SECTION INL
INTERIOR LIGHTING SYSTEM

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PRECAUTION

PRECAUTIONS

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

INFOID:0000000012591863

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. 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, it is recommended that all maintenance and repair be performed by an authorized NISSAN/INFINITI dealer.**
- **Improper repair, 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 or batteries, and wait at least three minutes before performing any service.**

Precaution for Work

INFOID:0000000012591864

- When removing or disassembling each component, be careful not to damage or deform it. If a component may be subject to interference, be sure to protect it with a shop cloth.
- When removing (disengaging) components with a screwdriver or similar tool, be sure to wrap the component with a shop cloth or vinyl tape to protect it.
- Protect the removed parts with a shop cloth and prevent them from being dropped.
- Replace a deformed or damaged clip.
- If a part is specified as a non-reusable part, always replace it with a new one.
- Be sure to tighten bolts and nuts securely to the specified torque.
- After installation is complete, be sure to check that each part works properly.
- Follow the steps below to clean components:

- Water soluble dirt:

- Dip a soft cloth into lukewarm water, wring the water out of the cloth and wipe the dirty area.
- Then rub with a soft, dry cloth.

- Oily dirt:

- Dip a soft cloth into lukewarm water with mild detergent (concentration: within 2 to 3%) and wipe the dirty area.
- Then dip a cloth into fresh water, wring the water out of the cloth and wipe the detergent off.
- Then rub with a soft, dry cloth.

- Do not use organic solvent such as thinner, benzene, alcohol or gasoline.
- For genuine leather seats, use a genuine leather seat cleaner.

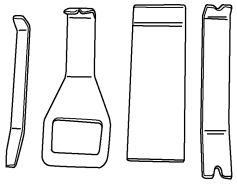
PREPARATION

PREPARATION

Special Service Tool

INFOID:0000000012591865

The actual shape of the tools may differ from those illustrated here.

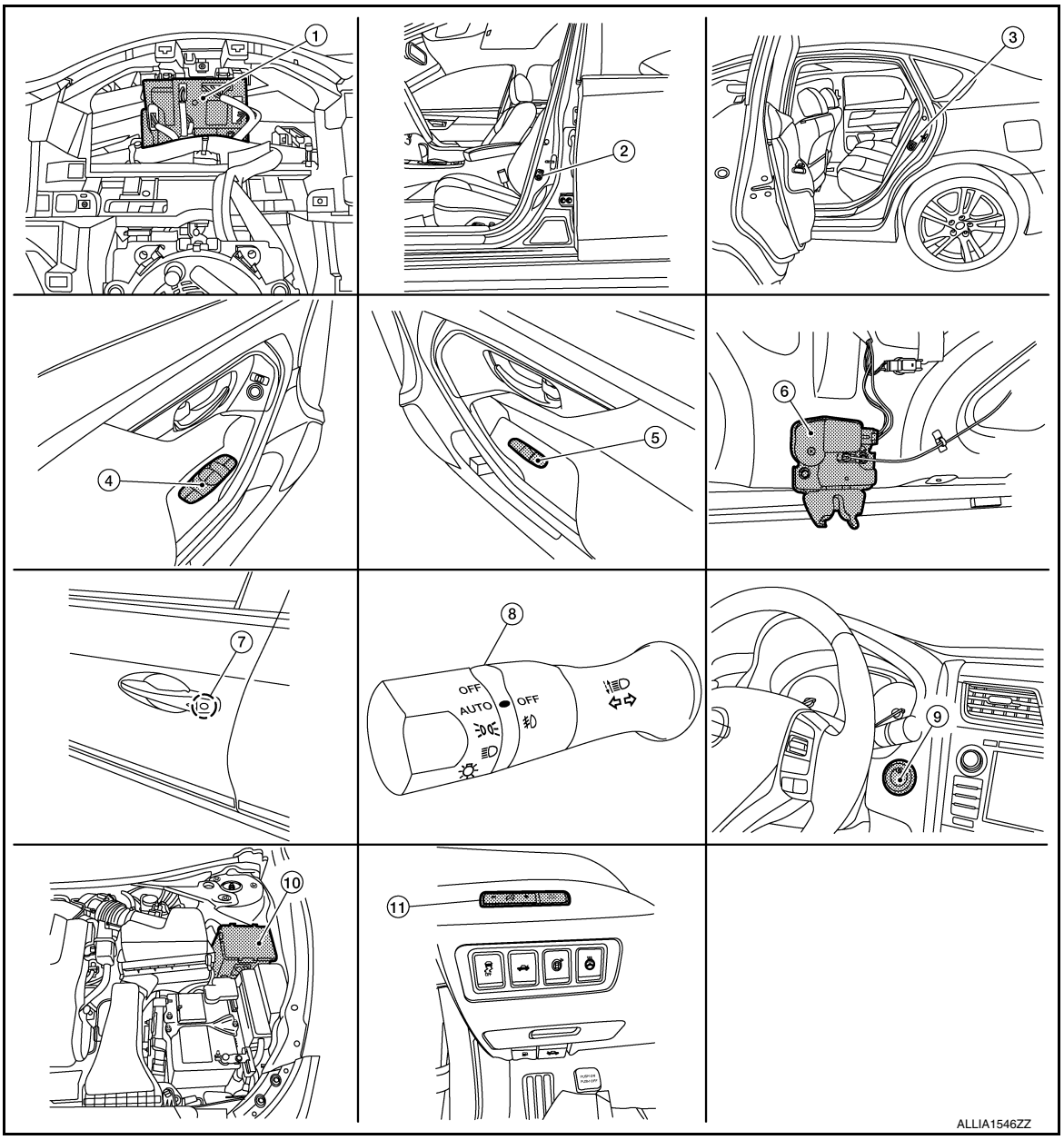
Tool number (TechMate No.) Tool name	Description
— (J-46534) Trim Tool Set  AWJIA0483ZZ	Removing trim components

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000012591866



1. BCM (view with combination meter removed)
2. Front door switch LH (RH similar)
3. Rear door switch LH (RH similar)
4. Main power window and door lock/unlock switch
5. Power window and door lock/unlock switch RH
6. Trunk lamp switch and trunk release solenoid (Trunk lamp switch)
7. Front door lock assembly LH (key cylinder switch)
8. Combination switch (lighting and turn signal switch)
9. Push-button ignition switch
10. IPDM E/R (tail lamp relay)
11. Meter control switch (illumination control switch)

Component Description

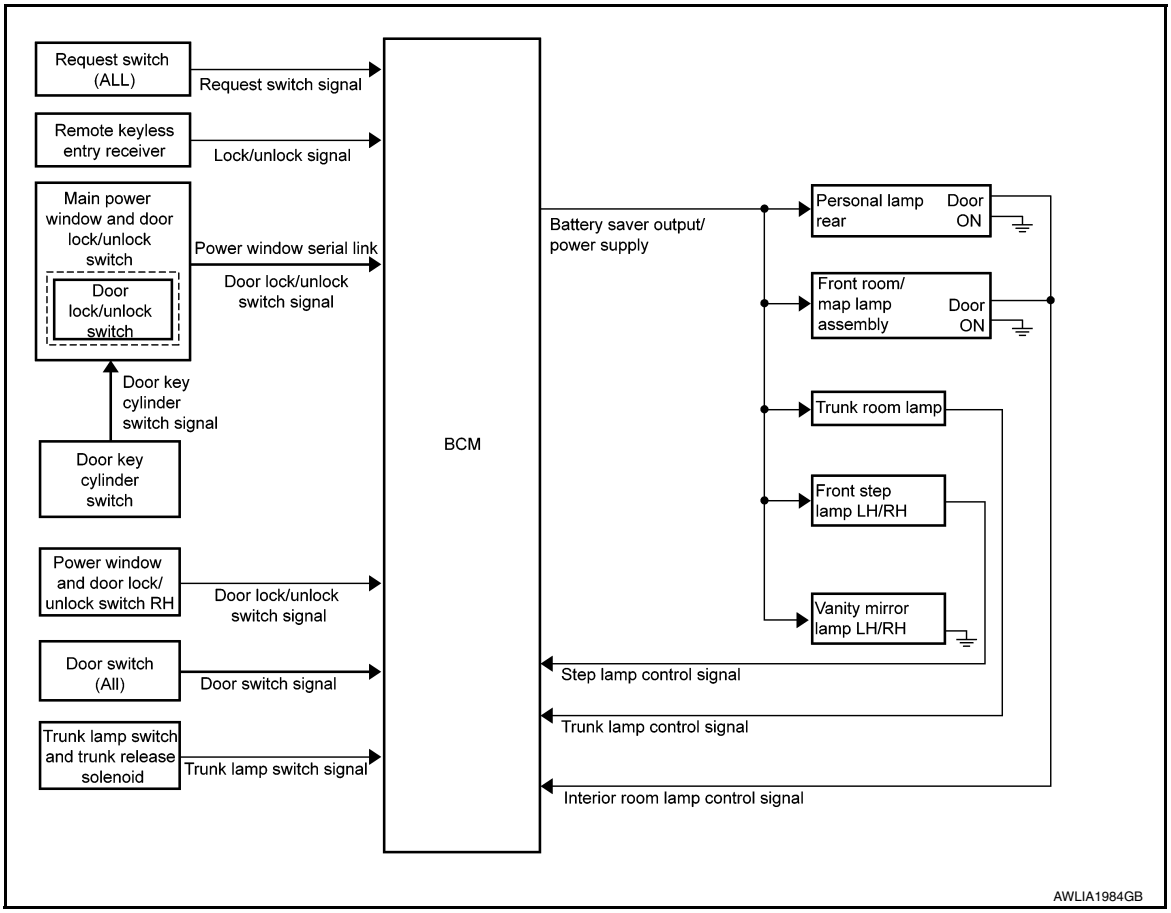
INFOID:0000000012591867

Part name	Description
BCM	The BCM monitors the combination switch (lighting and turn signal switch) position. 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.
Push-button ignition switch	Provides ignition switch status to the BCM.
Door switches	Provides door OPEN/CLOSED status to the BCM.
Combination switch (lighting and turn signal switch)	The combination switch (lighting and turn signal switch) provides input to the BCM. The BCM then sends a tail lamp relay request signal to the IPDM E/R via CAN communication to operate the illumination system.
Trunk lamp switch and release solenoid (trunk lamp switch)	Provides trunk lamp switch OPEN/CLOSED status to the BCM.
Power window and door lock/unlock switch RH	Provides door lock/unlock position switch RH status to the BCM.
Main power window and door lock/unlock switch	Provides door lock/unlock position switch LH status to the BCM.
Meter control switch (illumination control switch)	Adjusts the illumination system and combination meter illuminationbrightness.
Front door lock assembly LH (key cylinder switch)	Provides front door lock assembly LH (key cylinder switch) door lock/unlock switch position status to the BCM.

INTERIOR ROOM LAMP CONTROL SYSTEM

System Diagram

INFOID:0000000012591868



System Description

INFOID:0000000012591869

OUTLINE

- Front room/map lamps and personal lamps rear are controlled by the room lamp timer control function of the BCM when lamp switch is in the DOOR position.
- Front step lamps are controlled by step lamp control function of BCM.
- Trunk room lamp is controlled by trunk lamp control function of BCM.
- Push-button ignition switch illumination is controlled by the push-button ignition switch illumination control function of BCM.
- Interior room lamps are illuminated by the welcome light function of Intelligent Key system. Refer to DLK-33, "WELCOME LIGHT FUNCTION : System Description".

ROOM LAMP TIMER OPERATION

When the interior room lamp switch is in the DOOR position, the BCM begins time control (maximum 30 seconds) for interior room lamp ON/OFF when all of the following conditions are met:

- When the front door LH is unlocked [with Intelligent Key, 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 Intelligent Key, main power window and door lock/unlock switch or front door lock assembly LH (key cylinder switch)].
- A door is opened (door switch turns ON).
- Ignition switch is turned ON.

INTERIOR LAMP BATTERY SAVER CONTROL

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

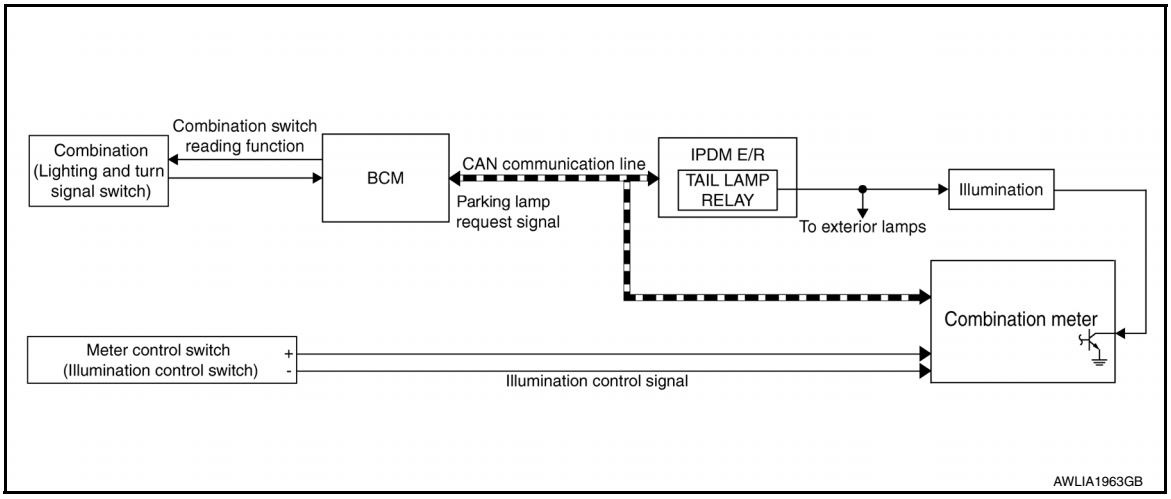
The BCM controls the following interior lamps:
- Front step lamp LH/RH
- Front room/map lamp LH/RH
- Personal lamp rear LH/RH
- Vanity mirror lamp LH/RH (if equipped)
- Trunk room lamp

After the battery saver system turns the lamps OFF, the lamps will illuminate again when:
- A signal is received from an Intelligent Key or main power window and door lock/unlock switch or when the front door lock assembly LH (key cylinder switch) is locked or unlocked.
- A door is opened or closed.

ILLUMINATION CONTROL SYSTEM

System Diagram

INFOID:0000000012591870



System Description

INFOID:0000000012591871

The illumination system is activated by the combination switch (lighting and turn signal switch) when the switch is placed in the 1st or 2nd position (or if the auto light system is activated).
The illumination system and combination meter illumination brightness is adjustable using the meter control switch (illumination control switch).

- The BCM (body control module) receives the parking lamp request signal from the combination switch (lighting and turn signal switch) to turn the lights on.
- The BCM sends the parking lamp request signal to the IPDM E/R (intelligent power distribution module engine room) via CAN communication.
- IPDM E/R receives the parking lamp request signal from the BCM to activate the tail lamp relay and provide power to the illumination system.

BATTERY SAVER CONTROL

When the combination switch (lighting and turn signal switch) is in the 1st or 2nd position and the ignition switch is set from ON or ACC to OFF, the battery saver control feature is activated. Under this condition, the illumination system remains on for 10 minutes unless the combination switch (lighting and turn signal switch) position is changed. If the combination switch (lighting and turn signal switch) position is changed, then the illumination system is 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 system has been turned off by the battery saver control, the illumination lights illuminate again.

DIAGNOSIS SYSTEM (BCM)
COMMON ITEM
COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

INFOID:0000000012825581

CAUTION:
After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF → ON (for at least 5 seconds) → OFF. If this step is not performed, the BCM may not go to "sleep mode", potentially causing a discharged battery and a no-start condition.

APPLICATION ITEM
CONSULT performs the following functions via CAN communication with BCM.

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

SYSTEM APPLICATION
BCM can perform the following functions.

System	Sub System	Direct Diagnostic Mode						
		ECU Identification	Self Diagnostic Result	Data Monitor	Active Test	Work support	Configuration	CAN Diag Support Mntr
Door lock	DOOR LOCK		×	×	×	×		
Rear window defogger	REAR DEFOGGER			×	×	×		
Warning chime	BUZZER			×	×			
Interior room lamp timer	INT LAMP			×	×	×		
Exterior lamp	HEADLAMP			×	×	×		
Wiper and washer	WIPER			×	×	×		
Turn signal and hazard warning lamps	FLASHER			×	×	×		
Air conditioner	AIR CONDITIONER			×				
Intelligent Key system	INTELLIGENT KEY		×	×	×	×		
Combination switch	COMB SW			×				
BCM	BCM	×	×			×	×	×
Immobilizer	IMMU		×	×	×			
Interior room lamp battery saver	BATTERY SAVER			×	×			
Trunk open	TRUNK			×				
Vehicle security system	THEFT ALM			×	×	×		
RAP system	RETAINED PWR			×				

System	Sub System	Direct Diagnostic Mode						
		ECU Identification	Self Diagnostic Result	Data Monitor	Active Test	Work support	Configuration	CAN Diag Support Mntr
Signal buffer system	SIGNAL BUFFER			×	×			
TPMS	AIR PRESSURE MONITOR		×	×	×			

INT LAMP

INT LAMP : CONSULT Function (BCM - INT LAMP)

INFOID:0000000012825582

CAUTION:

After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF → ON (for at least 5 seconds) → OFF. If this step is not performed, the BCM may not go to "sleep mode", potentially causing a discharged battery and a no-start condition.

DATA MONITOR

Monitor Item [Unit]	Description
REQ SW -DR [On/Off]	Indicates condition of door request switch LH.
REQ SW -AS [On/Off]	Indicates condition of door request switch RH.
PUSH -SW [On/Off]	Indicates condition of push-button ignition switch.
UNLK SEN -DR [On/Off]	Indicates condition of door unlock sensor.
DOOR SW-DR [On/Off]	Indicates condition of front door switch LH.
DOOR SW-AS [On/Off]	Indicates condition of front door switch RH.
DOOR SW-RR [On/Off]	Indicates condition of rear door switch RH.
DOOR SW-RL [On/Off]	Indicates condition of rear door switch LH.
DOOR SW-BK [On/Off]	Indicates condition of trunk switch.
CDL LOCK SW [On/Off]	Indicates condition of lock signal from door lock and unlock switch.
CDL UNLOCK SW [On/Off]	Indicates condition of unlock signal from door lock and unlock switch.
KEY CYL LK-SW [On/Off]	Indicates condition of lock signal from door key cylinder switch.
KEY CYL UN-SW [On/Off]	Indicates condition of unlock signal from door key cylinder switch.
TRNK/HAT MNTR [On/Off]	Indicates condition of trunk room lamp switch.
RKE-LOCK [On/Off]	Indicates condition of lock signal from Intelligent Key.
RKE-UNLOCK [On/Off]	Indicates condition of unlock signal from Intelligent Key.

ACTIVE TEST

Test Item	Description
INT LAMP	This test is able to check interior room lamp operation [On/Off].
STEP LAMP TEST	This test is able to check step lamp operation [On/Off].

WORK SUPPORT

NOTE:

The items listed below are the only applicable Work Support items for this vehicle. If other items are displayed on CONSULT, do not use or change the setting for these other items.

Support Item	Setting	Description
SCENARIO LIGHTING SETTING	On	**NOTE:** Do not use this function since interior room lamp control is changed.
	Off*	
SET I/L D-UNLCK INTCON	On	Interior room lamp timer function ON.
	Off*	Interior room lamp timer function OFF.
FOG LAMP OVERRIDE	On*	Fog lamp override function ON.
	Off	Fog lamp override function OFF.

* : Initial setting

BATTERY SAVER

BATTERY SAVER : CONSULT Function (BCM - BATTERY SAVER)

INFOID:0000000012825583

CAUTION:

After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF → ON (for at least 5 seconds) → OFF. If this step is not performed, the BCM may not go to "sleep mode", potentially causing a discharged battery and a no-start condition.

DATA MONITOR

Monitor Item [Unit]	Description
REQ SW -DR [On/Off]	Indicates condition of door request switch LH.
REQ SW -AS [On/Off]	Indicates condition of door request switch RH.
PUSH SW [On/Off]	Indicates condition push-button ignition switch.
UNLK SEN -DR [On/Off]	Indicates condition of door unlock sensor.
DOOR SW-DR [On/Off]	Indicates condition of front door switch LH.
DOOR SW-AS [On/Off]	Indicates condition of front door switch RH.
DOOR SW-RR [On/Off]	Indicates condition of rear door switch RH.
DOOR SW-RL [On/Off]	Indicates condition of rear door switch LH.
DOOR SW-BK [On/Off]	Indicates condition of trunk switch.
CDL LOCK SW [On/Off]	Indicates condition of lock signal from door lock and unlock switch.
CDL UNLOCK SW [On/Off]	Indicates condition of unlock signal from door lock and unlock switch.
KEY CYL LK-SW [On/Off]	Indicates condition of lock signal from door key cylinder switch.
KEY CYL UN-SW [On/Off]	Indicates condition of unlock signal from door key cylinder switch.
TRNK/HAT MNTR [On/Off]	Indicates condition of trunk room lamp switch.
RKE-LOCK [On/Off]	Indicates condition of lock signal from Intelligent Key.
RKE-UNLOCK [On/Off]	Indicates condition of unlock signal from Intelligent Key.

ACTIVE TEST

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

INTELLIGENT KEY

INTELLIGENT KEY : CONSULT Function (BCM - INTELLIGENT KEY)

INFOID:0000000012825584

CAUTION:

After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF → ON (for at least 5 seconds) → OFF. If this step is not performed, the BCM may not go to "sleep mode", potentially causing a discharged battery and a no-start condition.

SELF DIAGNOSTIC RESULT

Refer to BCS-52, "DTC Index".

DATA MONITOR

Monitor Item [Unit]	Main	Description
REQ SW -DR [On/Off]	×	Indicates condition of door request switch LH.
REQ SW -AS [On/Off]	×	Indicates condition of door request switch RH.
REQ SW -BD/TR [On/Off]	×	Indicates condition of trunk opener request switch.
PUSH SW [On/Off]		Indicates condition of push-button ignition switch.
SHFTLCK SLNID PER SPLY [On/Off]	×	Indicates condition of power supply to shift lock solenoid.
BRAKE SW 1 [On/Off]	×	Indicates condition of brake switch.
BRAKE SW 2 [On/Off]		Indicates condition of brake switch.
DETE/CANCL SW [On/Off]	×	Indicates condition of P (park) position.
SFT PN/N SW [On/Off]	×	Indicates condition of P (park) or N (neutral) position.
UNLK SEN -DR [On/Off]	×	Indicates condition of door unlock sensor.
PUSH SW -IPDM [On/Off]		Indicates condition of push-button ignition switch received from IPDM E/R on CAN communication line.
IGN RLY1 -F/B [On/Off]		Indicates condition of ignition relay 1 received from IPDM E/R on CAN communication line.
DETE SW -IPDM [On/Off]		Indicates condition of detent switch received from TCM on CAN communication line.
SFT PN -IPDM [On/Off]		Indicates condition of P (park) or N (neutral) position from TCM on CAN communication line.
SFT P -MET [On/Off]		Indicates condition of P (park) position from TCM on CAN communication line.
SFT N -MET [On/Off]		Indicates condition of N (neutral) position from IPDM E/R on CAN communication line.
ENGINE STATE [STOP/START/CRANK/RUN]	×	Indicates condition of engine state from ECM on CAN communication line.
VEH SPEED 1 [mph/km/h]	×	Indicates condition of vehicle speed signal received from ABS on CAN communication line.
VEH SPEED 2 [mph/km/h]	×	Indicates condition of vehicle speed signal received from combination meter on CAN communication line.
DOOR STAT -DR [LOCK/READY/UNLK]	×	Indicates condition of driver side door status.
DOOR STAT -AS [LOCK/READY/UNLK]	×	Indicates condition of passenger side door status.
DOOR STAT -RR [LOCK/READY/UNLK]	×	Indicates condition of rear right side door status.
DOOR STAT -RL [LOCK/READY/UNLK]	×	Indicates condition of rear left side door status.
ID OK FLAG [Set/Reset]		Indicates condition of Intelligent Key ID.
PRMT ENG STRT [Set/Reset]		Indicates condition of engine start possibility.
PRMT RKE STRT [Set/Reset]		Indicates condition of engine start possibility from Intelligent Key.
I-KEY OK FLAG [Key ON/Key OFF]	×	Indicates condition of Intelligent Key OK flag.
PRBT ENG STRT [Set/Reset]		Indicates condition of engine start prohibit.
ID AUTHENT CANCEL TIMER [STOP]		Indicates condition of Intelligent Key ID authentication.
ACC BATTERY SAVER [STOP]		Indicates condition of battery saver.
CRNK PRBT TMR [On/Off]		Indicates condition of crank prohibit timer.
AUT CRNK TMR [On/Off]		Indicates condition of automatic engine crank timer from Intelligent Key.
CRNK PRBT TME [sec]		Indicates condition of engine crank prohibit time.
AUT CRNK TME [sec]		Indicates condition of automatic engine crank time from Intelligent Key.
CRANKING TME [sec]		Indicates condition of engine cranking time from Intelligent Key.

< SYSTEM DESCRIPTION >

Monitor Item [Unit]	Main	Description
ST RLY -REQ [On/Off]		Indicates condition of starter relay.
IGN RLY 1 -REQ [On/Off]		Indicates condition of ignition 1 relay.
IGN RLY 2 -REQ [On/Off]		Indicates condition of ignition 2 relay.
DETE SW PWR [On/Off]		Indicates condition of detent switch voltage.
ACC RLY -REQ [On/Off]		Indicates condition of accessory relay control request.
RKE OPE COUN1 [0-19]	×	When remote keyless entry receiver receives the signal transmitted while operating on Intelligent Key, the numerical value start changing.
RKE OPE COUN2 [0-19]	×	When remote keyless entry receiver receives the signal transmitted while operating on Intelligent Key, the numerical value start changing.
TRNK/HAT MNTR [On/Off]		Indicates condition of trunk room lamp switch.
RKE-LOCK [On/Off]		Indicates condition of lock signal from Intelligent Key.
RKE-UNLOCK [On/Off]		Indicates condition of unlock signal from Intelligent Key.
RKE-TR/BD [On/Off]		Indicates condition of trunk open signal from Intelligent Key.
RKE-PANIC [On/Off]		Indicates condition of panic signal from Intelligent Key.
RKE-MODE CHG [On/Off]		Indicates condition of mode change signal from Intelligent Key.

ACTIVE TEST

Test Item	Description
INTELLIGENT KEY LINK (CAN)	This test is able to check Intelligent Key identification number [Off/ID No1/ID N02/ID No3/ID No4/ID No5].
INT LAMP	This test is able to check interior room lamp operation [On/Off].
FLASHER	This test is able to check hazard lamp operation [LH/RH/Off].
HORN	This test is able to check horn operation [On].
BATTERY SAVER	This test is able to check battery saver operation [On/Off].
TRUNK/BACK DOOR	This test is able to check trunk actuator operation [Open].
OUTSIDE BUZZER	This test is able to check Intelligent Key warning buzzer operation [On/Off].
INSIDE BUZZER	This test is able to check combination meter warning chime operation [Take Out/Knob/Key/Off].
INDICATOR	This test is able to check combination meter warning lamp operation [KEY ON/KEY IND/Off].
IGN CONT2	This test is able to check ignition relay-2 control operation [On/Off].
ENGINE SW ILLUMI	This test is able to check push-button ignition switch START indicator operation [On/Off].
PUSH SWITCH INDICATOR	This test is able to check push-button ignition switch indicator operation [On/Off].
ACC CONT	This test is able to check accessory relay control operation [On/Off].
IGN CONT1	This test is able to check ignition relay-1 control operation [On/Off].
ST CONT LOW	This test is able to check starter control relay operation [On/Off].
IGNITION RELAY	This test is able to ignition relay operation [On/Off].
REVERSE LAMP TEST	This test is able to check reverse lamp illumination operation [On/Off].
DR SEAT LAMP TEST	This test is able to check driver seat lamp illumination operation [On/Off].
AS SEAT LAMP TEST	This test is able to check passenger seat lamp illumination operation [On/Off].
SHIFT SPOT LAMP TEST	This test is able to check shift spot lamp illumination operation [On/Off].
TRUNK/LUGGAGE LAMP TEST	This test is able to check cargo lamp illumination operation [On/Off].
KEYFOB PW TEST	This test is able to check power window operation using the Intelligent Key [Off/DOWN/UP].
SHIFTLOCK SOLENOID TEST	This test is able to check shift lock solenoid operation [On/Off].

WORK SUPPORT

Support Item	Setting		Description
IGN/ACC BATTERY SAVER	On*		Battery saver function ON.
	Off		Battery saver function OFF.
REMOTE ENGINE STARTER	On*		Remote engine start function ON.
	Off		Remote engine start function OFF.
ANSWER BACK I-KEY LOCK UNLOCK	BUZZER		Buzzer reminder function by door lock/unlock request switch ON.
	HORN		Horn chirp reminder function by door lock request switch ON.
	Off*		No reminder function by door lock/unlock request switch.
	INVALID		This mode is not used.
ANSWERBACK KEYLESS LOCK UNLOCK	On		Buzzer or horn chirp reminder when doors are locked/unlocked with Intelligent Key.
	Off*		No buzzer or horn chirp reminder when doors are locked/unlocked with Intelligent Key.
ANSWER BACK	On*		Horn chirp reminder when doors are locked with Intelligent Key.
	Off		No horn chirp reminder when doors are locked with Intelligent Key.
RETRACTABLE MIRROR SET	On		Retractable mirror set ON.
	Off*		Retractable mirror set OFF.
CONFIRM KEY FOB ID	—		Intelligent Key ID code can check.
LOCK/UNLOCK BY I-KEY	On*		Door lock/unlock function from Intelligent Key ON.
	Off		Door lock/unlock function from Intelligent Key OFF.
ENGINE START BY I-KEY	On*		Engine start function from Intelligent Key ON.
	Off		Engine start function from Intelligent Key OFF.
TRUNK/GLASS HATCH OPEN	On*		Buzzer reminder function by trunk opener request switch ON.
	Off		Buzzer reminder function by trunk opener request switch OFF.
INTELLIGENT KEY LINK SET	On		Intelligent Key link set ON.
	Off*		Intelligent Key link set OFF.
SHORT CRANKING OUTPUT	Start	70 msec	Starter motor operation duration times.
		100 msec	
		200 msec	
	End		—
INSIDE ANT DIAGNOSIS	—		This function allows inside key antenna self-diagnosis.
AUTO LOCK SET	MODE7	5 min	Auto door lock time can be set in this mode.
	MODE6	4 min	
	MODE5	3 min	
	MODE4	2 min	
	MODE3*	1 min	
	MODE2	30 sec	
	MODE1	Off	

*: Initial Setting

DIAGNOSIS SYSTEM (IPDM E/R)

Diagnosis Description

INFOID:0000000012825586

AUTO ACTIVE TEST

Description

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

- Front wiper (LO, HI)
- Front fog lamps (if equipped)
- Parking lamps
- Side marker lamps
- Tail lamps
- License plate lamps
- Daytime running lamps
- Headlamps (LO, HI)
- A/C compressor
- Cooling fans (LO, HI)

Operation Procedure

CAUTION:

Do not start the engine.

NOTE:

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

NOTE:

- If auto active test mode cannot be actuated, check door switch system. Refer to DLK-99, "Component Function Check".
- When auto active test mode has to be cancelled halfway through test, turn ignition switch OFF.

1. Close the hood and lift the wiper arms from the windshield. (Prevent windshield damage due to wiper operation)
2. Turn ignition switch OFF.
3. Turn the ignition switch ON, and within 20 seconds, press the front door switch LH 10 times. Then turn the ignition switch OFF.
4. Turn the ignition switch ON within 10 seconds. After that the horn sounds once, and the auto active test starts.
5. After a series of the following operations is repeated 3 times, auto active test is completed.

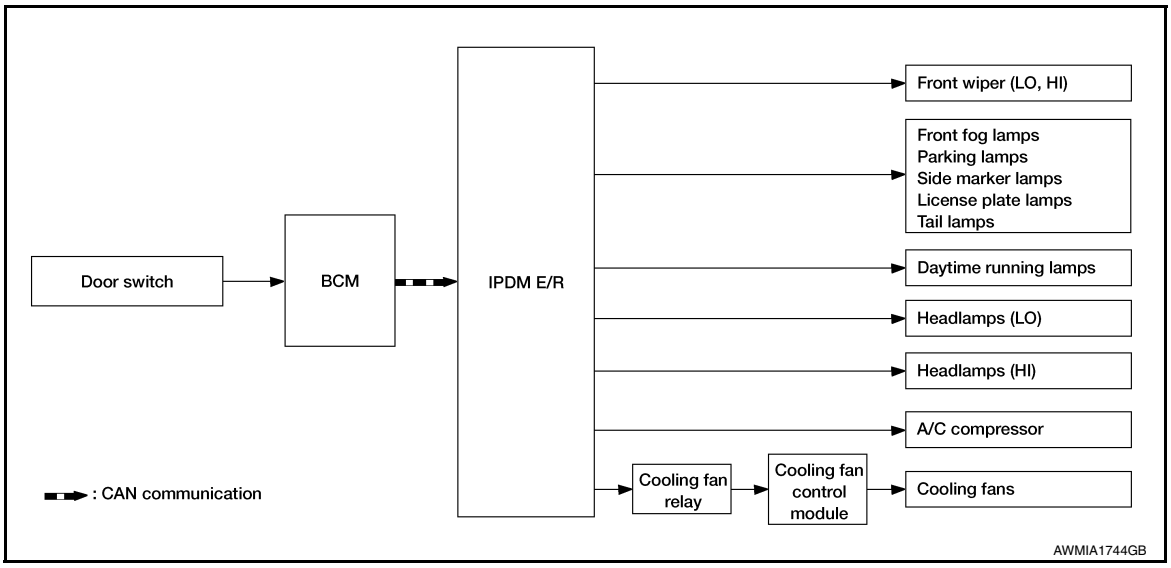
Inspection in Auto Active Test Mode

When auto active test mode is actuated, the following operation sequence is repeated 3 times.

Operation sequence	Inspection Location	Operation
1	Front wiper	LO for 3 seconds → HI for 3 seconds
2	• Front fog lamps (if equipped) • Parking lamps • Side marker lamps • Tail lamps • License plate lamps	10 seconds
3	Daytime running lamps	10 seconds
4	Headlamps	LO ⇔ HI 5 times
5	A/C compressor	ON ⇔ OFF 5 times
6*	Cooling fans	LO for 5 seconds → HI for 5 seconds

*: Outputs duty ratio of 50% for 5 seconds → duty ratio of 100% for 5 seconds on the cooling fan control module.

Concept of auto active test



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

Diagnosis chart in auto active test mode

Symptom	Inspection contents		Possible cause
Any of the following components do not operate • Front fog lamps (if equipped) • Parking lamps • Side marker lamps • License plate lamps • Tail lamps • Daytime running lamps • Headlamp (HI, LO) • Front wiper	Perform auto active test. Does the applicable system operate?	YES	BCM signal input circuit
		NO	• Lamp or motor • Lamp or motor ground circuit • Harness or connector between IPDM E/R and applicable system • IPDM E/R
Cooling fans do not operate	Perform auto active test. Do the cooling fans operate?	YES	• ECM signal input circuit • CAN communication signal between ECM and IPDM E/R
		NO	• Cooling fans • Harness or connectors between cooling fans and cooling fan control module • Cooling fan control module • Harness or connectors between cooling fan relay and cooling fan control module • Cooling fan relay • Harness or connectors between IPDM E/R and cooling fan relay • IPDM E/R

CONSULT Function (IPDM E/R)

INFOID:0000000012825587

CAUTION:

After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF → ON (for at least 5 seconds) → OFF. If this step is not performed, the BCM may not go to "sleep mode", potentially causing a discharged battery and a no-start condition.

APPLICATION ITEM

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

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

ECU IDENTIFICATION

The IPDM E/R part number is displayed.

SELF DIAGNOSTIC RESULT

Refer to PCS-21, "DTC Index".

DATA MONITOR

Monitor Item [Unit]	Main Signals	Description
MOTOR FAN REQ [1/2/3/4]	×	Indicates cooling fan speed signal received from ECM on CAN communication line
AC COMP REQ [On/Off]	×	Indicates A/C compressor request signal received from ECM on CAN communication line
TAIL&CLR REQ [On/Off]	×	Indicates position light request signal received from BCM on CAN communication line
HL LO REQ [On/Off]	×	Indicates low beam request signal received from BCM on CAN communication line
HL HI REQ [On/Off]	×	Indicates high beam request signal received from BCM on CAN communication line
FR FOG REQ [On/Off]	×	Indicates front fog light request signal received from BCM on CAN communication line
FR WIP REQ [Stop/1LOW/Low/Hi]	×	Indicates front wiper request signal received from BCM on CAN communication line
WIP AUTO STOP [STOP P/ACT P]	×	Indicates condition of front wiper auto stop signal
WIP PROT [Off/BLOCK]	×	Indicates condition of front wiper fail-safe operation
IGN RLY1 -REQ [On/Off]		Indicates ignition switch ON signal received from BCM on CAN communication line
IGN RLY [On/Off]	×	Indicates condition of ignition relay
PUSH SW [On/Off]		Indicates condition of push-button ignition switch
INTER/NP SW [On/Off]		Indicates condition of CVT shift position
ST RLY CONT [On/Off]		Indicates starter relay status signal received from BCM on CAN communication line
IHBT RLY -REQ [On/Off]		Indicates starter control relay signal received from BCM on CAN communication line
ST/INHI RLY [Off/ ST /INHI]		Indicates condition of starter relay and starter control relay
DETENT SW [On/Off]		Indicates condition of CVT shift selector (park position switch)
DTRL REQ [Off]		Indicates daytime running light request signal received from BCM on CAN communication line
HOOD SW [On/Off]		Indicates condition of hood switch
THFT HRN REQ [On/Off]		Indicates theft warning horn request signal received from BCM on CAN communication line

Monitor Item [Unit]	Main Signals	Description
HORN CHIRP [On/Off]		Indicates horn reminder signal received from BCM on CAN communication line
HOOD SW 2 [On/Off]		Indicates condition of hood switch 2

ACTIVE TEST

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

CAN DIAG SUPPORT MNTR

Refer to LAN-16, "CAN Diagnostic Support Monitor".

ECU DIAGNOSIS INFORMATION

BCM, IPDM E/R

List of ECU Reference

INFOID:0000000012591878

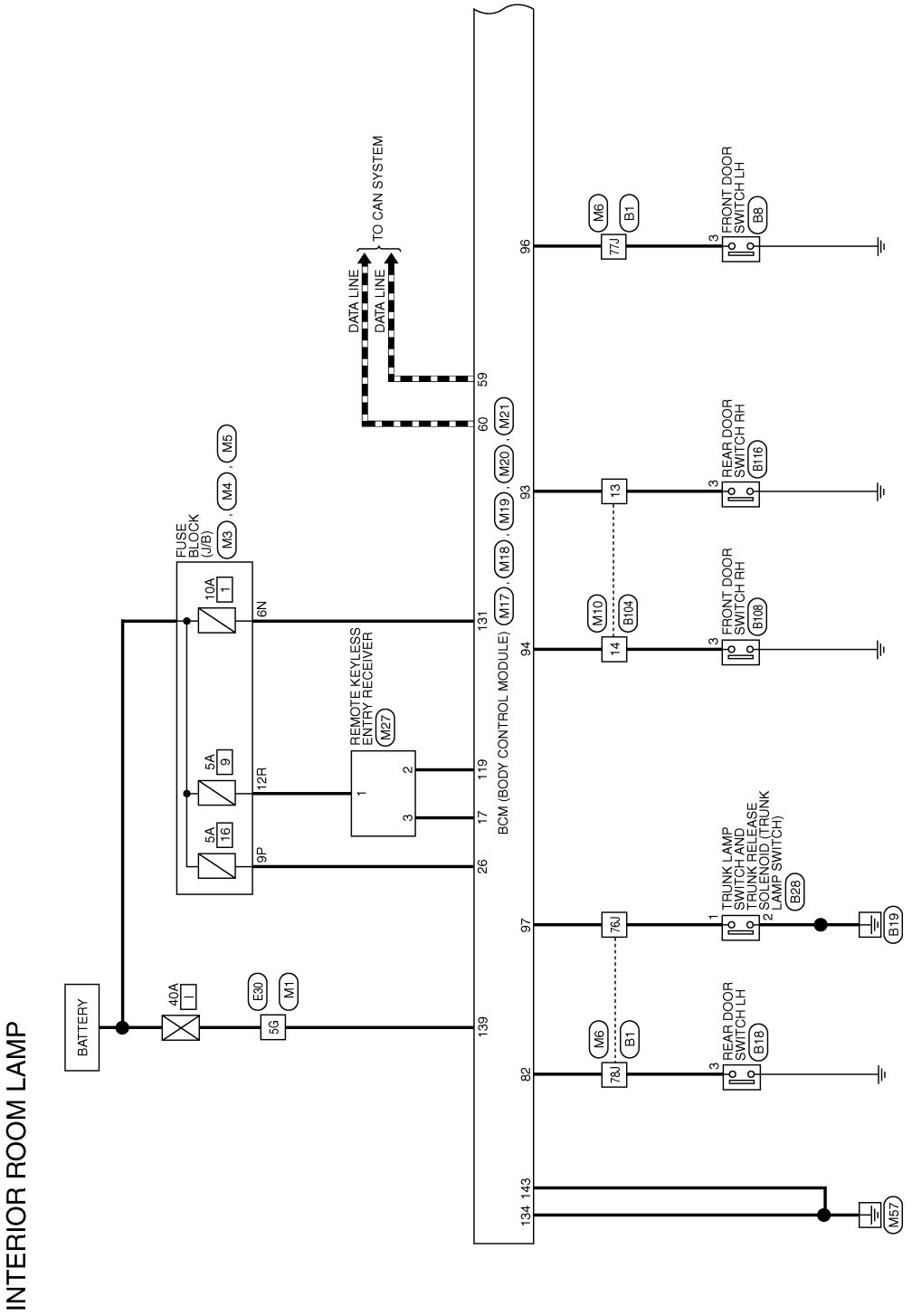
ECU	Reference
BCM	BCS-31, "Reference Value"
	BCS-50, "Fail Safe"
	BCS-51, "DTC Inspection Priority Chart"
	BCS-52, "DTC Index"
IPDM E/R	PCS-13, "Reference Value"
	PCS-20, "Fail Safe"
	PCS-21, "DTC Index"

WIRING DIAGRAM

INTERIOR ROOM LAMP

Wiring Diagram

INFOID:0000000012591879



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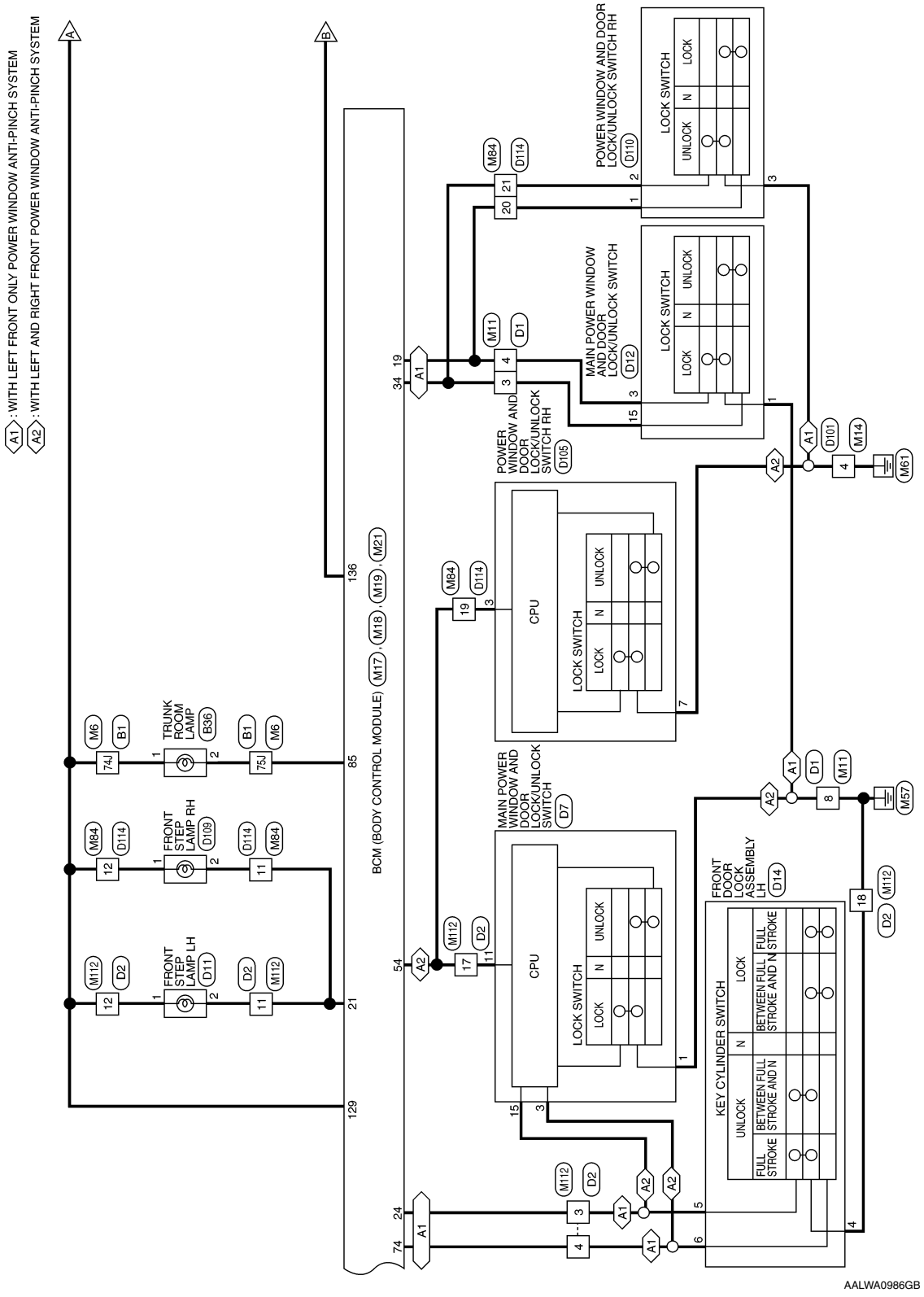
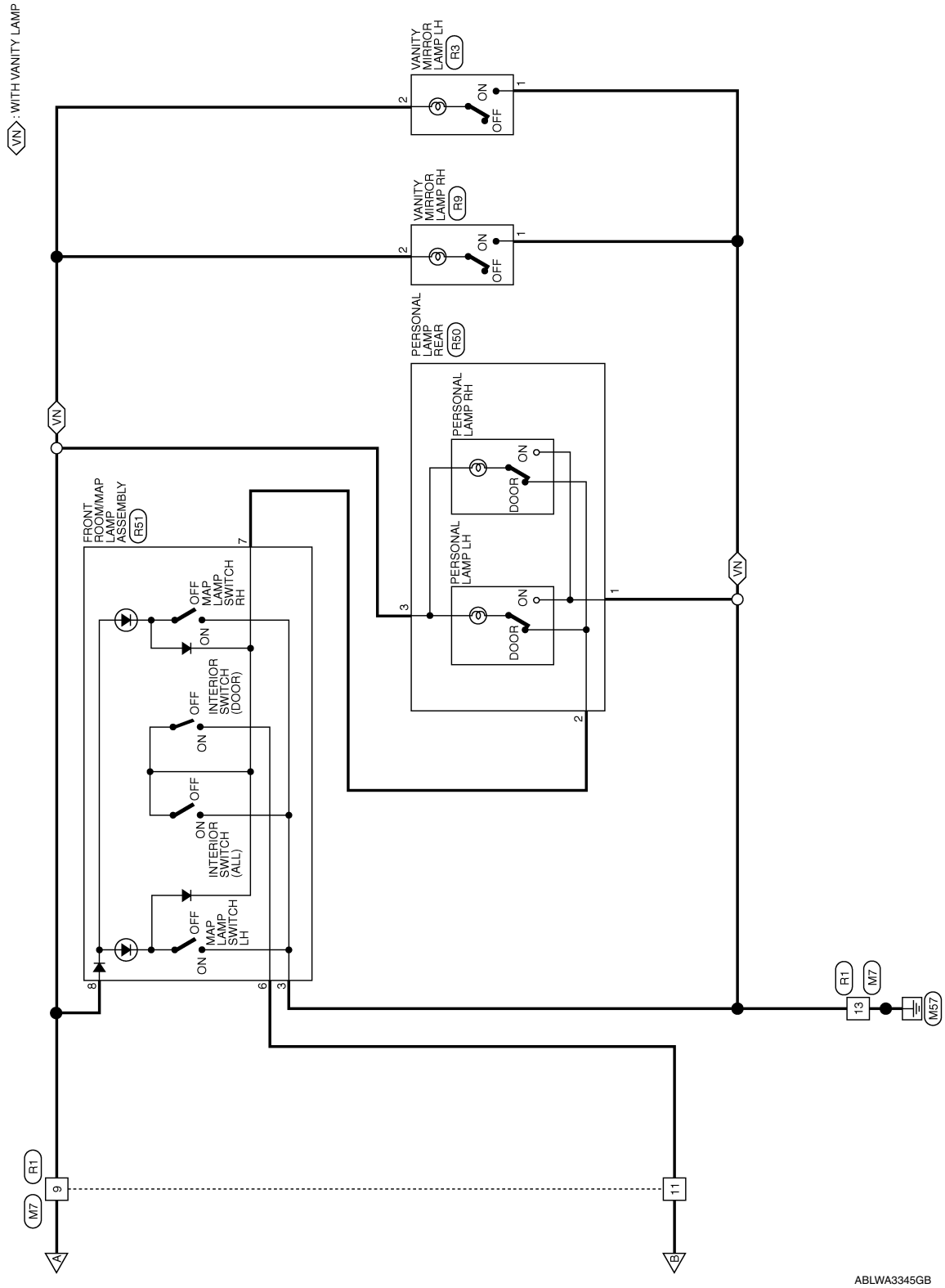
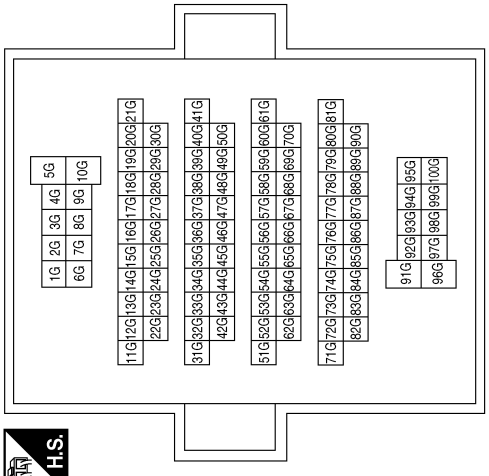

A1 : WITH LEFT FRONT ONLY POWER WINDOW ANTI-PINCH SYSTEM
A2 : WITH LEFT AND RIGHT FRONT POWER WINDOW ANTI-PINCH SYSTEM
BCM (BODY CONTROL MODULE) (M17), (M18), (M19), (M21)
TRUNK ROOM LAMP B36
FRONT STEP LAMP RH D109
FRONT STEP LAMP LH D11
MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH D7
POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH D105
MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH D12
POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH D110
FRONT DOOR LOCK ASSEMBLY LH D14
KEY CYLINDER SWITCH
LOCK SWITCH
CPU
UNLOCK
LOCK
N
FULL STROKE
BETWEEN FULL STROKE AND N
BETWEEN FULL STROKE AND N STROKE
AALWA0986GB


VN : WITH VANITY LAMP
VANITY MIRROR LAMP LH
R3
VANITY MIRROR LAMP RH
R9
PERSONAL LAMP REAR
R50
PERSONAL LAMP RH
PERSONAL LAMP LH
DOOR
ON
OFF
VN
FRONT ROOM/MAP LAMP ASSEMBLY
R51
OFF
MAP LAMP SWITCH RH
ON
INTERIOR SWITCH (DOOR)
INTERIOR SWITCH (ALL)
MAP LAMP SWITCH LH
R1
M7
13
M57
9
11
A
B
ABLWA3345GB

INTERIOR ROOM LAMP CONNECTORS

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

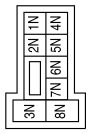
H.S.



Terminal No.	Color of Wire	Signal Name
5G	W	–

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

H.S.



Terminal No.	Color of Wire	Signal Name
6N	W	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
12R	W	–

Connector No.	M5
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
9P	Y	–

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

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	81J
	82J	83J	84J	85J	86J	87J	88J	89J	90J	

91J	92J	93J	94J	95J
	96J	97J	98J	99J	100J

Terminal No.	Color of Wire	Signal Name
74J	G	–
75J	BG	–
76J	SB	–
77J	BR	–
78J	Y	–

Connector No.	M7
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	G	–
11	P	–
13	GR	–

Connector No.	M10
Connector Name	WIRE TO WIRE
Connector Color	BROWN

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
13	V	–
14	SB	–

Connector No.	M11
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
3	R	–
4	G	–
8	B	–

Connector No.	M14
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1	2		3
4	5	6	7	8

Terminal No.	Color of Wire	Signal Name
4	GR	–

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Connector No.	M17
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GREEN

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
17	B	GND RF A/L
19	G	CENTRAL DOOR LOCK SW
21	W	STEP LAMP CONT
24	G	DOOR KEY/C UNLOCK SW
26	Y	SHORTING IN PIN INPUT
34	BG	CENTRAL DOOR UNLOCK SW

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

H.S.

60	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41
80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61

Terminal No.	Color of Wire	Signal Name
54	P	PW LIN
59	P	CAN-L
60	L	CAN-H
74	P	DOOR KEY/C LOCK SW

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

H.S.

92	91	90	89	88	87	86	85	84	83	82	81
104	103	102	101	100	99	98	97	96	95	94	93

Terminal No.	Color of Wire	Signal Name
82	Y	RL DOOR SW
85	BG	TRUNK LAMP CONT
93	V	RR DOOR SW
94	SB	AS DOOR SW
96	BR	DR DOOR SW
97	SB	TRUNK SW

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

H.S.

116	115	114	113	112	111	110	109	108	107	106	105
128	127	126	125	124	123	122	121	120	119	118	117

Terminal No.	Color of Wire	Signal Name
119	G	RF NIMOCO

Connector No.	M21
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE

H.S.

137	136	135	134	133	132	131	130	129
143	142	141	140	139	138			

Terminal No.	Color of Wire	Signal Name
129	G	BATTERY SAVER OUT
131	W	BAT BCM FUSE
134	B	GND2
136	P	ROOM LAMP CONT
139	W	BAT POWER F/L
143	B	GND1

Connector No.	M27
Connector Name	REMOTE KEYLESS ENTRY RECEIVER
Connector Color	BLACK

H.S.

1	2	3	4

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

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Connector No.	M84
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
11	W	–
12	G	–
19	P	–
20	BG	–
21	G	–

Connector No.	M112
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

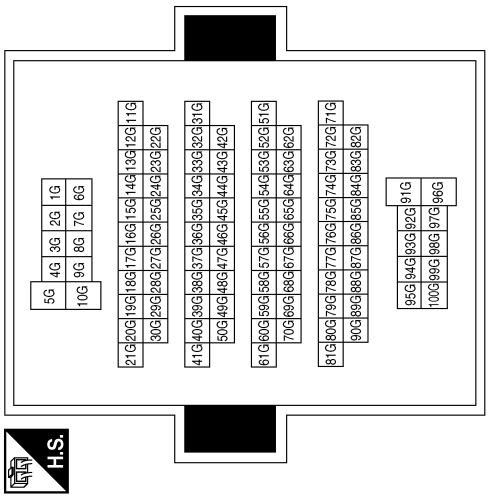
1	2	3	4	5	6	7	8	9	10	11	12
13	14	15	16	17	18	19	20	21	22	23	24

Terminal No.	Color of Wire	Signal Name
3	G	–
4	P	–
11	W	–
12	G	–
17	P	–

Terminal No.	Color of Wire	Signal Name
18	B	–

Connector No.	E30
Connector Name	WIRE TO WIRE
Connector Color	WHITE

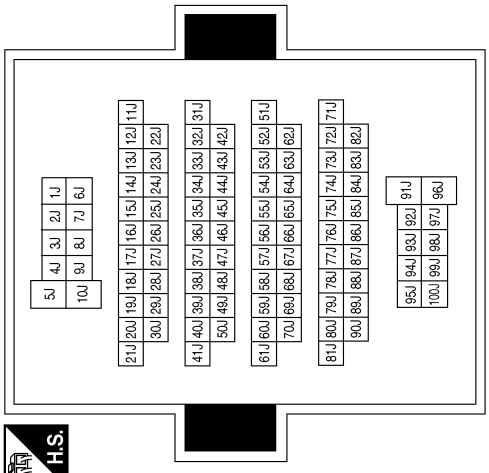
H.S.



Terminal No.	Color of Wire	Signal Name
5G	P	–

Connector No.	B1
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.



Terminal No.	Color of Wire	Signal Name
74J	P	–
75J	BG	–
76J	W	–
77J	L	–
78J	LG	–

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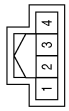
Connector No.	B8
Connector Name	FRONT DOOR SWITCH LH
Connector Color	WHITE

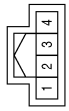
H.S.



Terminal No.	Color of Wire	Signal Name
3	L	–

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

H.S.



Terminal No.	Color of Wire	Signal Name
3	LG	–

Connector No.	B28
Connector Name	TRUNK LAMP SWITCH AND TRUNK RELEASE SOLENOID
Connector Color	WHITE

H.S.

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

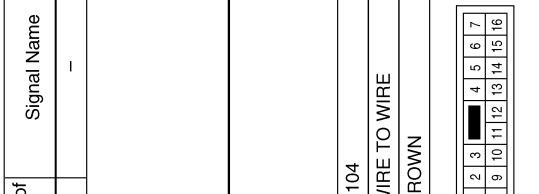
Connector No.	B36
Connector Name	TRUNK ROOM LAMP
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	P	–
2	BG	–

Connector No.	B104
Connector Name	WIRE TO WIRE
Connector Color	BROWN

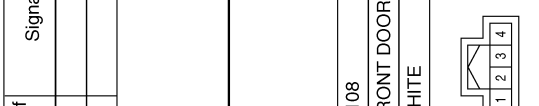
H.S.



Terminal No.	Color of Wire	Signal Name
13	V	–
14	L	–

Connector No.	B108
Connector Name	FRONT DOOR SWITCH RH
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
3	L	–

ABLIA8287GB

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

H.S.

Terminal No.	Color of Wire	Signal Name
3	V	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
9	B/W	–
11	R	–
13	B	–

Connector No.	R3
Connector Name	VANITY MIRROR LAMP LH
Connector Color	WHITE

H.S.

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

Connector No.	R9
Connector Name	VANITY MIRROR LAMP RH
Connector Color	WHITE

H.S.

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

Connector No.	R50
Connector Name	PERSONAL LAMP REAR
Connector Color	WHITE

H.S.

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

Connector No.	R51
Connector Name	FRONT ROOM/MAP LAMP ASSEMBLY
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
3	B	–
6	R	–
7	W/L	–
8	B/W	–

ABLIA8288GB

Connector No.	D1
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
3	R	–
4	G	–
8	B	–

Connector No.	D2
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
3	G	–
4	P	–
11	G	–
12	W	–
17	P	–
18	B	–

Connector No.	D7
Connector Name	MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH (WITH LEFT AND RIGHT FRONT POWER WINDOW ANTI-PINCH SYSTEM)
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	B	GND
3	P	KEY CYLINDER LOCK
11	P	COM
15	G	KEY CYLINDER UNLOCK

Connector No.	D11
Connector Name	FRONT STEP LAMP LH
Connector Color	WHITE

H.S.

2	1

Terminal No.	Color of Wire	Signal Name
1	W	–
2	G	–

Connector No.	D12
Connector Name	MAIN POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH (WITH LEFT FRONT ONLY POWER WINDOW ANTI-PINCH SYSTEM)
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	B	GND
3	G	LOCK SW
15	R	UNLOCK SW

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

H.S.

1	2	3	4	5	6

Terminal No.	Color of Wire	Signal Name
4	B	–
5	G	–
6	P	–

ABLIA8289GB

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

H.S.

3		2	1
8	7	6	5	4

Terminal No.	Color of Wire	Signal Name
4	B	–

Connector No.	D105
Connector Name	POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH (WITH LEFT AND RIGHT POWER WINDOW ANTI-PINCH SYSTEM)
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
3	P	COM
7	B	GND

Connector No.	D109
Connector Name	FRONT STEP LAMP RH
Connector Color	WHITE

H.S.

2	1

Terminal No.	Color of Wire	Signal Name
1	W	–
2	G	–

Connector No.	D110
Connector Name	POWER WINDOW AND DOOR LOCK/UNLOCK SWITCH RH (WITH LEFT FRONT ONLY POWER WINDOW ANTI-PINCH SYSTEM)
Connector Color	WHITE

H.S.

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

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

Connector No.	D114
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
11	G	–
12	W	–
19	P	–
20	BG	–
21	G	–

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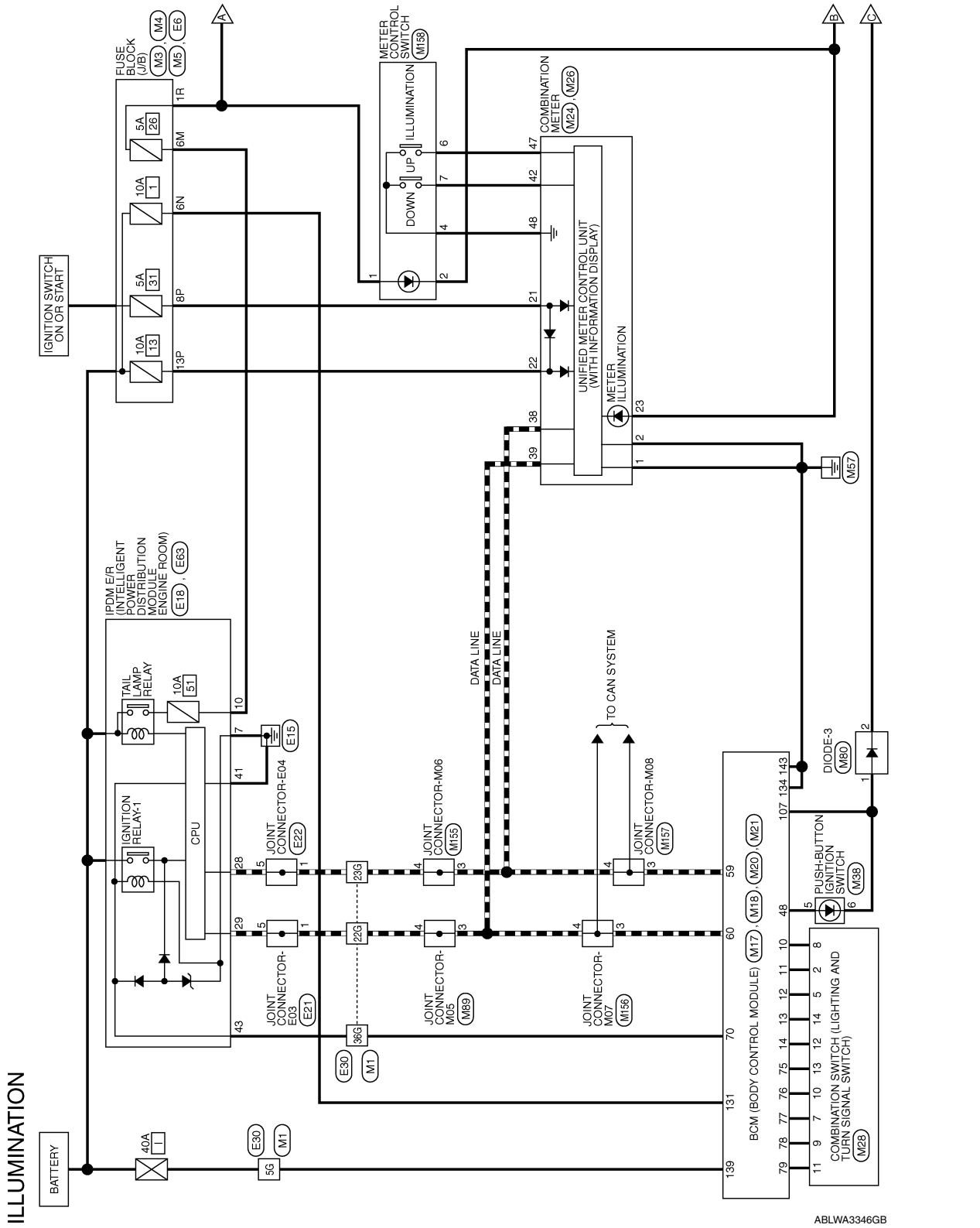
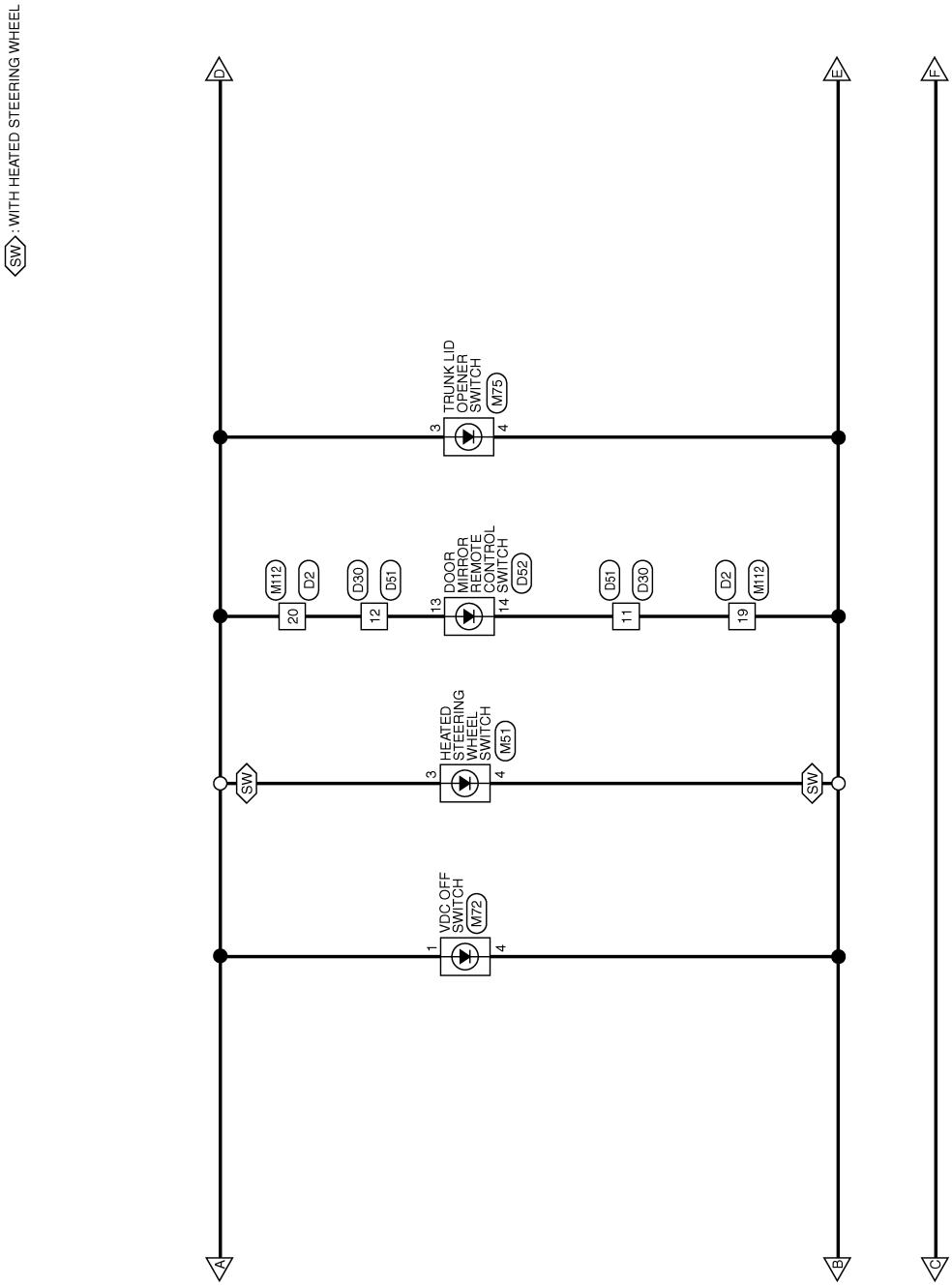
< WIRING DIAGRAM >

ILLUMINATION

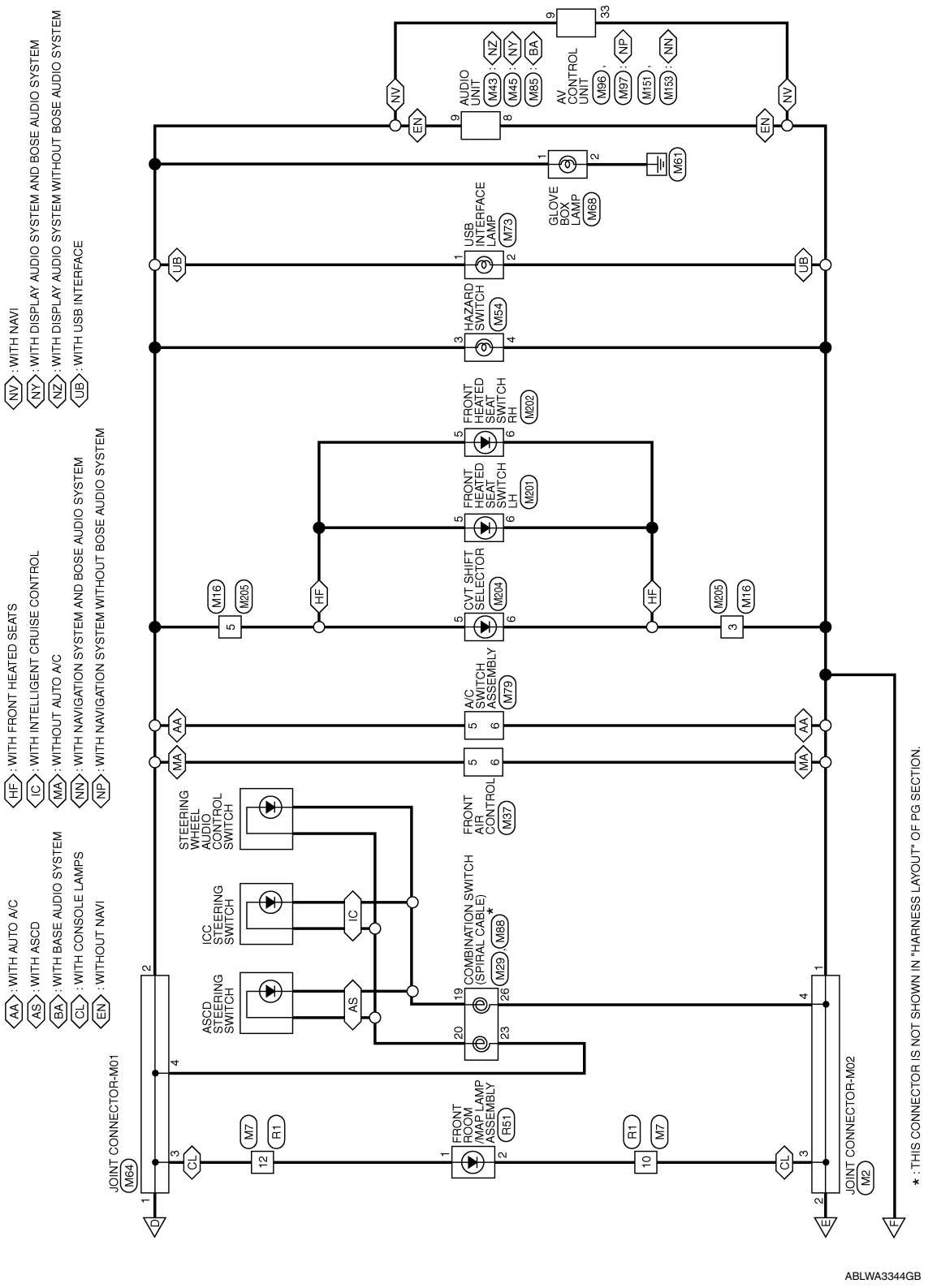
Wiring Diagram

INFOID:0000000012591880





ABLWA3343GB


NV : WITH NAVI
NY : WITH DISPLAY AUDIO SYSTEM AND BOSE AUDIO SYSTEM
NZ : WITH DISPLAY AUDIO SYSTEM WITHOUT BOSE AUDIO SYSTEM
UB : WITH USB INTERFACE
HF : WITH FRONT HEATED SEATS
IC : WITH INTELLIGENT CRUISE CONTROL
MA : WITHOUT AUTO A/C
NN : WITH NAVIGATION SYSTEM AND BOSE AUDIO SYSTEM
NP : WITH NAVIGATION SYSTEM WITHOUT BOSE AUDIO SYSTEM
AA : WITH AUTO A/C
AS : WITH ASCD
BA : WITH BASE AUDIO SYSTEM
CL : WITH CONSOLE LAMPS
EN : WITHOUT NAVI
AUDIO UNIT M43 M45 M85
AV CONTROL UNIT M96 M97 M151 M153
GLOVE BOX LAMP M68
USB INTERFACE LAMP M73
HAZARD SWITCH M54
FRONT HEATED SEAT SWITCH RH M202
FRONT HEATED SEAT SWITCH LH M201
CVT SHIFT SELECTOR M204
A/C SWITCH ASSEMBLY M79
FRONT AIR CONTROL M37
STEERING WHEEL AUDIO CONTROL SWITCH
ICC STEERING SWITCH
ASCD STEERING SWITCH
COMBINATION SWITCH (SPIRAL CABLE)* M29 M88
FRONT ROOM /MAP LAMP ASSEMBLY R51
JOINT CONNECTOR-M01 M64
JOINT CONNECTOR-M02 M2
M61
M16 M205
M205 M16
M7 R1
R1 M7
* : THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT" OF PG SECTION.
ABLWA3344GB

ILLUMINATION CONNECTORS

Connector No.	M1
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	81G
	82G	83G	84G	85G	86G	87G	88G	89G	90G	

91G	92G	93G	94G	95G
96G	97G	98G	99G	100G

Terminal No.	Color of Wire	Signal Name
5G	W	–
22G	L	–
23G	P	–
36G	G	–

Connector No.	M2
Connector Name	JOINT CONNECTOR-M02
Connector Color	WHITE

H.S.

4	3	2	1

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

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
6N	W	–

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

H.S.

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

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

Connector No.	M5
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	BR	–
13P	G	–

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Connector No.	M7
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	B	–
12	R	–

Connector No.	M16
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
3	GR	–
5	R	–

Connector No.	M17
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GREEN

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
10	W	COMBI SW IN 5
11	BG	COMBI SW IN 4
12	W	COMBI SW IN 3
13	G	COMBI SW IN 2
14	P	COMBI SW IN 1

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

H.S.

60	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41
80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64	63	62	61

Terminal No.	Color of Wire	Signal Name
48	BR	HIGH SIDE START SW LED
59	P	CAN-L
60	L	CAN-H
70	G	IGN USM OUT 1
75	BG	COMBI SW OUT 5
76	W	COMBI SW OUT 4
77	R	COMBI SW OUT 3
78	P	COMBI SW OUT 2
79	G	COMBI SW OUT 1

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

H.S.

116	115	114	113	112	111	110	109	108	107	106	105
128	127	126	125	124	123	122	121	120	119	118	117

Terminal No.	Color of Wire	Signal Name
107	W	LOW SIDE START SW LED

ABLIA8279GB

Connector No.	M21
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	WHITE

H.S.

137	138	135	134	133	132	131	130	129
143	142	141	140	139		138		

Terminal No.	Color of Wire	Signal Name
131	W	BAT BCM FUSE
134	B	GND2
139	W	BAT POWER F/L
143	B	GND1

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
1	B	GND1
2	B	GND2
21	BR	IGN
22	G	BAT
23	GR	ILLUMI CONT OUT
38	P	CAN-L
39	L	CAN-H

Connector No.	M26
Connector Name	COMBINATION METER
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
42	SB	ILLUMI DOWN SW
47	Y	ILLUMI UP SW
48	G	SW GND

Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
2	BG	–
5	W	–
7	R	–
8	W	–

Connector No.	M29
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Color	YELLOW

H.S.

23	26	34
28	29	30

Terminal No.	Color of Wire	Signal Name
23	R	–
26	B	–

Terminal No.	Color of Wire	Signal Name
9	P	–
10	W	–
11	G	–
12	P	–
13	BG	–
14	G	–

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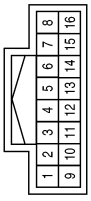
Connector No.	M37
Connector Name	FRONT AIR CONTROL (WITHOUT AUTO A/C)
Connector Color	WHITE

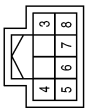
H.S.



Terminal No.	Color of Wire	Signal Name
5	R	ILL+
6	GR	ILL-

Connector No.	M38
Connector Name	PUSH-BUTTON IGNITION SWITCH
Connector Color	WHITE

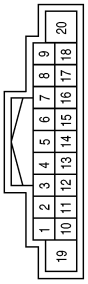
H.S.



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

Connector No.	M43
Connector Name	AUDIO UNIT (WITH DISPLAY AUDIO SYSTEM WITHOUT BOSE AUDIO SYSTEM)
Connector Color	WHITE

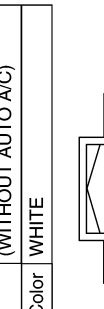
H.S.



Terminal No.	Color of Wire	Signal Name
8	GR	ILL (-)
9	R	ILL (+), LIGHT SW

Connector No.	M45
Connector Name	AUDIO UNIT (WITH DISPLAY AUDIO SYSTEM AND BOSE AUDIO SYSTEM)
Connector Color	WHITE

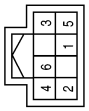
H.S.



Terminal No.	Color of Wire	Signal Name
8	GR	ILL (-)
9	R	ILL (+), LIGHT SW

Connector No.	M51
Connector Name	HEATED STEERING WHEEL SWITCH
Connector Color	BLUE

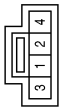
H.S.



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

Connector No.	M54
Connector Name	HAZARD SWITCH
Connector Color	WHITE

H.S.

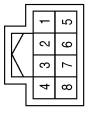


Terminal No.	Color of Wire	Signal Name
3	R	–
4	GR	–

ABLIA5181GB

Connector No.	M72
Connector Name	VDC OFF SWITCH
Connector Color	BLACK

H.S.



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

Connector No.	M68
Connector Name	GLOVE BOX LAMP
Connector Color	WHITE

H.S.

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

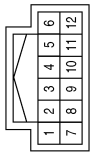
Connector No.	M64
Connector Name	JOINT CONNECTOR-M01
Connector Color	WHITE

H.S.

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

Connector No.	M79
Connector Name	A/C SWITCH ASSEMBLY
Connector Color	WHITE

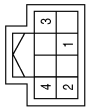
H.S.



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

Connector No.	M75
Connector Name	TRUNK LID OPENER SWITCH
Connector Color	GREEN

H.S.



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

Connector No.	M73
Connector Name	USB INTERFACE LAMP
Connector Color	WHITE

H.S.

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

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Connector No.	M80
Connector Name	DIODE-3
Connector Color	BLACK

H.S.

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

Connector No.	M85
Connector Name	AUDIO UNIT (WITH BASE AUDIO SYSTEM)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
8	GR	ILLUMINATION GND
9	R	ILL+, LIGHT SW

Connector No.	M88
Connector Name	COMBINATION SWITCH (SPIRAL CABLE)
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
19	Y	–
20	R	–

Connector No.	M89
Connector Name	JOINT CONNECTOR-M05
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
3	L	–
4	L	–

Connector No.	M96
Connector Name	AV CONTROL UNIT (WITH NAVIGATION SYSTEM WITHOUT BOSE AUDIO SYSTEM)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
9	R	ILL (+), LIGHT SW

Connector No.	M97
Connector Name	AV CONTROL UNIT (WITH NAVIGATION SYSTEM WITHOUT BOSE AUDIO SYSTEM)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
33	GR	ILL (-)

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Connector No.	M153
Connector Name	AV CONTROL UNIT (WITH NAVIGATION SYSTEM WITH BOSE AUDIO SYSTEM)
Connector Color	WHITE

H.S.

21	22	23	24	25	26	27	28	29	30	31	32
33	34	35	36	37	38	39	40	41	42	43	44

Terminal No.	Color of Wire	Signal Name
33	GR	ILL (-)

Connector No.	M151
Connector Name	AV CONTROL UNIT (WITH NAVIGATION SYSTEM WITH BOSE AUDIO SYSTEM)
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

Terminal No.	Color of Wire	Signal Name
9	R	ILL (+), LIGHT SW

Connector No.	M157
Connector Name	JOINT CONNECTOR-M08
Connector Color	WHITE

H.S.

4	3	2	1

Terminal No.	Color of Wire	Signal Name
3	P	–
4	P	–

Connector No.	M156
Connector Name	JOINT CONNECTOR-M07
Connector Color	WHITE

H.S.

4	3	2	1

Terminal No.	Color of Wire	Signal Name
3	L	–
4	L	–

Connector No.	M112
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
19	GR	–
20	R	–

Connector No.	M155
Connector Name	JOINT CONNECTOR-M06
Connector Color	WHITE

H.S.

4	3	2	1

Terminal No.	Color of Wire	Signal Name
3	P	–
4	P	–

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Connector No.	M158
Connector Name	METER CONTROL SWITCH
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	R	–
2	B	–
4	G	–
6	Y	–
7	SB	–

Connector No.	M201
Connector Name	FRONT HEATED SEAT SWITCH LH
Connector Color	WHITE

H.S.

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

Connector No.	M202
Connector Name	FRONT HEATED SEAT SWITCH RH
Connector Color	BROWN

H.S.

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

Connector No.	M204
Connector Name	CVT SHIFT SELECTOR
Connector Color	BROWN

H.S.

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

Connector No.	M205
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Connector No.	E6
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
6M	V	–

ABLIA8283GB

Connector No.	E18
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

7	8		9	10	11
12	13	14	15	16	17	18

Terminal No.	Color of Wire	Signal Name
7	B	GND (POWER)
10	V	TAIL LH

Connector No.	E21
Connector Name	JOINT CONNECTOR-E03
Connector Color	GRAY

H.S.

6	5	4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	L	–
5	L	–

Connector No.	E22
Connector Name	JOINT CONNECTOR-E04
Connector Color	GRAY

H.S.

6	5	4	3	2	1

Terminal No.	Color of Wire	Signal Name
1	P	–
5	P	–

Connector No.	E63
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

Terminal No.	Color of Wire	Signal Name
28	P	CAN-L
29	L	CAN-H
41	B	GND (SIGNAL)
43	LG	IGN SIGNAL

Terminal No.	Color of Wire	Signal Name
5G	P	–
22G	L	–
23G	P	–
36G	LG	–

Connector No.	E30
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

ABLIA8284GB

Connector No.	D2
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
19	R	–
20	G	–

Connector No.	R51
Connector Name	FRONT ROOM/MAP LAMP ASSEMBLY
Connector Color	WHITE

H.S.

8	7	6	5	4	3	2	1

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

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
8	W/R	–
10	SB	–

Connector No.	D52
Connector Name	DOOR MIRROR REMOTE CONTROL 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
13	G	–
14	R	–

Connector No.	D51
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
11	R	–
12	G	–

Connector No.	D30
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
11	R	–
12	G	–

ABLIA8285GB

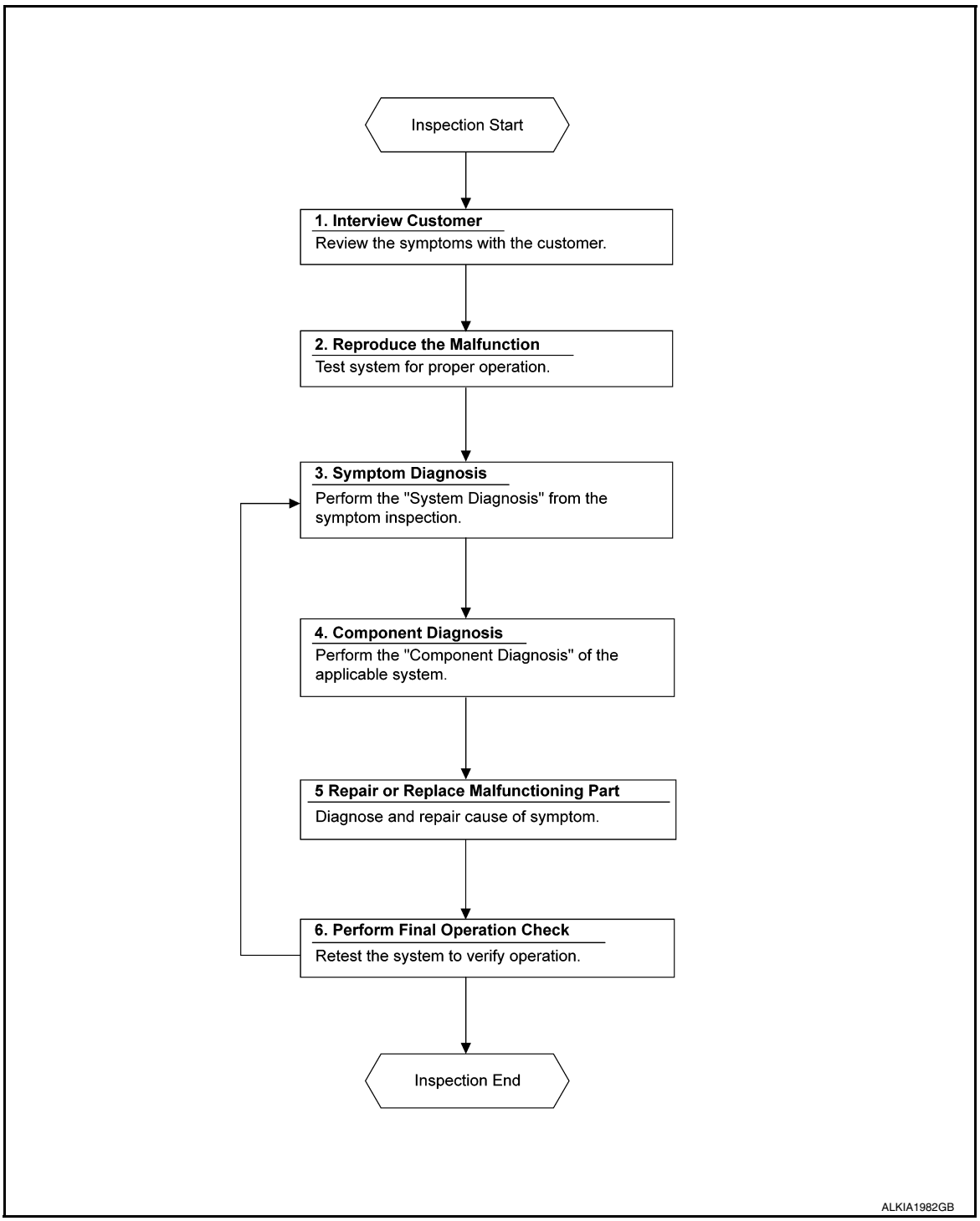
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:0000000012591881

OVERALL SEQUENCE



DETAILED FLOW

1. OBTAIN INFORMATION ABOUT SYMPTOM

Interview the customer to obtain as much information as possible about the conditions and environment under which the malfunction occurred.

>> GO TO 2.

2. CONFIRM THE SYMPTOM

Check the malfunction on the vehicle that the customer describes.
Inspect the relation of the symptoms and the condition when the symptoms occur.

>> GO TO 3.

3. IDENTIFY THE MALFUNCTIONING SYSTEM WITH SYMPTOM DIAGNOSIS

Use Symptom diagnosis from the symptom inspection result in step 2 and then identify where to start performing the diagnosis based on possible causes and symptoms.

>> GO TO 4.

4. PERFORM THE COMPONENT DIAGNOSIS OF THE OF THE APPLICABLE SYSTEM

Perform the diagnosis with Component diagnosis of the applicable system.

>> GO TO 5.

5. REPAIR OR REPLACE THE MALFUNCTIONING PARTS

Repair or replace the specified malfunctioning parts.

>> GO TO 6.

6. FINAL CHECK

Check that malfunctions are not reproduced when obtaining the malfunction information from the customer, referring to the symptom inspection result in step 2.

Are the malfunctions corrected?

YES >> Inspection End.
NO >> GO TO 3.

DTC/CIRCUIT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

BCM

BCM : Diagnosis Procedure

INFOID:0000000012825585

Regarding Wiring Diagram information, refer to BCS-55, "Wiring Diagram".

1. CHECK FUSE AND FUSIBLE LINK

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

Terminal No.	Signal name	Fuse and fusible link No.
139	Fusible link battery power	I (40A)
131	BCM battery fuse	1 (10A)

Is the fuse or fusible link blown?

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

2. CHECK POWER SUPPLY CIRCUIT

1. Disconnect BCM connector M21.
2. Check voltage between BCM connector M21 terminals 131, 139 and ground.

BCM		Ground	Voltage (Approx.)
Connector	Terminal		
M21	131	—	Battery voltage
	139		

Is the inspection result normal?

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

3. CHECK GROUND CIRCUIT

Check continuity between BCM connector M21 terminals 134, 143 and ground.

BCM		Ground	Continuity
Connector	Terminal		
M21	134	—	Yes
	143		

Is the inspection result normal?

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

IPDM E/R

IPDM E/R : Diagnosis Procedure

INFOID:0000000012825588

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

1. CHECK FUSIBLE LINKS

Check that the following fusible links are not blown.

Terminal No.	Signal name	Fusible link No.
1	Fusible link main	E (80A)
2	Fusible link IPDM E/R	A (250A), C (80A)
3	Fusible link ignition switch	A (250A), B (100A), M (40A)

Is the fusible link blown?

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

2. CHECK POWER SUPPLY CIRCUIT

1. Disconnect IPDM E/R connectors E16 and E17.
2. Check voltage between IPDM E/R connectors and ground.

IPDM E/R		Ground	Voltage (Approx.)
Connector	Terminal		
E16	1	—	Battery voltage
	2		
E17	3		

Is the inspection result normal?

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

3. CHECK GROUND CIRCUIT

1. Disconnect IPDM E/R connectors E18 and E63.
2. Check continuity between IPDM E/R connectors and ground.

IPDM E/R		Ground	Continuity
Connector	Terminal		
E18	7	—	Yes
E63	41		

Is the inspection result normal?

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

BATTERY SAVER OUTPUT/POWER SUPPLY CIRCUIT

Description

INFOID:0000000012591884

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

Component Function Check

INFOID:0000000012591885

1.CHECK BATTERY SAVER OUTPUT/POWER SUPPLY FUNCTION

CONSULT
1. Turn ignition switch ON.
2. Turn each interior room lamp ON.
- Front room/map lamps
- Personal lamps rear
- Front step lamps
- Vanity mirror lamps (if equipped)
- Trunk room lamp
3. Open the driver door to turn ON the front step lamps.
4. Select “BATTERY SAVER” in “Active Test” of “BCM (BATTERY SAVER)”.
5. While operating the test item, check that each interior room lamp turn ON/OFF.

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

Is the inspection result normal?

YES >> Interior room lamp power supply circuit is normal.
NO >> Refer to INL-49, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012591886

Regarding Wiring Diagram information, refer to INL-21, "Wiring Diagram".

1.CHECK BATTERY SAVER OUTPUT/POWER SUPPLY OUTPUT

CONSULT
1. Turn ignition switch ON.
2. Select “BATTERY SAVER” in “Active Test” of “BCM (BATTERY SAVER)”.
3. While operating the test item, check voltage between BCM connector M21 terminal 129 and ground.

(+)		(-)	Test item	Voltage (Approx.)
Connector	Terminal		BATTERY SAVER	
M21	129	Ground	OFF	0V
			ON	Battery voltage

Is the inspection result normal?

YES >> GO TO 2.
NO >> Replace BCM after making sure battery saver output/power supply circuit is not shorted to voltage. Refer to BCS-81, "Removal and Installation".

2.CHECK BATTERY SAVER OUTPUT/POWER SUPPLY OPEN CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect the following connectors:
- BCM M21
- Front step lamp LH D11
- Front step lamp RH D109
- Front room/map lamp assembly R51

- Vanity mirror lamp LH (if equipped) R3
- Vanity mirror lamp RH (if equipped) R9
- Trunk room lamp B36
- Personal lamp rear R50

3. Check continuity between BCM connector M21 terminal 129 and each interior room lamp connector.

BCM		Each interior room lamp			Continuity
Connector	Terminal	Connector		Terminal	
M21	129	Front step lamp LH	D11	1	Yes
		Front step lamp RH	D109	1	
		Front room/map lamp assembly	R51	8	
		Vanity mirror lamp LH	R3	2	
		Vanity mirror lamp RH	R9	2	
		Trunk room lamp	B36	1	
		Personal lamp rear	R50	3	

Is the inspection result normal?

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

3. CHECK BATTERY SAVER OUTPUT/POWER SUPPLY SHORT CIRCUIT

Check continuity between BCM connector M21 terminal 129 and ground.

BCM		Ground	Continuity
Connector	Terminal		
M21	129		No

Is the inspection result normal?

YES >> Check that each interior room lamp has no internal short circuit.
NO >> Repair or replace harness or connectors.

INTERIOR ROOM LAMP CONTROL CIRCUIT

Description

INFOID:0000000012591887

Controls the room lamp control circuit (ground side) to turn the room lamps ON and OFF.

Component Function Check

INFOID:0000000012591888

CAUTION:
Before performing the diagnosis, check that the following is normal:
- **Battery saver output/power supply**
- **Front room/map lamp assembly bulbs**
- **Personal lamp bulbs**

1.CHECK INTERIOR ROOM LAMP CONTROL FUNCTION

CONSULT
1. Switch the front room/map lamp assembly switch to DOOR.
2. Turn ignition switch ON.
3. Select “INT LAMP” in “Active Test” of “BCM (INT LAMP)”.
4. While operating the test item, check that each interior room lamp turn ON/OFF.

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

Is the inspection result normal?

YES >> Interior room lamp control circuit is normal.
NO >> Refer to INL-51, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012591889

Regarding Wiring Diagram information, refer to INL-21, "Wiring Diagram".

1.CHECK INTERIOR ROOM LAMP CONTROL OUTPUT

CONSULT
1. Turn ignition switch ON.
2. Select “INT LAMP” in “Active Test” of “BCM (INT LAMP)”.
3. While operating the test item, check voltage between BCM connector M21 terminal 136 and ground.

BCM		Ground	Test item	Voltage
Connector	Terminal		INT LAMP	
M21	136		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 harness connector M21, front room/map lamp harness connector R51.
3. Check continuity between BCM harness connector M21 terminal 136 and front room/map lamp assembly harness connector R51 terminal 6.

BCM		Front room/map lamp		Continuity
Connector	Terminal	Connector	Terminal	
M21	136	R51	6	Yes

4. Reconnect the front room/map lamp assembly harness connector.
5. Check continuity between BCM harness connector M21 terminal 136 and personal lamp rear harness connector R50 terminal 2.

BCM		Personal lamp rear		Continuity
Connector	Terminal	Connector	Terminal	
M21	136	R50	2	Yes

Is the inspection result normal?

YES >> Check interior room lamps for an open. If NG, replace lamp in question. Refer to INL-60, "Removal and Installation" (front room/map lamp assembly) or refer to INL-65, "Removal and Installation" (personal lamp rear). If OK, replace BCM. Refer to BCS-81, "Removal and Installation".

NO >> Repair or replace harness or connectors.

3. CHECK INTERIOR ROOM LAMP CONTROL SHORT CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM harness connector M21 and front room/map lamp harness connector R51 lamp harness.
3. Check continuity between BCM harness connector M21 terminal 136 and ground.

BCM		Ground	Continuity
Connector	Terminal		
M21	136		No

Is the inspection result normal?

YES >> Check the interior room lamps for a short circuit. If NG, replace the interior room lamp. Refer to INL-60, "Removal and Installation" (front room/map lamp assembly) or refer to INL-65, "Removal and Installation" (personal lamp rear). If OK, replace BCM. Refer to BCS-81, "Removal and Installation"

NO >> Repair or replace the harness or connectors.

STEP LAMP CIRCUIT

Description

INFOID:0000000012591890

Controls the step lamp control circuit (ground side) to turn the step lamp ON and OFF.

Component Function Check

INFOID:0000000012591891

CAUTION:
Before performing the diagnosis, check that the following is normal:
- **Battery saver output/power supply**
- **Step lamp bulbs**

1.CHECK STEP LAMP OPERATION

CONSULT
1. Turn ignition switch ON.
2. Select “STEP LAMP” in “Active Test” of “BCM (INT LAMP)”.
3. While operating the test item, check that step lamps turn ON/OFF.

ON : Step lamp ON
OFF : Step lamp OFF

Is the inspection result normal?

YES >> Step lamp circuit is normal.
NO >> Refer to INL-53, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012591892

Regarding Wiring Diagram information, refer to INL-21, "Wiring Diagram".

1.CHECK STEP LAMP OUTPUT

CONSULT
1. Turn ignition switch ON.
2. Select “STEP LAMP” in “Active Test” of “BCM (INT LAMP)”.
3. While operating the test item, check voltage between BCM connector M17 terminal 21 and ground.

BCM		Ground	Test item	Voltage
Connector	Terminal		STEP LAMP TEST	
M17	21		ON	0V
			OFF	Battery voltage

Is the inspection result normal?

YES >> Step lamp circuit is operating normally.
Fixed ON>>GO TO 3.
Fixed OFF>>GO TO 2.

2.CHECK STEP LAMP OPEN CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector M17 and step lamp LH and RH connectors.
3. Check continuity between BCM connector M17 terminal 21 and step lamp connector terminal 2.

BCM		Step lamp			Continuity
Connector	Terminal	Connector		Terminal	
M17	21	LH	D11	2	Yes
		RH	D109		

Is the inspection result normal?

YES >> Check the step lamps for an open. If OK, replace BCM. Refer to BCS-81, "Removal and Installation". If NG, replace the step lamp. Refer to INL-64, "Removal and Installation".

NO >> Repair or replace harness or connectors.

3. CHECK STEP LAMP SHORT CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector M17 and step lamp LH and RH connectors.
3. Check continuity between BCM connector M17 terminal 21 and ground.

BCM		Ground	Continuity
Connector	Terminal		
M17	21		No

Is the inspection result normal?

YES >> Check the step lamps for a short circuit. If OK, replace BCM. Refer to BCS-81, "Removal and Installation". If NG, replace the interior room lamp. Refer to INL-64, "Removal and Installation".

NO >> Repair or replace harness or connectors.

TRUNK ROOM LAMP CIRCUIT

Description

INFOID:0000000012591893

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

Component Function Check

INFOID:0000000012591894

CAUTION:
Before performing the diagnosis, check that the following is normal:
- **Battery saver output/power supply**
- **Trunk room lamp bulb**

1.CHECK TRUNK ROOM LAMP OPERATION

CONSULT
1. Turn ignition switch ON.
2. Select “TRUNK/BACK DOOR” in “Active Test” of “BCM (INTELLIGENT KEY)”.
3. While operating the test item, check that the trunk room lamp turns ON/OFF.

ON : Trunk room lamp ON
OFF : Trunk room lamp OFF

Is the inspection result normal?

YES >> Trunk room lamp circuit is normal.
NO >> Refer to INL-55, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012591895

Regarding Wiring Diagram information, refer to INL-21, "Wiring Diagram".

1.CHECK TRUNK ROOM LAMP OUTPUT

CONSULT
1. Turn ignition switch ON.
2. Select “TRUNK/BACK DOOR” in “Active Test” of “BCM (INTELLIGENT KEY)”.
3. While operating the test item, check voltage between BCM connector M19 terminal 85 and ground.

BCM		Ground	Test item	Voltage
Connector	Terminal		TRUNK/BACK DOOR	
M19	85		ON	0V
			OFF	Battery voltage

Is the inspection result normal?

YES >> Trunk room lamp circuit is operating normally.
Fixed ON>>GO TO 3.
Fixed OFF>>GO TO 2.

2.CHECK TRUNK ROOM LAMP OPEN CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector M19 and trunk room lamp connector.
3. Check continuity between BCM connector M19 terminal 85 and trunk room lamp connector B36 terminal 2.

BCM		Trunk room lamp		Continuity
Connector	Terminal	Connector	Terminal	
M19	85	B36	2	Yes

Is the inspection result normal?

YES >> Check the trunk room lamp for an open. If OK, replace BCM. Refer to BCS-81, "Removal and Installation". If NG, replace the trunk room lamp. Refer to INL-66, "Removal and Installation".

NO >> Repair or replace harness or connectors.

3. CHECK TRUNK ROOM LAMP SHORT CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector M19 and trunk room lamp connector.
3. Check continuity between BCM connector M19 terminal 85 and ground.

BCM		Ground	Continuity
Connector	Terminal		
M19	85		No

Is the inspection result normal?

YES >> Check the trunk room lamp for a short circuit. If OK, replace BCM. Refer to BCS-81, "Removal and Installation". If NG, replace the trunk room lamp. Refer to INL-66, "Removal and Installation".

NO >> Repair or replace harness or connectors.

PUSH-BUTTON IGNITION SWITCH ILLUMINATION CIRCUIT

Description

INFOID:0000000012591896

Provides the power supply and the ground to control the push-button ignition switch illumination.

Component Function Check

INFOID:0000000012591897

1.CHECK PUSH-BUTTON IGNITION SWITCH ILLUMINATION OPERATION

CONSULT
1. Turn the ignition switch ON.
2. Select “ENGINE SW ILLUMI” in “Active Test” of “BCM (INTELLGENT KEY)”.
3. While operating the test item, check that the push-button ignition switch illumination turns ON/OFF.

ON : Push-button ignition switch illumination ON
OFF : Push-button ignition switch illumination OFF

Is the inspection result normal?

YES >> Push-button ignition switch illumination circuit is normal.
NO >> Refer to INL-57, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012591898

Regarding Wiring Diagram information, refer to INL-32, "Wiring Diagram".

1.CHECK PUSH-BUTTON IGNITION SWITCH ILLUMINATION OPERATION

CONSULT
1. Turn the ignition switch ON.
2. Select “ENGINE SW ILLUMI” in “Active Test” of “BCM (INTELLIGENT KEY)”.
3. While operating the test item, check voltage between push-button ignition switch connector M38 terminal 5 and ground.

Terminals			Test item	Voltage
(+)		(-)		
Push-button ignition switch		Ground	ENGINE SW ILLUMI	
Connector	Terminal			
M38	5		ON	5 V
			OFF	0 V

Is the inspection result normal?

YES >> GO TO 4.
NO >> GO TO 2.

2.CHECK PUSH-BUTTON IGNITION SWITCH ILLUMINATION POWER SUPPLY OPEN CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect BCM connector M18 and push-button ignition switch connector.
3. Check continuity between BCM connector M18 terminal 48 and push-button ignition switch connector M38 terminal 5.

BCM		Push-button ignition switch		Continuity
Connector	Terminal	Connector	Terminal	
M18	48	M38	5	Yes

Is the inspection result normal?

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

3. CHECK PUSH-BUTTON IGNITION SWITCH ILLUMINATION POWER SUPPLY SHORT CIRCUIT

Check continuity between BCM connector M18 terminal 48 and ground.

BCM		Ground	Continuity
Connector	Terminal		
M18	48		No

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-81, "Removal and Installation".
NO >> Repair or replace the harness or connectors.

4. CHECK PUSH-BUTTON IGNITION SWITCH ILLUMINATION GROUND CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect push-button ignition switch connector.
3. Check continuity between push-button ignition switch connector M38 terminal 6 and ground.

Push-button ignition switch		Ground	Continuity
Connector	Terminal		
M38	6		Yes

Is the inspection result normal?

YES >> Replace push-button ignition switch. Refer to SEC-144, "Removal and Installation".
NO >> GO TO 5.

5. CHECK PUSH-BUTTON IGNITION SWITCH ILLUMINATION GROUND OPEN CIRCUIT

1. Disconnect BCM connector M20.
2. Check continuity between BCM connector M20 terminal 107 and push-button ignition switch connector M38 terminal 6.

BCM		Push-button ignition switch		Continuity
Connector	Terminal	Connector	Terminal	
M20	107	M38	6	Yes

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-81, "Removal and Installation".
NO >> Repair or replace the harness or connectors.

SYMPTOM DIAGNOSIS

INTERIOR LIGHTING SYSTEM SYMPTOMS

Symptom Table

INFOID:0000000012591899

CAUTION:
Perform the "Self Diagnostic Result" with CONSULT before the symptom diagnosis. Perform the trouble diagnosis if any DTC is detected.

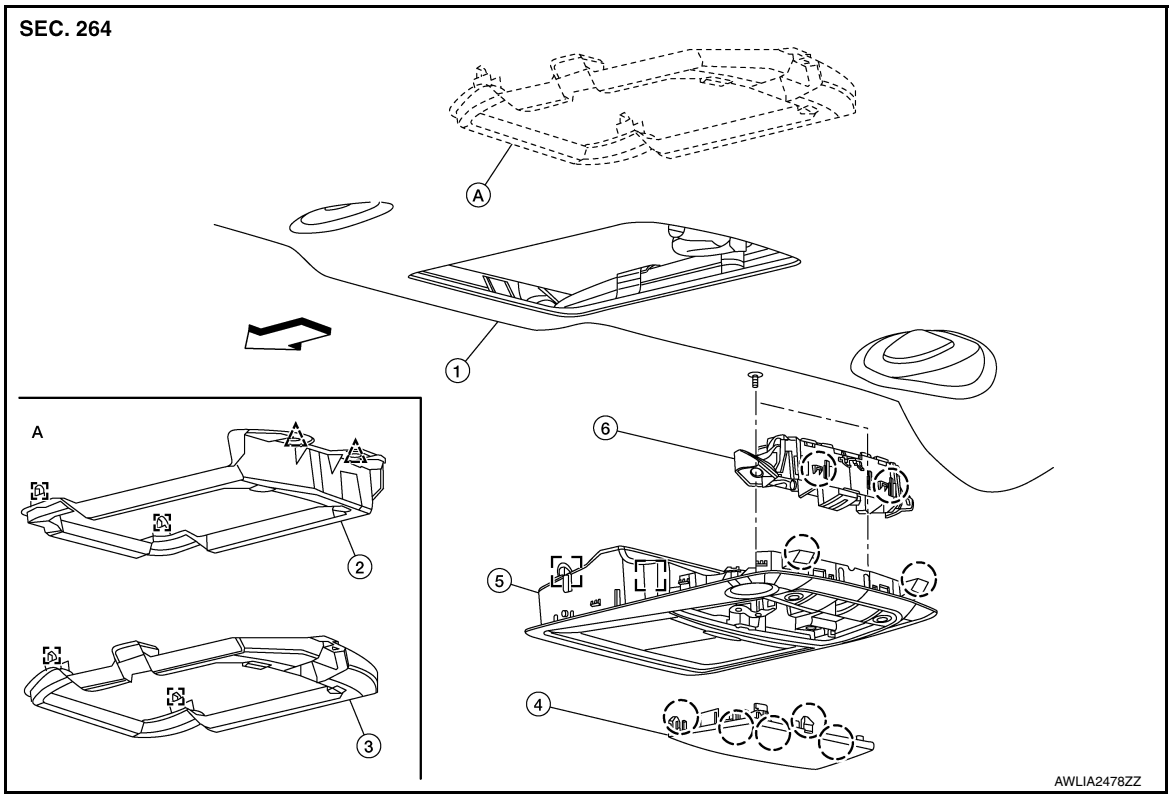
Symptom	Possible cause	Inspection item
All the following lamps do not turn ON: • Front room/map lamp LH/RH • Personal lamp rear LH/ RH • Trunk room lamp • Front step lamp LH/RH • Vanity mirror lamp LH/RH (if equipped)	• Harness between BCM and each interior room lamp • BCM	Battery saver output/power supply circuit Refer to INL-49.
• Interior room lamp does not turn ON even though the door is open. (It turns ON when turning the interior room lamp ON.) • Interior room lamp does not turn OFF even though the door is closed.	• Harness between BCM and each door switch • Harness between BCM and each interior room lamp • BCM	Door switch circuit Refer to DLK-99.
		Interior room lamp control circuit Refer to INL-51.
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-11.
Front step lamps do not turn ON. (The front room/map lamps and the personal lamps turn ON.)	• Harness between BCM and each step lamp • BCM	Step lamp circuit Refer to INL-53.
Front step lamps do not turn OFF. (The front room/map lamps and the personal lamps turn OFF.)		
• Trunk room lamp does not turn ON. (The bulb is normal.) • Trunk room lamp does not turn OFF.	• Harness between BCM and trunk room lamp switch • Harness between BCM and trunk room lamp • BCM	Trunk room lamp switch circuit Refer to DLK-123.
		Trunk room lamp circuit Refer to INL-55.
• Push-button ignition switch illumination does not turn ON. • Push-button ignition switch illumination does not turn OFF.	• Harness between BCM and combination switch (lighting and turn signal switch) • Harness between BCM and push-button ignition switch • BCM	Combination switch (lighting and turn signal switch) input circuit Refer to BCS-79.
		Push-button ignition switch illumination circuit Refer to INL-57.
Interior room lamp battery saver does not activate.	—	Check the interior room lamp battery saver setting. Refer to INL-12.

REMOVAL AND INSTALLATION

FRONT ROOM/MAP LAMP ASSEMBLY

Exploded View

INFOID:0000000012591900



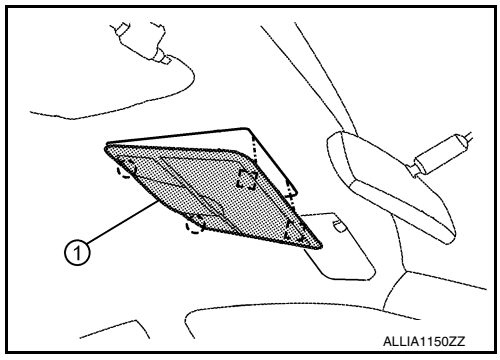
1.	Headlining	2.	Front room/map lamp assembly bracket (without moonroof)	3.	Front room/map lamp assembly bracket (with moonroof)
4.	Moonroof switch finisher	5.	Front room/map lamp assembly	6.	LED unit
	Metal clip		Clip		Pawl
	Front				

Removal and Installation

INFOID:0000000012591901

REMOVAL

1. Lower front edge of front room/map lamp assembly (1) down from the headlining by releasing the metal clips, then slide forward to clear pawls at rear.
   : Metal clip
   : Pawl



2. Disconnect the harness connectors from the front room/map lamp assembly and remove.

INSTALLATION

Installation is in the reverse order of removal.

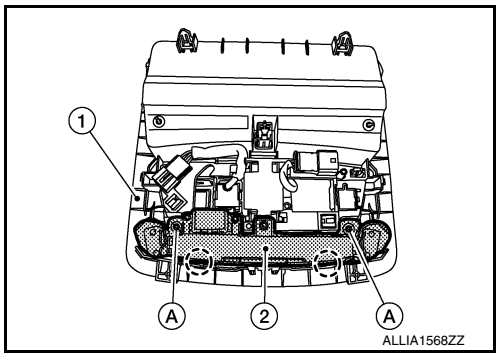
Bulb Replacement

INFOID:0000000012591902

NOTE:
The LED bulbs are replaced as part of the LED unit.

REMOVAL

1. Remove the front room/map lamp assembly. Refer to INL-60, "Removal and Installation".
2. Remove screws (A) from LED unit (2).
3. Remove the LED unit from the front room/map lamp assembly (1).
   ◌: Pawl



INSTALLATION

Installation is in the reverse order of removal.

VANITY MIRROR LAMP

Removal and Installation

INFOID:0000000012591903

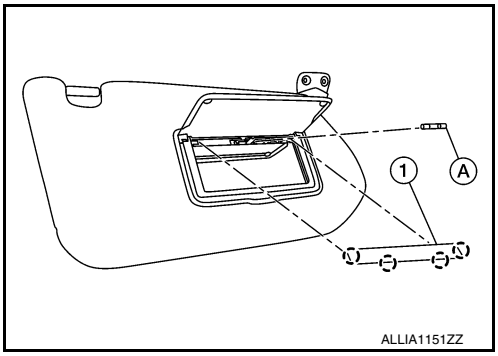
CAUTION:
Do not attempt to separate the vanity mirror lamp from the sun visor or damage to the components may occur.
The vanity mirror lamp is replaced as part of the sun visor. Refer to INT-30, "Removal and Installation".

Bulb or Lens Replacement

INFOID:0000000012591904

WARNING:
Do not touch bulb while it is lit or right after being turned OFF. Burning may result.
CAUTION:
- **Do not attempt to separate the vanity mirror lamp from the sun visor or damage to the components may occur.**
- **Do not touch glass surface of the bulb with bare hands or allow oil or grease to get on it to prevent damage to bulb.**

1. Release the pawls on the vanity mirror lamp lens (1) using a suitable tool.
   : Pawl
2. Remove the bulb (A) using a suitable tool.



3. Install bulb to vanity mirror lamp.
4. Install the vanity mirror lamp lens.

GLOVE BOX LAMP

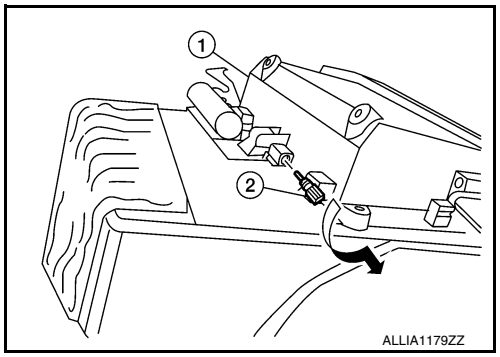
Removal and Installation

INFOID:0000000012591905

WARNING:
Do not touch bulb while it is lit or right after being turned OFF. Burning may result.
CAUTION:
Do not touch glass surface of the bulb with bare hands or allow oil or grease to get on it to prevent damage to bulb.

REMOVAL

1. Remove the glove box assembly (1). Refer to IP-22, "Removal and Installation".
2. Rotate the glove box lamp socket assembly (2) counterclockwise and remove.



INSTALLATION
Installation is in the reverse order of removal.

Bulb Replacement

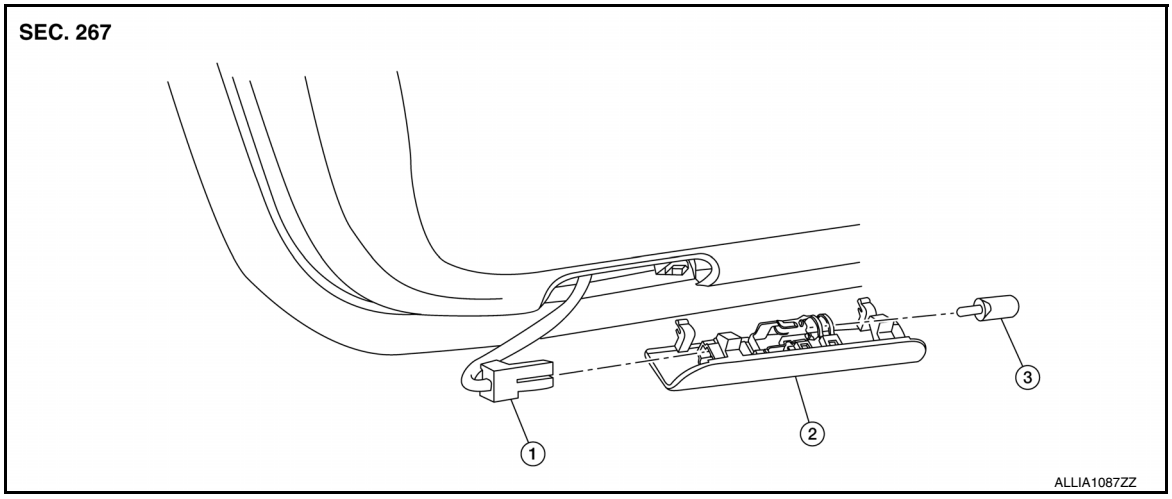
INFOID:0000000012591906

The glove box lamp bulb is serviced as part of the glove box lamp socket. Refer to INL-63, "Removal and Installation".

FRONT STEP LAMP

Exploded View

INFOID:0000000012591907



1. Front step lamp harness connector
2. Front step lamp
3. Bulb

Removal and Installation

INFOID:0000000012591908

REMOVAL

1. Insert a suitable tool into the gap between the front step lamp and front door finisher and gently release the pawls and the front step lamp.
2. Disconnect the harness connector from the front step lamp and remove.

INSTALLATION

Installation is in the reverse order of removal.

Bulb or Lens Replacement

INFOID:0000000012591909

WARNING:

Do not touch the glass surface of a bulb while it is lit or right after being turned OFF to prevent burns.

CAUTION:

- **Do not touch the glass of bulb directly by hand. Keep grease and other oily substances away from bulb surface.**
- **Do not leave bulb out of lamp reflector for a long time because dust, moisture, smoke, etc. may affect the performance of lamp.**

1. Remove the front step lamp. Refer to INL-64, "Removal and Installation".
2. Grasp the bulb and pull straight out from the front step lamp to remove.
3. Install the front step lamp bulb to front step lamp.
4. Install the front step lamp. Refer to INL-64, "Removal and Installation".

PERSONAL LAMP

Removal and Installation

INFOID:0000000012591910

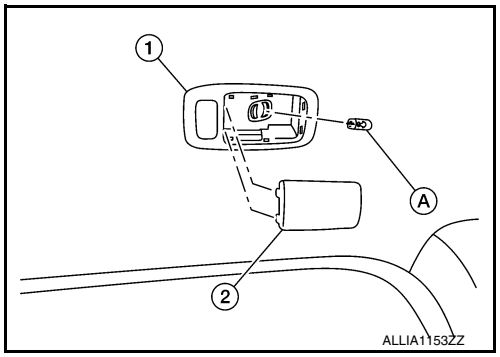
CAUTION:
Do not attempt to separate the personal lamp rear from the headlining or damage to the components may occur.
The personal lamp rear is replaced as part of the headlining. Refer to INT-30, "Removal and Installation".

Bulb or Lens Replacement

INFOID:0000000012591911

WARNING:
Do not touch bulb while it is lit or right after being turned OFF. Burning may result.
CAUTION:
Do not touch glass surface of the bulb with bare hands or allow oil or grease to get on it to prevent damage to bulb.

1. Using a suitable tool, release the pawls and remove lens (2) from the personal lamp rear (1).
2. Remove personal lamp rear bulb (A).



3. Install personal lamp bulb to personal lamp rear.
4. Install the personal lamp rear lens.

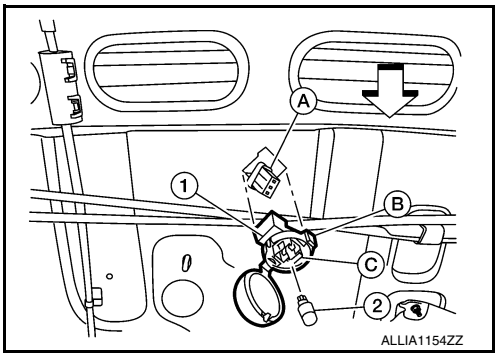
TRUNK ROOM LAMP

Removal and Installation

INFOID:0000000012591912

WARNING:
Do not touch bulb while it is lit or right after being turned OFF. Burning may result.
CAUTION:
Do not touch glass surface of the bulb with bare hands or allow oil or grease to get on it to prevent damage to bulb.

1. Release the tab (B) to open the lens.
   ⇦: Front
2. Remove the trunk room bulb (2).
3. Release tab (C), then pull trunk room lamp (1) down to remove.
4. Disconnect the harness connector (A) from the trunk room lamp and remove.



INSTALLATION
Installation is in the reverse order of removal.

Bulb Replacement

INFOID:0000000012591913

WARNING:
Do not touch bulb while it is lit or right after being turned OFF. Burning may result.
CAUTION:
Do not touch glass surface of the bulb with bare hands or allow oil or grease to get on it to prevent damage to bulb.

1. Release the tab to open the lens.
2. Remove bulb from trunk room lamp.
3. Install bulb to trunk room lamp.
4. Close lens.

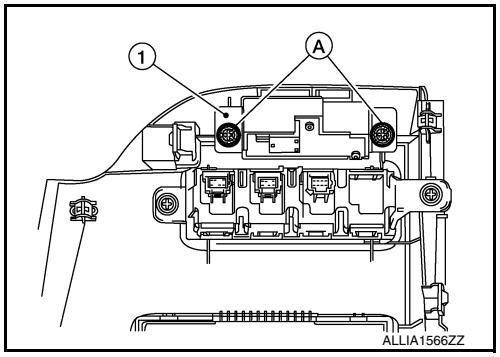
ILLUMINATION CONTROL SWITCH

Removal and Installation

INFOID:0000000012591914

REMOVAL

1. Remove the instrument lower panel LH. Refer to IP-21, "Removal and Installation".
2. Remove screws (A) and remove illumination control switch (1).



INSTALLATION

Installation is in the reverse order of removal.

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Bulb Specifications

INFOID:0000000012591915

Item	Wattage (W)*
Front room/map lamp	-
Vanity mirror lamp (if equipped)	-
Glove box lamp	-
Front step lamp	3.8
Personal lamp rear	8
Trunk room lamp	3.4

* Always check with the Parts Department for the latest parts information.