Wiring Diagram

INFOID:0000000005272853




CC : CREW CAB
FM : WITH FRONT MAP LAMPS
KC : KING CAB
FRONT ROOM/MAP LAMP ASSEMBLY
R9
FM
ON
OFF
DOOR
M57
M116
B162
B107
D302
ROOM LAMP 2ND ROW
R10
DOOR
DIODE-6
M139
M40
B69
55J
54J
M1
R1
B16
D216
ABLWA0604GB

INTERIOR ROOM LAMP CONNECTORS - WITHOUT POWER DOOR LOCK SYSTEM

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

H.S.

1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24

Terminal No.	Color of Wire	Signal Name
9	R/Y	–
20	B	–
21	BR	–

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

H.S.

3N		2N	1N
8N	7N	6N	5N	4N

Terminal No.	Color of Wire	Signal Name
4N	R/Y	–

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

H.S.

7P	6P	5P	4P	3P	2P	1P
16P	15P	14P	13P	12P	11P	10P	9P	8P

Terminal No.	Color of Wire	Signal Name
15P	W/R	–

Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

3	2	1
6	5	4

Terminal No.	Color of Wire	Signal Name
6	W	–

Connector No.	M16
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
6	R	–
7	L	–
8	LG	–
12	G	–

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

H.S.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

Terminal No.	Color of Wire	Signal Name
12	LG	DOOR SW (AS)
13	L	DOOR SW (RR)
31	GR	CARGO LAMP SW
37	B	KEY SW
38	W/R	IGN SW
39	L	CAN-H
40	P	CAN-L

ABLIA0684GB

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

H.S.

41	42	43	44	45	46	47	48	49
50	51	52	53	54	55			

Terminal No.	Color of Wire	Signal Name
47	GR	DOOR SW (DR)
48	P	DOOR SW (RL)
50	P	CARGO LAMP OUTPUT

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

H.S.

56	57	58	59	60	61	62	63	64
65	66	67	68	69	70			

Terminal No.	Color of Wire	Signal Name
57	R/Y	BAT (FUSE)
67	B	GND (POWER)
70	W	BAT (F/L)

Connector No.	M27
Connector Name	KEY SWITCH
Connector Color	WHITE

H.S.

2	1

Terminal No.	Color of Wire	Signal Name
1	B	–
2	Y	–

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

H.S.

		5G	4G	3G	2G	1G				
			10G	9G	8G	7G	6G			
21G	20G	19G	18G	17G	16G	15G	14G	13G	12G	11G
	30G	29G	28G	27G	26G	25G	24G	23G	22G	
41G	40G	39G	38G	37G	36G	35G	34G	33G	32G	31G
	50G	49G	48G	47G	46G	45G	44G	43G	42G	
61G	60G	59G	58G	57G	56G	55G	54G	53G	52G	51G
	70G	69G	68G	67G	66G	65G	64G	63G	62G	
		75G	74G	73G	72G	71G				
			80G	79G	78G	77G	76G			

Terminal No.	Color of Wire	Signal Name
55G	Y	–

Connector No.	M40
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

		5J	4J	3J	2J	1J				
			10J	9J	8J	7J	6J			
21J	20J	19J	18J	17J	16J	15J	14J	13J	12J	11J
	30J	29J	28J	27J	26J	25J	24J	23J	22J	
41J	40J	39J	38J	37J	36J	35J	34J	33J	32J	31J
	50J	49J	48J	47J	46J	45J	44J	43J	42J	
61J	60J	59J	58J	57J	56J	55J	54J	53J	52J	51J
	70J	69J	68J	67J	66J	65J	64J	63J	62J	
		75J	74J	73J	72J	71J				
			80J	79J	78J	77J	76J			

Terminal No.	Color of Wire	Signal Name
54J	V	–
55J	R	–
60J	P	–
61J	GR	–

Connector No.	M71
Connector Name	CARGO LAMP SWITCH
Connector Color	WHITE

H.S.

4		
1	2	3

Terminal No.	Color of Wire	Signal Name
1	GR	–
3	B	–

ABLIA1772GB

Connector No.	M139
Connector Name	DIODE-6
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	L	–
2	BR	–

Connector No.	M165
Connector Name	CARGO LAMP RELAY
Connector Color	BLUE

H.S.

Terminal No.	Color of Wire	Signal Name
1	P	–
2	R/Y	–
3	G	–
5	R/Y	–

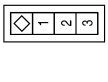
Connector No.	E10
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
6	W	–

Connector No.	B8
Connector Name	FRONT DOOR SWITCH LH (CREW CAB)
Connector Color	WHITE

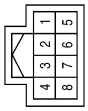
H.S.



Terminal No.	Color of Wire	Signal Name
1	L	–
2	GR	–

Connector No.	B16
Connector Name	WIRE TO WIRE
Connector Color	WHITE

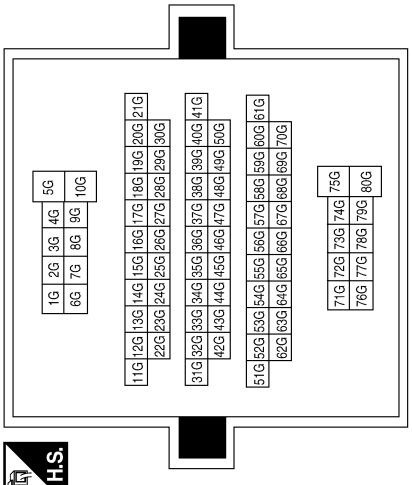
H.S.



Terminal No.	Color of Wire	Signal Name
6	V	–
7	B	–
8	GR	–

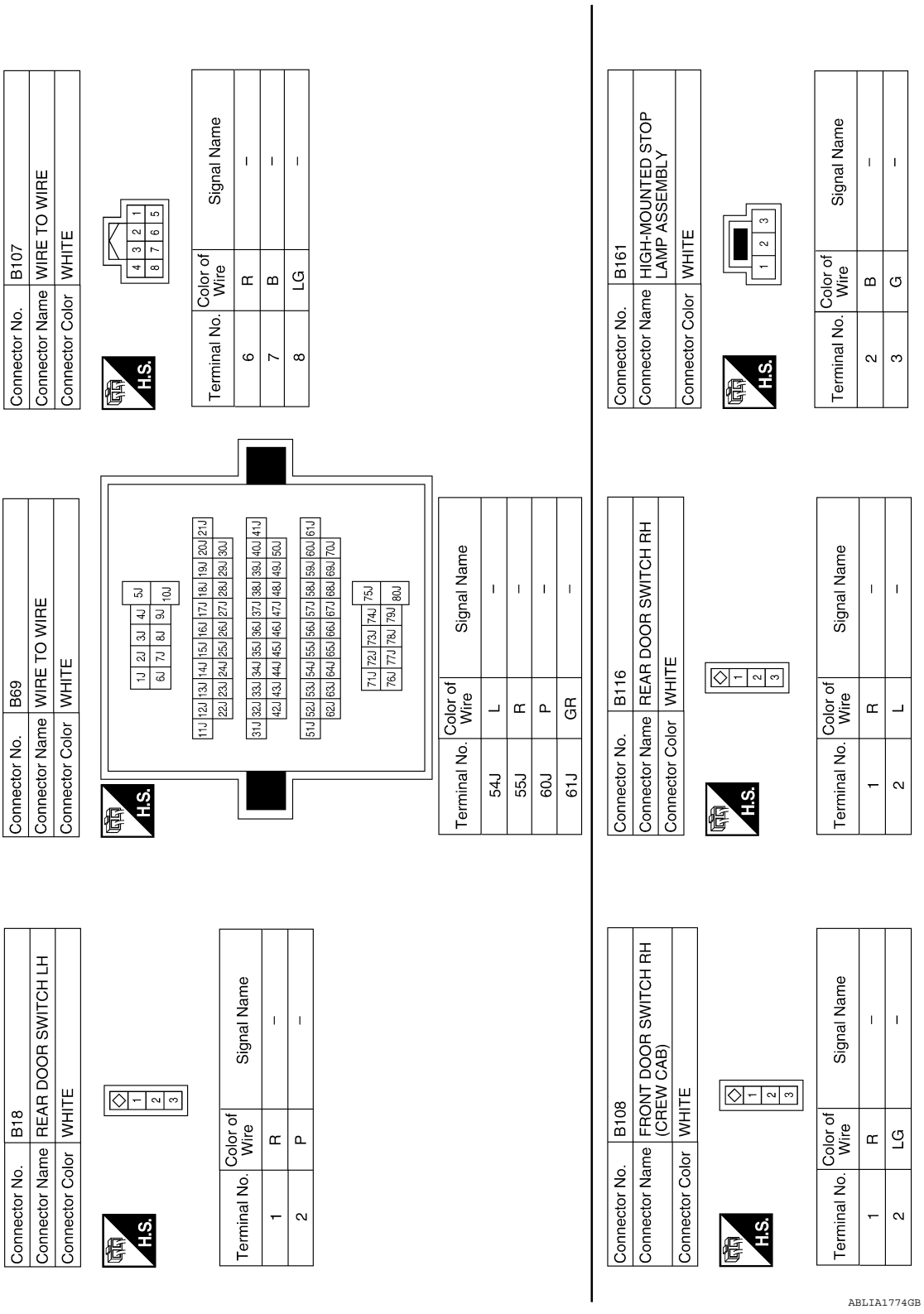
Connector No.	E152
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
55G	Y	–

ABLIA1773GB


Connector No. B107
Connector Name WIRE TO WIRE
Connector Color WHITE
H.S.
4 3 2 1
8 7 6 5
Terminal No. Color of Wire Signal Name
6 R –
7 B –
8 LG –
Connector No. B69
Connector Name WIRE TO WIRE
Connector Color WHITE
H.S.
1J 2J 3J 4J 5J
6J 7J 8J 9J 10J
11J 12J 13J 14J 15J 16J 17J 18J 19J 20J 21J
22J 23J 24J 25J 26J 27J 28J 29J 30J
31J 32J 33J 34J 35J 36J 37J 38J 39J 40J 41J
42J 43J 44J 45J 46J 47J 48J 49J 50J
51J 52J 53J 54J 55J 56J 57J 58J 59J 60J 61J
62J 63J 64J 65J 66J 67J 68J 69J 70J
71J 72J 73J 74J 75J
76J 77J 78J 79J 80J
Terminal No. Color of Wire Signal Name
54J L –
55J R –
60J P –
61J GR –
Connector No. B161
Connector Name HIGH-MOUNTED STOP LAMP ASSEMBLY
Connector Color WHITE
H.S.
1 2 3
Terminal No. Color of Wire Signal Name
2 B –
3 G –
Connector No. B116
Connector Name REAR DOOR SWITCH RH
Connector Color WHITE
H.S.
1 2 3
Terminal No. Color of Wire Signal Name
1 R –
2 L –
Connector No. B18
Connector Name REAR DOOR SWITCH LH
Connector Color WHITE
H.S.
1 2 3
Terminal No. Color of Wire Signal Name
1 R –
2 P –
Connector No. B108
Connector Name FRONT DOOR SWITCH RH (CREW CAB)
Connector Color WHITE
H.S.
1 2 3
Terminal No. Color of Wire Signal Name
1 R –
2 LG –
ABLIA1774GB

Connector No.	R9
Connector Name	FRONT ROOM/MAP LAMP ASSEMBLY
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	R/Y	–
2	Y	–
3	B	–

Connector No.	R1
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
9	R/Y	–
20	B	–
21	BR	–

Connector No.	D216
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
6	L	–
7	B	–
8	LG	–

Connector No.	D213
Connector Name	FRONT DOOR SWITCH LH (KING CAB)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	L	–
2	LG	–
3	B	–

Connector No.	B162
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
6	R	–
7	L	–
8	LG	–
12	G	–

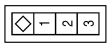
Connector No.	R10
Connector Name	ROOM LAMP 2ND ROW
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	BR	–
2	R/Y	–

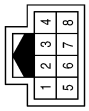
ABLIA1775GB

Connector No.	D314
Connector Name	FRONT DOOR SWITCH RH (KING CAB)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	R	–
2	LG	–
3	B	–

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



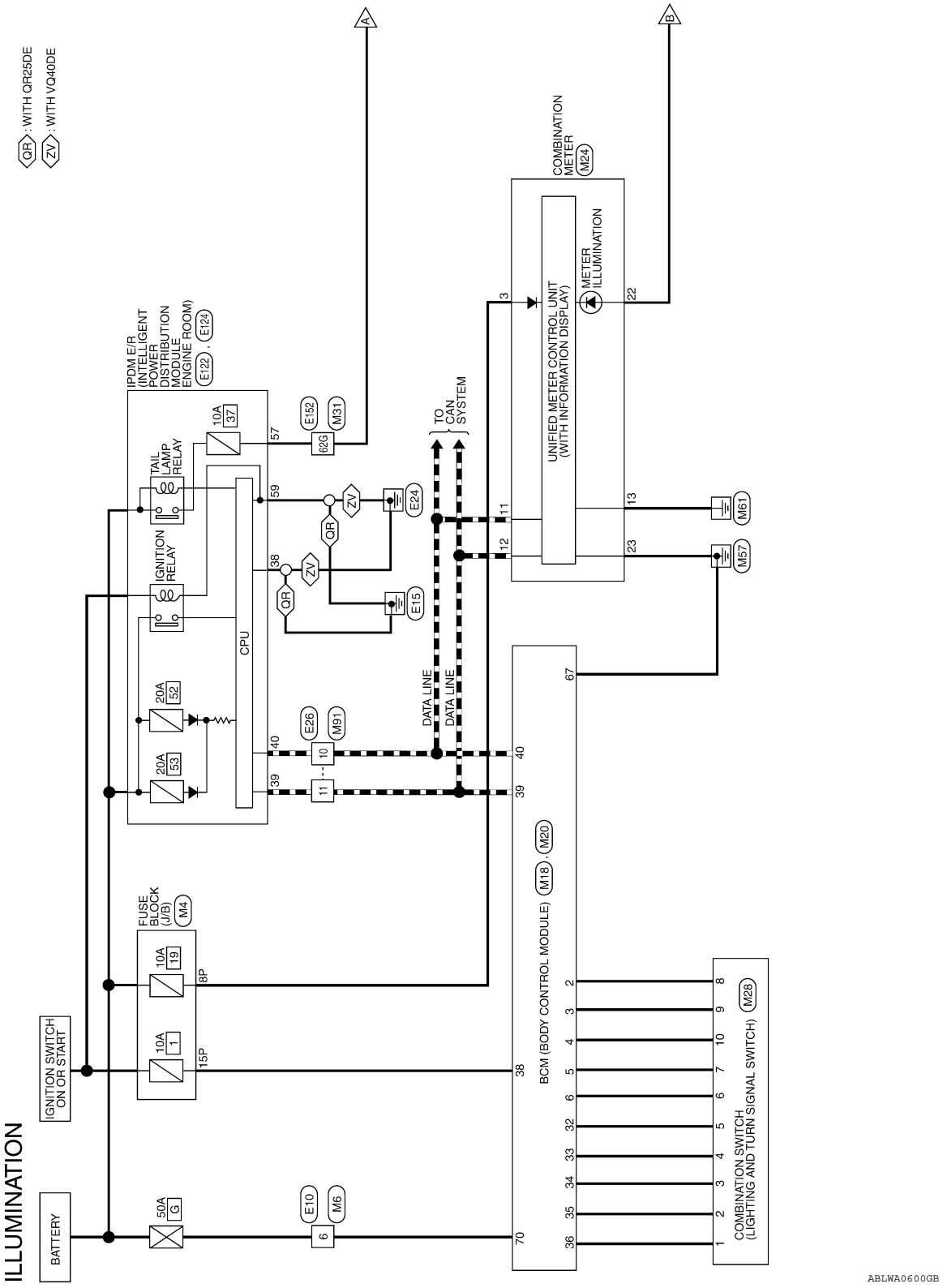
Terminal No.	Color of Wire	Signal Name
6	R	–
7	B	–
8	LG	–

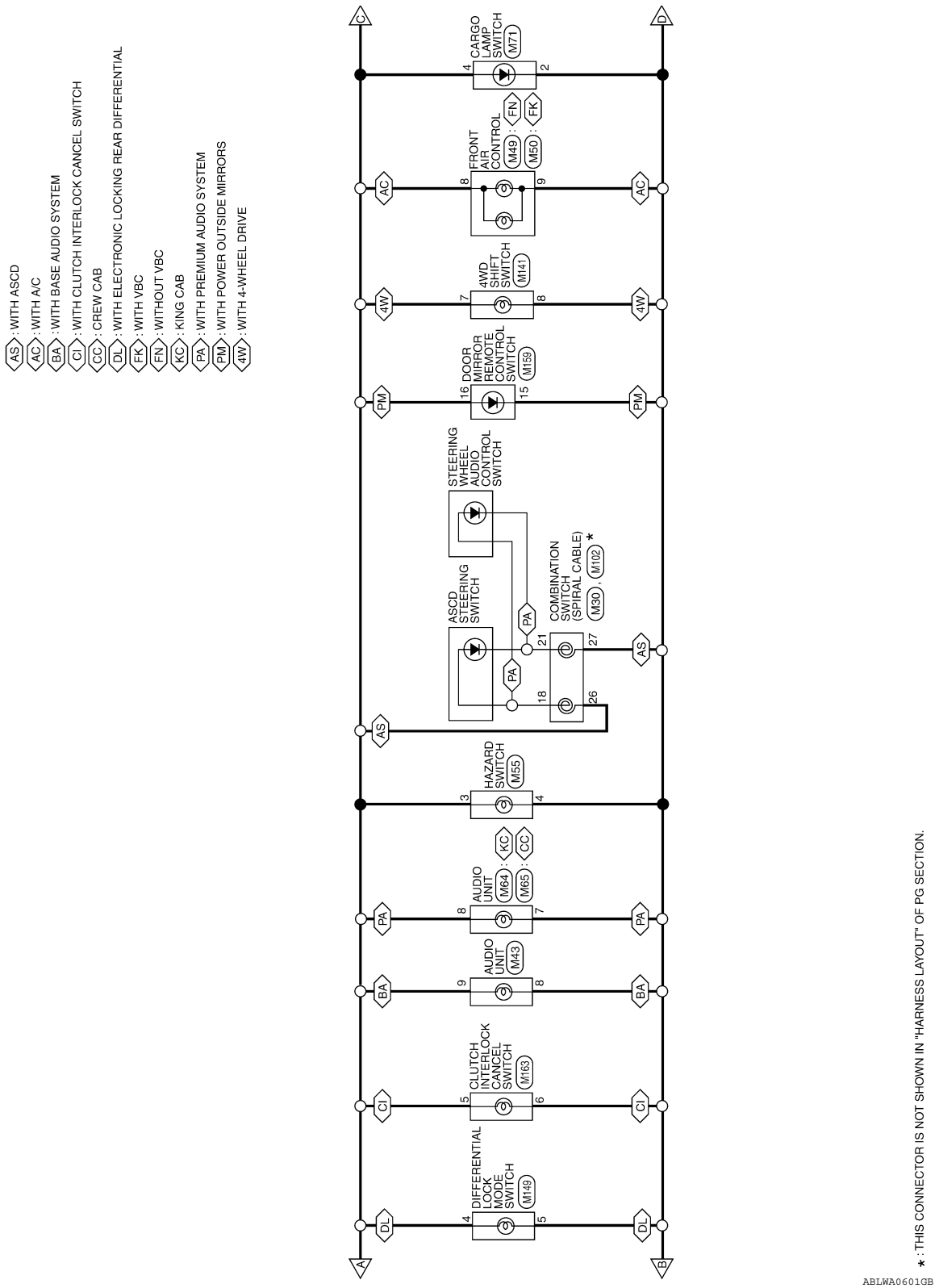
ABLIA1776GB

ILLUMINATION

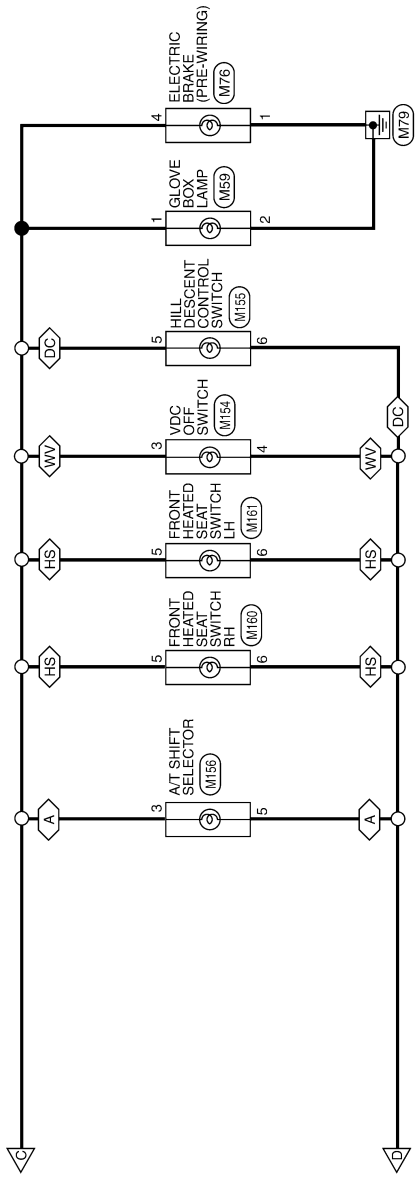
Wiring Diagram

INFOID:0000000005272854




AS : WITH ASCD
AC : WITH A/C
BA : WITH BASE AUDIO SYSTEM
CI : WITH CLUTCH INTERLOCK CANCEL SWITCH
CC : CREW CAB
DL : WITH ELECTRONIC LOCKING REAR DIFFERENTIAL
FK : WITH VBC
FN : WITHOUT VBC
KC : KING CAB
PA : WITH PREMIUM AUDIO SYSTEM
PM : WITH POWER OUTSIDE MIRRORS
4W : WITH 4-WHEEL DRIVE
CARGO LAMP SWITCH (M71)
FRONT AIR CONTROL (M49) : FN (M50) : FK
4WD SHIFT SWITCH (M141)
DOOR MIRROR REMOTE CONTROL SWITCH (M159)
STEERING WHEEL AUDIO CONTROL SWITCH
ASCD STEERING SWITCH
COMBINATION SWITCH (SPIRAL CABLE) * (M30), (M102)
HAZARD SWITCH (M55)
AUDIO UNIT (M64) : KC (M65) : CC
AUDIO UNIT (M43)
CLUTCH INTERLOCK CANCEL SWITCH (M163)
DIFFERENTIAL LOCK MODE SWITCH (M149)
* : THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT" OF PG SECTION.
ABLWA0601GB

A : WITH A/T
DC : WITH HILL DESCENT CONTROL AND HILL START ASSIST
HS : WITH HEATED SEATS
WV : WITH VDC

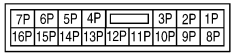


ABLWA0602GB

ILLUMINATION CONNECTORS

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

H.S.



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

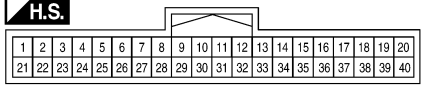
Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
6	W	–

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

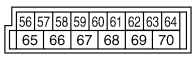
H.S.



Terminal No.	Color of Wire	Signal Name
2	P	INPUT 5
3	SB	INPUT 4
4	V	INPUT 3
5	L	INPUT 2
6	R	INPUT 1
32	O	OUTPUT 5
33	GR	OUTPUT 4
34	G	OUTPUT 3
35	BR	OUTPUT 2
36	LG	OUTPUT 1
38	W/R	IGN SW
39	L	CAN-H
40	P	CAN-L

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

H.S.

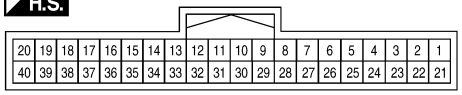


Terminal No.	Color of Wire	Signal Name
67	B	GND (POWER)
70	W	BAT (F/L)

ABLIA1766GB

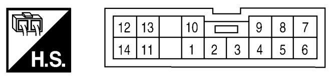
Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE

H.S.



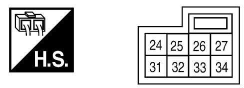
Terminal No.	Color of Wire	Signal Name
3	R/Y	BATTERY
11	P	CAN-L
12	L	CAN-H
13	GR	GROUND
22	BR	ILLUMINATION CONTROL
23	B	POWER GND

Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE



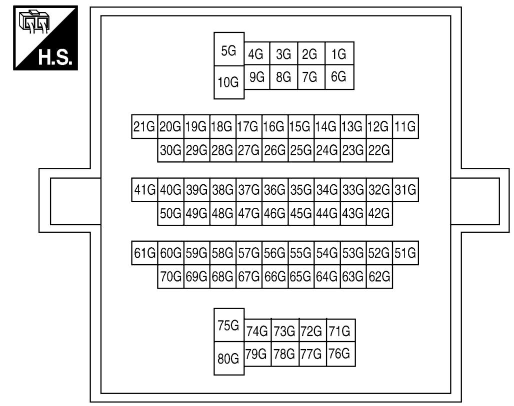
Terminal No.	Color of Wire	Signal Name
1	LG	INPUT 1
2	BR	INPUT 2
3	G	INPUT 3
4	GR	INPUT 4
5	O	INPUT 5
6	R	OUTPUT 1
7	L	OUTPUT 2
8	P	OUTPUT 5
9	SB	OUTPUT 4
10	V	OUTPUT 3

Connector No.	M30
Connector Name	COMBINATION SWITCH
Connector Color	GRAY



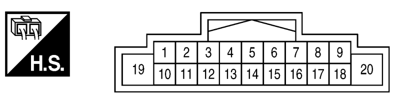
Terminal No.	Color of Wire	Signal Name
26	R	ILL+
27	G	ILL-

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



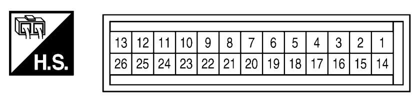
Terminal No.	Color of Wire	Signal Name
62G	R	–

Connector No.	M43
Connector Name	AUDIO UNIT (WITH BASE AUDIO SYSTEM)
Connector Color	WHITE



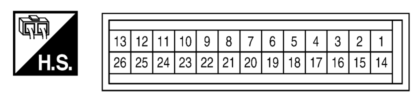
Terminal No.	Color of Wire	Signal Name
8	GR	ILL CONT
9	R	LIGHT SW

Connector No.	M49
Connector Name	FRONT AIR CONTROL (WITHOUT VBC)
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
8	G	–
9	BR	–

Connector No.	M50
Connector Name	FRONT AIR CONTROL (WITH VBC)
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
8	G	–
9	BR	–

ABLIA1767GB

Connector No.	M55
Connector Name	HAZARD SWITCH
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
3	R	–
4	BR	–

Connector No.	M59
Connector Name	GLOVE BOX LAMP
Connector Color	BROWN

H.S.

Terminal No.	Color of Wire	Signal Name
1	R	–
2	B	–

Connector No.	M64
Connector Name	AUDIO UNIT (KING CAB WITH PREMIUM AUDIO SYSTEM)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
7	GR	ILL CONT
8	G	LIGHT SW

Connector No.	M65
Connector Name	AUDIO UNIT (CREW CAB WITH PREMIUM AUDIO SYSTEM)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
7	GR	ILL CONT
8	G	LIGHT SW

Connector No.	M71
Connector Name	CARGO LAMP SWITCH
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
2	P	–
4	V	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
1	B	GROUND
4	R	ILL (TAIL)

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Connector No.	M91
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
10	P	–
11	L	–

Connector No.	M102
Connector Name	COMBINATION SWITCH
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
18	R	–
21	G	–

Connector No.	M141
Connector Name	4WD SHIFT SWITCH
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
7	R	LIGHT_SW
8	BR	GND

Connector No.	M149
Connector Name	DIFFERENTIAL LOCK MODE SWITCH
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
4	R	–
5	BR	–

Connector No.	M154
Connector Name	VDC OFF SWITCH
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
3	R	–
4	BR	–

Connector No.	M155
Connector Name	HILL DESCENT CONTROL SWITCH
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
5	R	–
6	BR	–

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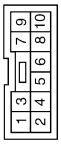
Connector No.	M156
Connector Name	A/T SHIFT SELECTOR
Connector Color	WHITE

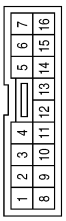
H.S.



Terminal No.	Color of Wire	Signal Name
3	R	–
5	BR	–

Connector No.	M159
Connector Name	DOOR MIRROR REMOTE CONTROL SWITCH
Connector Color	WHITE

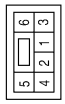
H.S.



Terminal No.	Color of Wire	Signal Name
15	BR	–
16	R	–

Connector No.	M160
Connector Name	FRONT HEATED SEAT SWITCH RH
Connector Color	BROWN

H.S.



Terminal No.	Color of Wire	Signal Name
5	SB	–
6	O	–

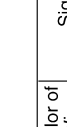
Connector No.	M161
Connector Name	FRONT HEATED SEAT SWITCH LH
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
5	R	–
6	BR	–

Connector No.	M163
Connector Name	CLUTCH INTERLOCK CANCEL SWITCH
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
5	R	–
6	BR	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
6	W	–

ABLIA1770GB

Connector No.	E26
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2	3		4	5	6	7
8	9	10	11	12	13	14	15	16

Terminal No.	Color of Wire	Signal Name
10	P	–
11	L	–

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

H.S.

42	41	40	39	38	37
48	47	46	45	44	43

Terminal No.	Color of Wire	Signal Name
38	B	GND (SIGNAL)
39	L	CAN-H
40	P	CAN-L

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

H.S.

59	58	57
62	61	60

Terminal No.	Color of Wire	Signal Name
57	GR	TAIL LAMP
59	B	GND (POWER)

Connector No.	E152
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1G 2G 3G 4G 5G
6G 7G 8G 9G 10G

11G 12G 13G 14G 15G 16G 17G 18G 19G 20G 21G
22G 23G 24G 25G 26G 27G 28G 29G 30G

31G 32G 33G 34G 35G 36G 37G 38G 39G 40G 41G
42G 43G 44G 45G 46G 47G 48G 49G 50G

51G 52G 53G 54G 55G 56G 57G 58G 59G 60G 61G
62G 63G 64G 65G 66G 67G 68G 69G 70G

71G 72G 73G 74G 75G
76G 77G 78G 79G 80G

Terminal No.	Color of Wire	Signal Name
62G	R	–

ABLIA1771GB

ECU DIAGNOSIS

BCM (BODY CONTROL MODULE)

Reference Value

INFOID:0000000005550767

VALUES ON THE DIAGNOSIS TOOL

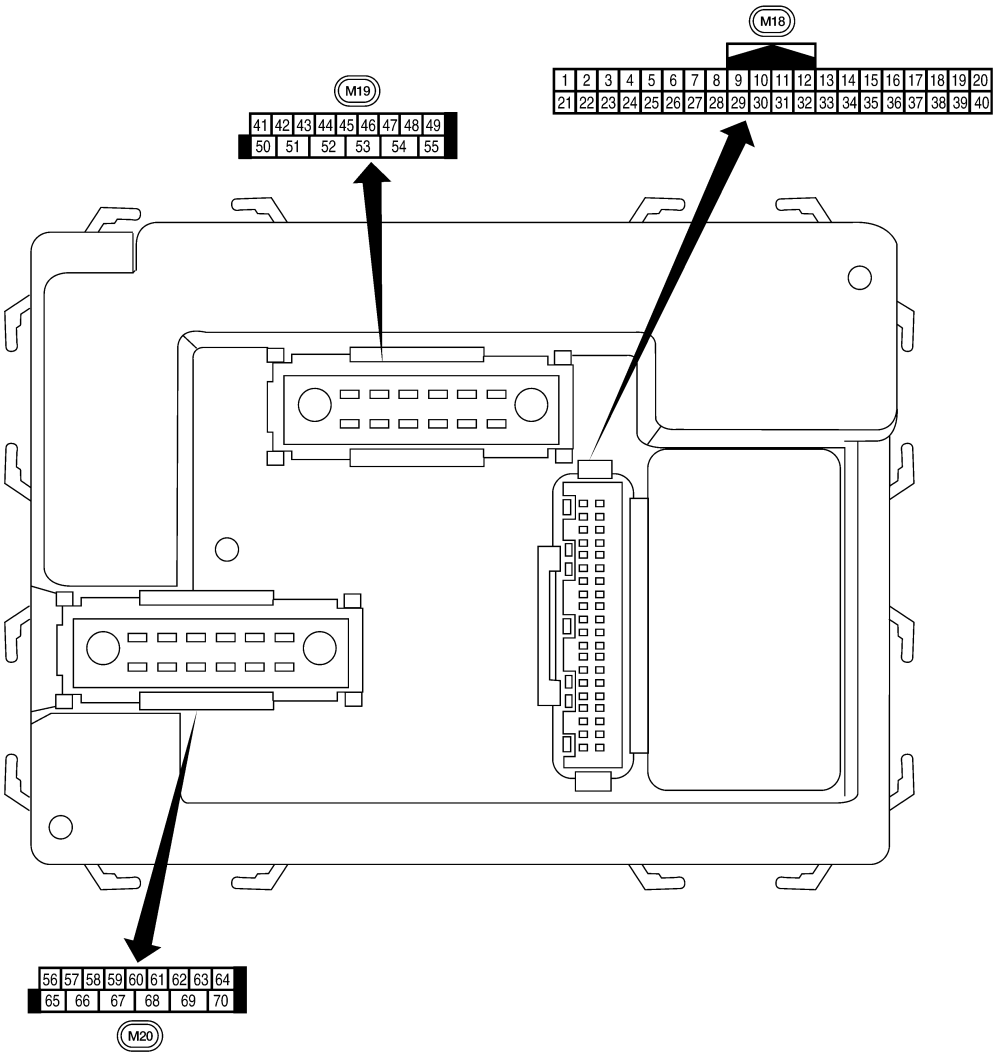
Monitor Item	Condition	Value/Status
IGN ON SW	Ignition switch OFF or ACC	OFF
	Ignition switch ON	ON
KEY ON SW	Mechanical key is removed from key cylinder	OFF
	Mechanical key is inserted to key cylinder	ON
CDL LOCK SW	Door lock/unlock switch does not operate	OFF
	Press door lock/unlock switch to the lock side	ON
CDL UNLOCK SW	Door lock/unlock switch does not operate	OFF
	Press door lock/unlock switch to the unlock side	ON
DOOR SW-DR	Driver's door closed	OFF
	Driver's door opened	ON
DOOR SW-AS	Passenger door closed	OFF
	Passenger door opened	ON
DOOR SW-RR	Rear RH door closed	OFF
	Rear RH door opened	ON
DOOR SW-RL	Rear LH door closed	OFF
	Rear LH door opened	ON
KEY CYL LK-SW	Other than driver door key cylinder LOCK position	OFF
	Driver door key cylinder LOCK position	ON
KEY CYL UN-SW	Other than driver door key cylinder UNLOCK position	OFF
	Driver door key cylinder UNLOCK position	ON
KEYLESS LOCK	“LOCK” button of key fob is not pressed	OFF
	“LOCK” button of key fob is pressed	ON
KEYLESS UNLOCK	“UNLOCK” button of key fob is not pressed	OFF
	“UNLOCK” button of key fob is pressed	ON
ACC ON SW	Ignition switch OFF	OFF
	Ignition switch ACC or ON	ON
REAR DEF SW	Rear window defogger switch OFF	OFF
	Rear window defogger switch ON	ON
LIGHT SW 1ST	Lighting switch OFF	OFF
	Lighting switch 1ST	ON
BUCKLE SW	The seat belt (driver side) is unfastened. [Seat belt switch (driver side) OFF]	OFF
	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
	PANIC button of key fob is pressed	ON

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

Monitor Item	Condition	Value/Status
FAN ON SIG	Blower fan motor switch OFF	OFF
	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
	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 of front LH tire transmitter is not registered	YET
ID REGST FR1	ID of front RH tire transmitter is registered	DONE
	ID of front RH tire transmitter is not registered	YET
ID REGST RR1	ID of rear RH tire transmitter is registered	DONE
	ID of rear RH tire transmitter is not registered	YET
ID REGST RL1	ID of rear LH tire transmitter is registered	DONE
	ID of rear LH tire transmitter is not registered	YET
WARNING LAMP	Tire pressure indicator OFF	OFF
	Tire pressure indicator ON	ON
BUZZER	Tire pressure warning alarm is not sounding	OFF
	Tire pressure warning alarm is sounding	ON

Terminal Layout

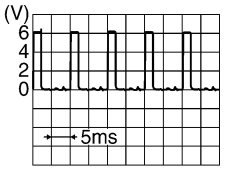
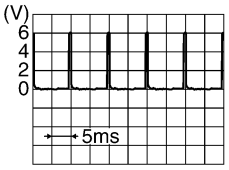
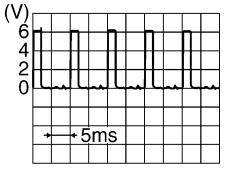
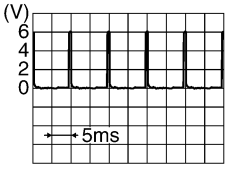
INFOID:0000000005550768

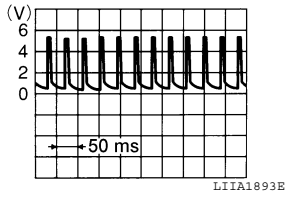
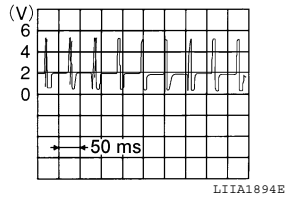
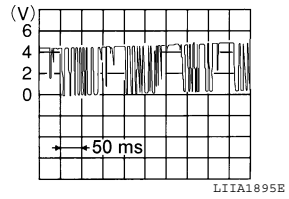


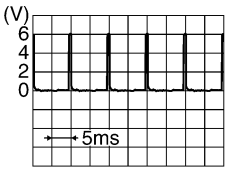
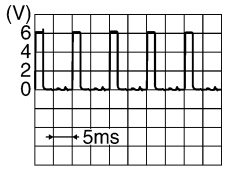
LIIA2443E

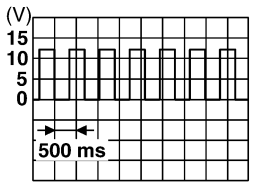
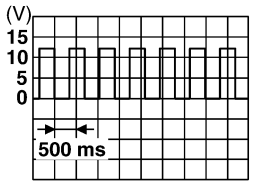
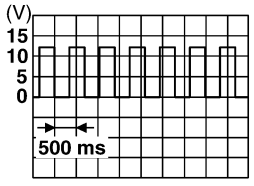
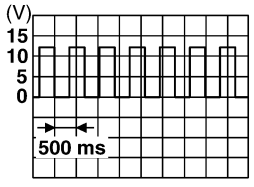
Physical Values

INFOID:0000000005550769

Terminal	Wire color	Item	Signal input/ output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
1	BR	Ignition keyhole illumination	Output	OFF	Door is locked (SW OFF)	Battery voltage
					Door is unlocked (SW ON)	0V
2	P	Combination switch input 5	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5291E
3	SB	Combination switch input 4	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5292E
4	V	Combination switch input 3	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5291E
5	L	Combination switch input 2	Input	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5292E
6	R	Combination switch input 1				
7	GR	Front door lock assembly LH (key cylinder switch) unlock	Input	OFF	ON (open, 2nd turn)	Momentary 1.5V
					OFF (closed)	0V
8	SB	Front door lock assembly LH (key cylinder switch) lock	Input		On (open)	Momentary 1.5V
					OFF (closed)	0V
9	Y	Rear window defogger switch	Input	ON	Rear window defogger switch ON	0V
					Rear window defogger switch OFF	5V
11	G/B	Ignition switch (ACC or ON)	Input	ACC or ON	Ignition switch ACC or ON	Battery voltage
12	LG	Front door switch RH (All)	Input	OFF	ON (open)	0V
		Rear door switch upper RH (King Cab)			OFF (closed)	Battery voltage
		Rear door switch lower RH (King Cab)				

Terminal	Wire color	Item	Signal input/ output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
13	L	Rear door switch RH (Crew Cab)	Input	OFF	ON (open)	0V
					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 supply)	Output	OFF	Ignition switch OFF	
20	G	Remote keyless entry receiver signal (Signal)	Input	OFF	Stand-by (keyfob buttons released)	
					When remote keyless entry receiver receives signal from keyfob (keyfob buttons pressed)	
21	GR	NATS antenna amp.	Input	OFF → ON	Ignition switch (OFF → 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 → ON)	Just after turning ignition switch ON: Pointer of tester should move.
27	W	Compressor ON signal	Input	ON	A/C switch OFF	5V
					A/C switch ON	0V
28	R	Front blower monitor	Input	ON	Front blower motor OFF	Battery voltage
					Front blower motor ON	0V
29	G	Hazard switch	Input	OFF	ON	0V
					OFF	5V
31	GR	Cargo lamp switch	Input	OFF	ON	0V
					OFF	Battery voltage

Terminal	Wire color	Item	Signal input/ output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
32	O	Combination switch output 5	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5291E
33	GR	Combination switch output 4	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5292E
34	G	Combination switch output 3	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5291E
35	BR	Combination switch output 2	Output	ON	Lighting, turn, wiper OFF Wiper dial position 4	 SKIA5292E
36	LG	Combination switch output 1				
37	B	Key switch	Input	OFF	Key inserted	Battery voltage
					Key removed	0V
38	W/R	Ignition switch (ON)	Input	ON	—	Battery voltage
39	L	CAN-H	—	—	—	—
40	P	CAN-L	—	—	—	—
45	V	Lock switch	Input	OFF	ON (lock)	0V
					OFF	Battery voltage
46	LG	Unlock switch	Input	OFF	ON (unlock)	0V
					OFF	Battery voltage
47	GR	Front door switch LH (All)	Input	OFF	ON (open)	0V
		Rear door switch upper LH (King Cab)			OFF (closed)	Battery voltage
		Rear door switch lower LH (King Cab)				
48	P	Rear door switch LH (Crew Cab)	Input	OFF	ON (open)	0V
					OFF (closed)	Battery voltage
50	P	Cargo lamp	Output	OFF	Any door open (ON)	0V
					All doors closed (OFF)	Battery voltage

Terminal	Wire color	Item	Signal input/ output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
51	O	Trailer turn signal (right)	Output	ON	Turn right ON	 SKIA3009J
52	LG	Trailer turn signal (left)	Output	ON	Turn left ON	 SKIA3009J
56	R/Y	Battery saver output	Output	OFF	30 minutes after ignition switch is turned OFF	0V
				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 assembly LH (unlock)	Output	OFF	OFF (neutral)	0V
					ON (unlock)	Battery voltage
60	LG	Turn signal (left)	Output	ON	Turn left ON	 SKIA3009J
61	G	Turn signal (right)	Output	ON	Turn right ON	 SKIA3009J
63	BR	Interior room/map lamp	Output	OFF	Any door switch: ON (open)	0V
					Any door switch: OFF (closed)	Battery voltage
65	V	All door lock actuators (lock)	Output	OFF	OFF (neutral)	0V
					ON (lock)	Battery voltage
66	L	Front door lock actuator RH, rear door lock actuators LH/RH (unlock)	Output	OFF	OFF (neutral)	0V
					ON (unlock)	Battery voltage
67	B	Ground	Input	ON	—	0V

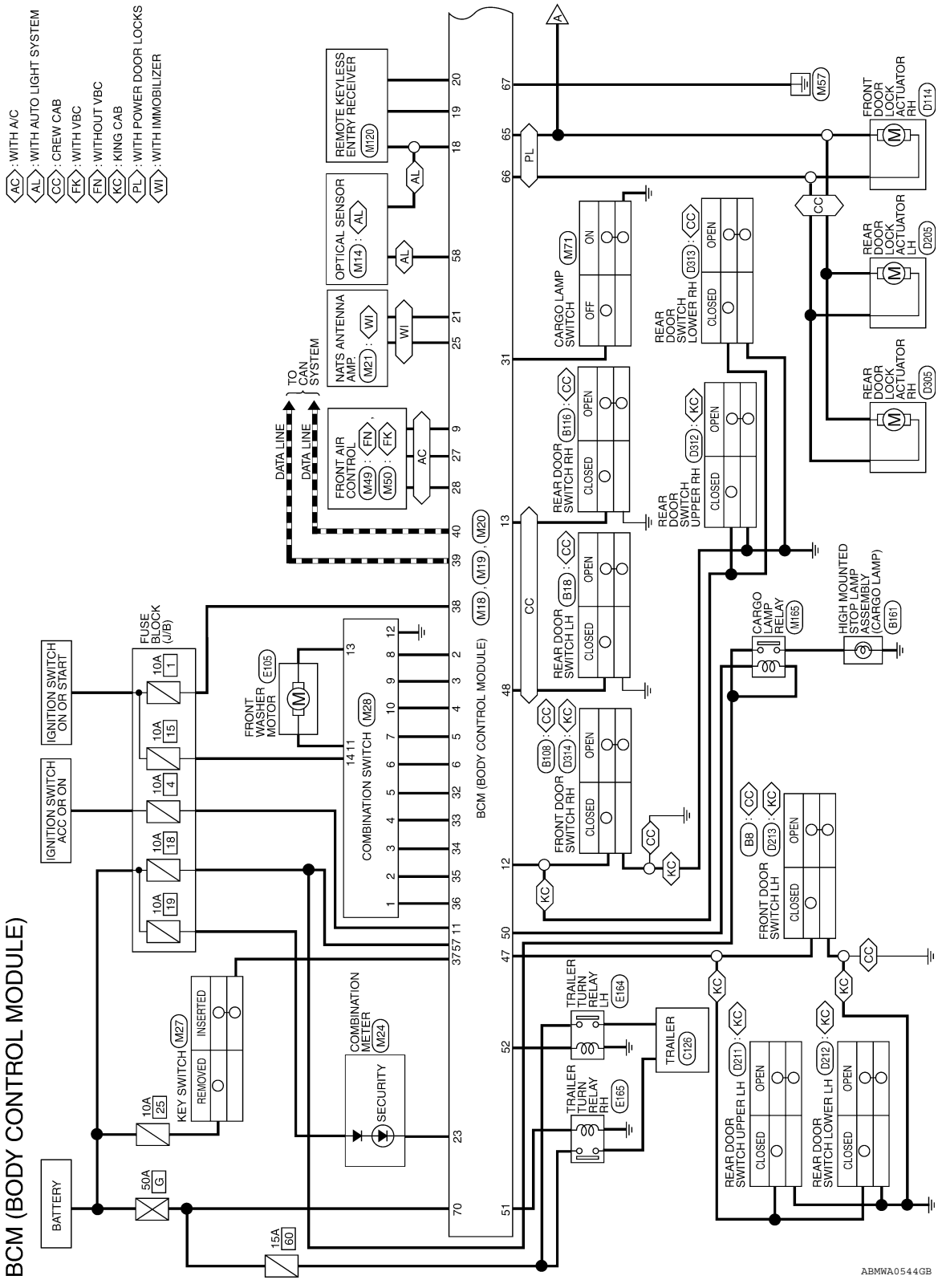
Terminal	Wire color	Item	Signal input/ output	Measuring condition		Reference value or waveform (Approx.)
				Ignition switch	Operation or condition	
68[1]	O	Power window power supply (RAP)	Output	—	Ignition switch ON	Battery voltage
					Within 45 seconds after ignition switch OFF	Battery voltage
		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

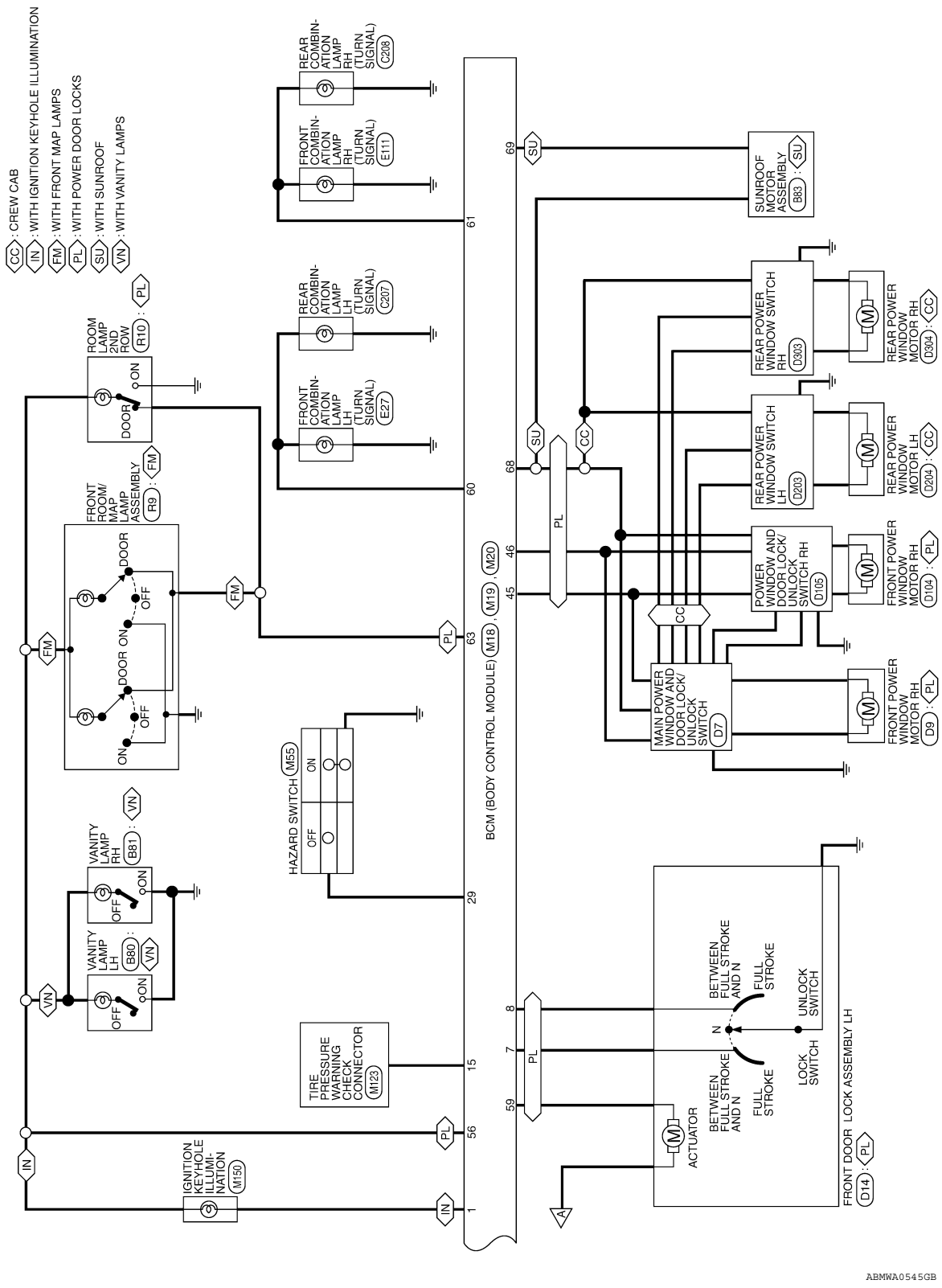
1: King cab (with power door lock system)

2: Crew cab (with power door lock system)

Wiring Diagram

INFOID:0000000005550770




CC : CREW CAB
IN : WITH IGNITION KEYHOLE ILLUMINATION
FM : WITH FRONT MAP LAMPS
PL : WITH POWER DOOR LOCKS
SU : WITH SUNROOF
VN : WITH VANITY LAMPS
REAR COMBIN-ATION LAMP RH (TURN SIGNAL) C208
FRONT COMBIN-ATION LAMP RH (TURN SIGNAL) E111
REAR COMBIN-ATION LAMP LH (TURN SIGNAL) C207
FRONT COMBIN-ATION LAMP LH (TURN SIGNAL) E27
ROOM LAMP 2ND ROW R10
FRONT ROOM/ MAP LAMP ASSEMBLY R9
VANITY LAMP RH B81
VANITY LAMP LH B80
HAZARD SWITCH M55
TIRE PRESSURE WARNING CHECK CONNECTOR M123
IGNITION KEYHOLE ILLUMI-NATION M150
BCM (BODY CONTROL MODULE) M18, M19, M20
SUNROOF MOTOR ASSEMBLY B83
REAR POWER WINDOW SWITCH RH D303
REAR POWER WINDOW SWITCH LH D203
POWER WINDOW AND DOOR LOCK/ UNLOCK SWITCH RH D105
MAIN POWER WINDOW AND DOOR LOCK/ UNLOCK SWITCH D7
REAR POWER WINDOW MOTOR RH D304
REAR POWER WINDOW MOTOR LH D204
FRONT POWER WINDOW MOTOR RH D104
FRONT POWER WINDOW MOTOR RH D9
ACTUATOR
BETWEEN FULL STROKE AND N
FULL STROKE
UNLOCK SWITCH
LOCK SWITCH
FRONT DOOR LOCK ASSEMBLY LH D14
ABMWA0545GB

BCM (BODY CONTROL MODULE) CONNECTORS

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

H.S.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

Terminal No.	Color of Wire	Signal Name
1	BR	KEY RING OUTPUT
2	P	INPUT 5
3	SB	INPUT 4
4	V	INPUT 3
5	L	INPUT 2
6	R	INPUT 1
7	GR	KEY CYLINDER UNLOCK SW
8	SB	KEY CYLINDER LOCK SW
9	Y	RR DEFOGGER SW
10	–	–
11	G/B	ACC SW
12	LG	DOOR SW (AS)
13	L	DOOR SW (RR)
14	–	–
15	W	TPMS MODE TRIGGER SW
16	–	–
17	–	–
18	BR	KEYLESS & AUTO LIGHT SENSOR GND
19	V	KEYLESS TUNER POWER SUPPLY OUTPUT
20	G	KEYLESS TUNER SIGNAL
21	GR	IMMOBILIZER ANTENNA SIGNAL (CLOCK)
22	–	–
23	G	SECURITY INDICATOR OUTPUT
24	–	–
25	BR	IMMOBILIZER ANTENNA SIGNAL (RX,TX)
26	–	–
27	W	AIRCON SW
28	R	BLOWER FAN SW
29	G	HAZARD SW
30	–	–
31	GR	CARGO LAMP SW
32	O	OUTPUT 5
33	GR	OUTPUT 4
34	G	OUTPUT 3
35	BR	OUTPUT 2
36	LG	OUTPUT 1
37	B	KEY SW
38	W/R	IGN SW
39	L	CAN-H
40	P	CAN-L

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

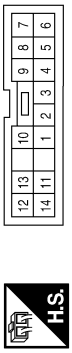
H.S.

41	42	43	44	45	46	47	48	49
50	51	52	53	54	55			

Terminal No.	Color of Wire	Signal Name
41	–	–
42	–	–
43	–	–
44	–	–
45	V	CDL LOCK SW
46	LG	CDL UNLOCK SW
47	GR	DOOR SW (DR)
48	P	DOOR SW (RL)
49	–	–
50	P	CARGO LAMP OUTPUT
51	O	TRAILER FLASHER OUTPUT (RIGHT)
52	LG	TRAILER FLASHER OUTPUT (LEFT)
53	–	–
54	–	–
55	–	–

ABMIA1431GB

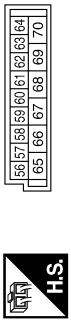
Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	LG	INPUT 1
2	BR	INPUT 2
3	G	INPUT 3
4	GR	INPUT 4
5	O	INPUT 5
6	R	OUTPUT 1
7	L	OUTPUT 2
8	P	OUTPUT 5
9	SB	OUTPUT 4
10	V	OUTPUT 3
11	O	WASH FR (-) RR (+)
12	B	GND
13	L	WASH FR (+) RR (-)
14	W/G	IGN

Terminal No.	Color of Wire	Signal Name
65	V	DOOR LOCK OUTPUT (ALL)
66	L	DOOR UNLOCK OUTPUT (OTHER)
67	B	GND (POWER)
68	O	POWER WINDOW POWER SUPPLY OUTPUT (LINKED TO RAP) (WITH POWER DOOR LOCK SYSTEM)
68	SB	POWER WINDOW POWER SUPPLY OUTPUT (LINKED TO RAP) (CREW CAB WITHOUT POWER DOOR LOCK SYSTEM)
69	P	POWER WINDOW POWER SUPPLY OUTPUT (BAT)
70	W	BAT (F/L)

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



Terminal No.	Color of Wire	Signal Name
56	R/Y	BATTERY SAVER OUTPUT
57	R/Y	BAT (FUSE)
58	W	AUTO LIGHT SENSOR INPUT 2
59	GR	DOOR UNLOCK OUTPUT (DR)
60	LG	FLASHER OUTPUT (LEFT)
61	G	FLASHER OUTPUT (RIGHT)
62	–	–
63	BR	ROOM LAMP OUTPUT
64	–	–

ABMIA1432GB

Fail Safe

INFOID:0000000005550771

Fail-safe index

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

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

DTC Inspection Priority Chart

INFOID:0000000005550772

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] RL • C1716: [PRESSDATA ERR] FL • C1717: [PRESSDATA ERR] FR • C1718: [PRESSDATA ERR] RR • C1719: [PRESSDATA ERR] RL • C1720: [CODE ERR] FL • C1721: [CODE ERR] FR • C1722: [CODE ERR] RR • C1723: [CODE ERR] RL • C1724: [BATT VOLT LOW] FL • C1725: [BATT VOLT LOW] FR • C1726: [BATT VOLT LOW] RR • C1727: [BATT VOLT LOW] RL

DTC Index

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 → 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

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

SYMPTOM DIAGNOSIS

INTERIOR LIGHTING SYSTEM SYMPTOMS

Symptom Table

INFOID:0000000005272861

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 INL-82.

PRECAUTION

PRECAUTIONS

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

INFOID:0000000005567995

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.

ON-VEHICLE REPAIR

INTERIOR ROOM LAMP

Removal and Installation

INFOID:0000000005567996

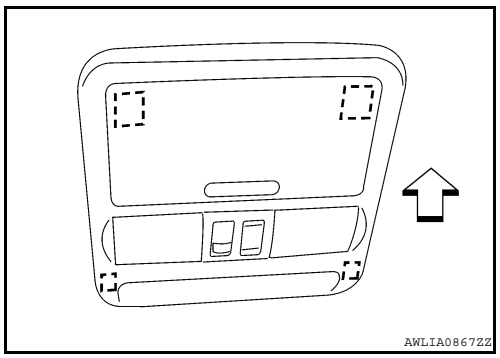
FRONT ROOM/MAP LAMP ASSEMBLY

Removal

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

⇦: Vehicle front

⬚: Metal clip



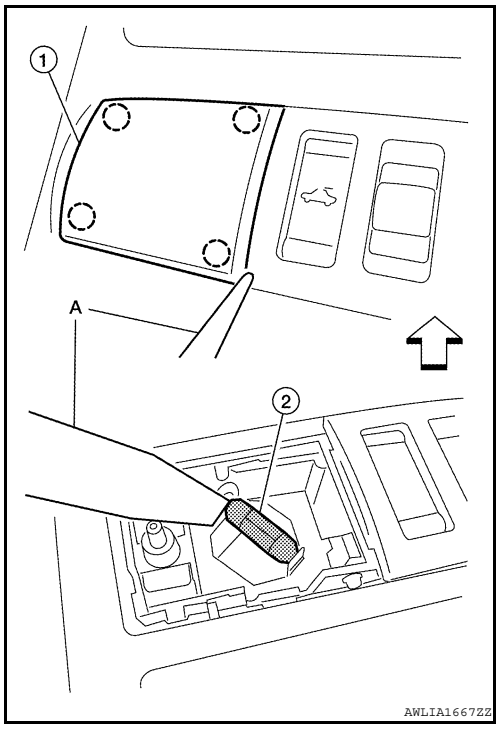
Installation

Installation is in the reverse order of removal.

Bulb Replacement

1. Using a suitable tool (A), remove map lamp lens (1).
   ⇦: Vehicle front
   ◌: 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.

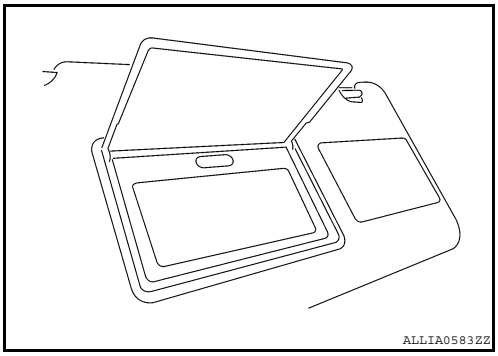
Map lamp bulb : 12V - 8W



VANITY MIRROR LAMP

Removal

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.

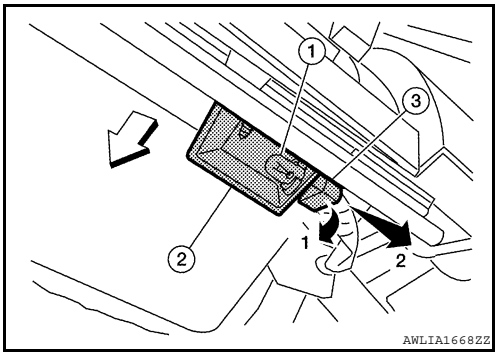
Bulb Replacement
The vanity mirror lamp bulb is replaced as part of the sunvisor assembly. Refer to INT-24, "Removal and Installation".

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

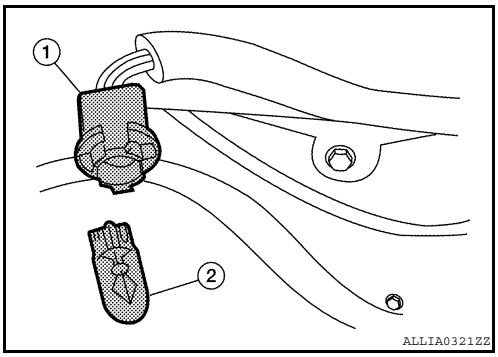


Installation
Installation is in the reverse order of removal.

Bulb Replacement

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

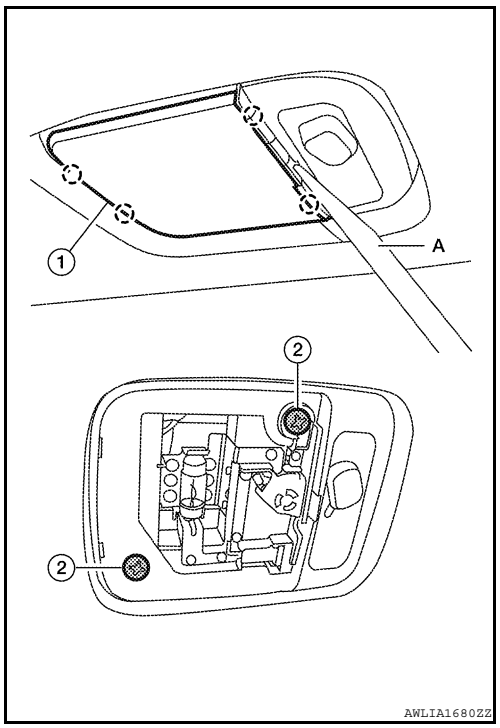
Glove box lamp bulb : 12V - 3.4W



ROOM LAMP

Removal

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.



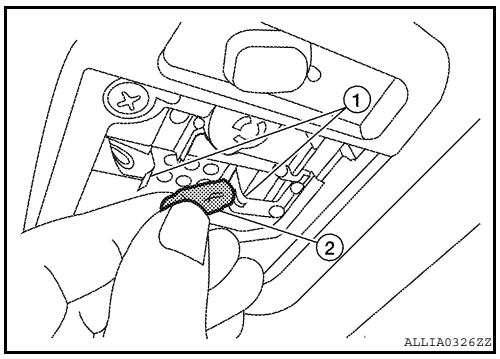
Installation

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



ILLUMINATION

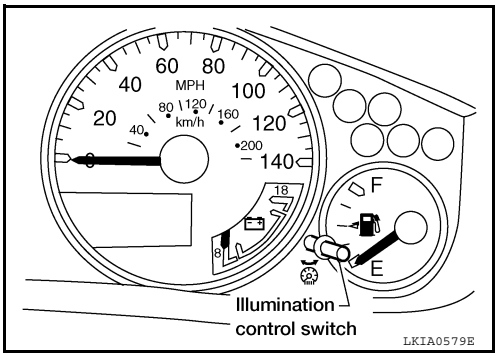
Removal and Installation

INFOID:0000000005567997

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".



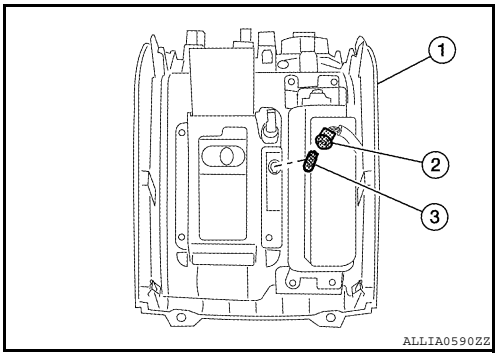
Installation

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).



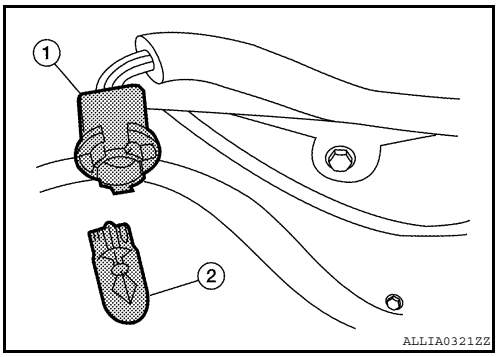
Installation

Installation is in the reverse order of removal.

Bulb Replacement

1. Remove A/T finisher from center console. Refer to IP-17, "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



SERVICE DATA AND SPECIFICATIONS (SDS)

BULB SPECIFICATIONS

Interior Lamp/Illumination

INFOID:0000000005272866

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.