SECTION EXL
EXTERIOR LIGHTING SYSTEM

CONTENTS

PRECAUTION

PRECAUTIONS

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

INFOID:0000000012432764

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, 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 three minutes before performing any service.**

Precaution for Work

INFOID:0000000012432765

- 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.

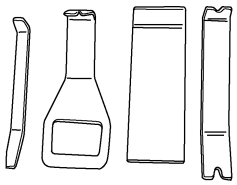
PREPARATION

PREPARATION

Special Service Tool

INFOID:0000000012432766

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

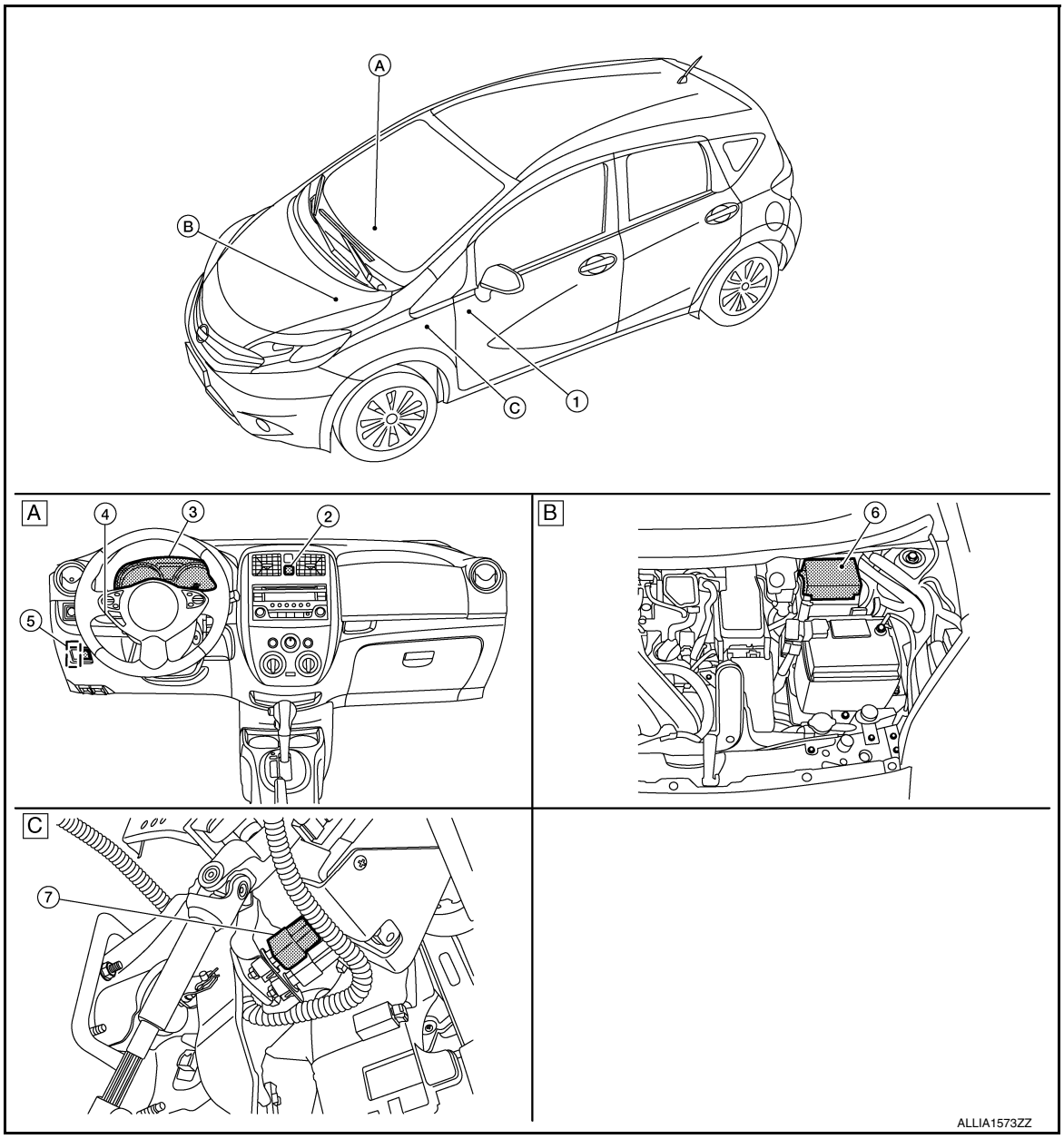
Tool number (TechMate No.) Tool name	Description
— (J-46534) Trim Tool Set  AWJIA0483ZZ	Removing trim components

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000012432767



A. Instrument panel B. LH side of engine compartment C. Brake pedal area

Component Description

INFOID:0000000012432768

No.	Part name	Description
1.	Daytime running light relays 1 and 2 (if equipped)	Sends power to daytime lamps when operated by the IPDM E/R.
2.	Hazard switch	Hazard flasher request signal is output to the BCM.

3.	Combination meter	• Blinks the turn signal indicator lamp and outputs the turn signal operating sound with integrated buzzer according to the request from BCM (via CAN communication). • Turns the tail lamp indicator lamp and high beam indicator lamp ON according to the request from BCM (via CAN communication).
4.	Combination switch (lighting and turn signal switch)	Refer to BCS-9, "COMBINATION SWITCH READING SYSTEM : System Description" (with Intelligent Key system) or BCS-79, "COMBINATION SWITCH READING SYSTEM : System Description" (without Intelligent Key system).
5.	BCM	Controls the exterior lighting system.
6.	IPDM E/R	Controls the integrated relay, and supplies voltage to the load according to the request from BCM (via CAN communication).
7.	Stop lamp switch	Stop lamp signal is output to the rear combination lamps and high-mounted stop lamp.

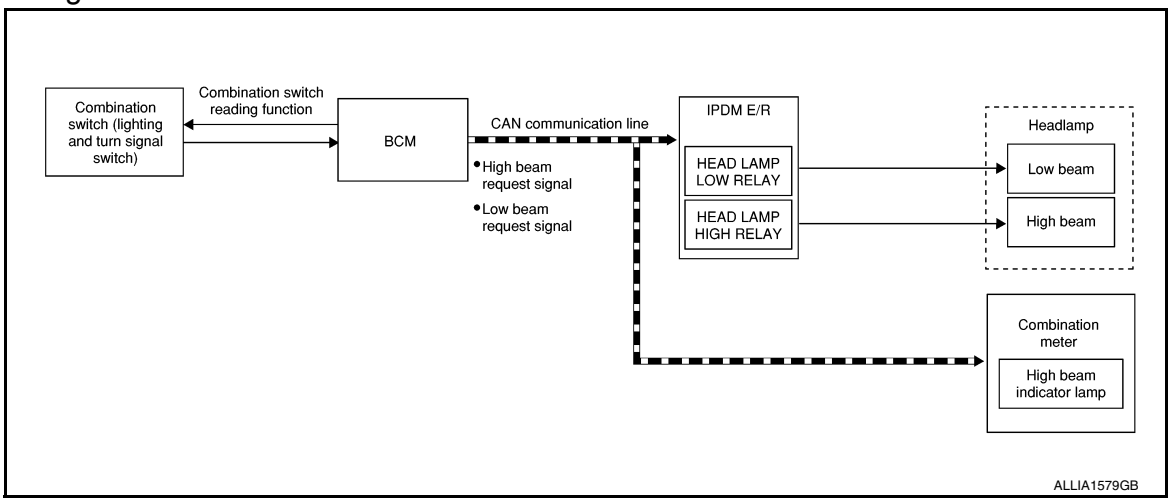
SYSTEM

HEADLAMP SYSTEM

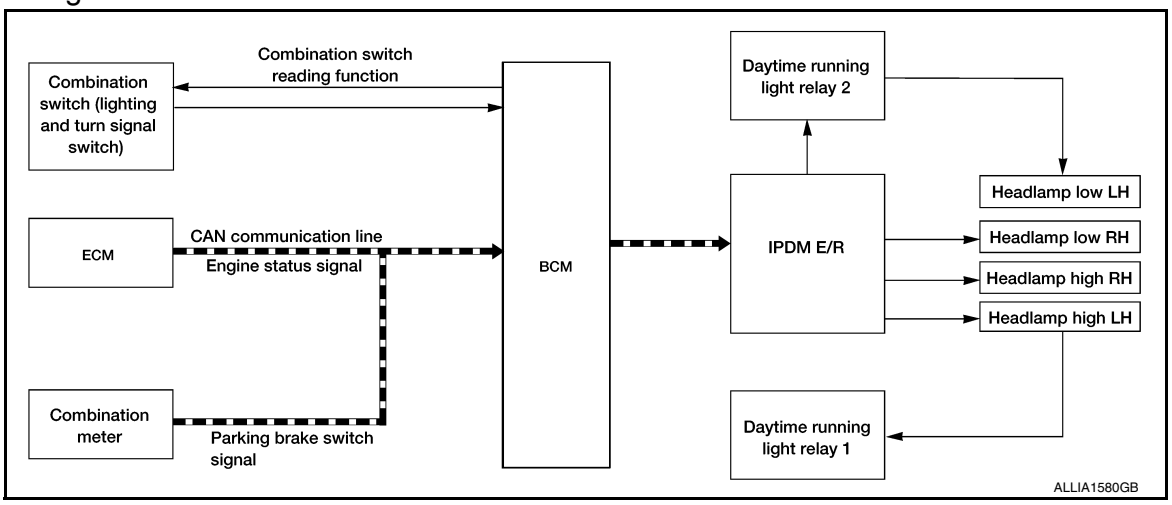
HEADLAMP SYSTEM : System Diagram

INFOID:0000000012432769

System Diagram - For USA



System Diagram - For Canada



HEADLAMP SYSTEM : System Description

INFOID:0000000012432770

LOW BEAM OPERATION

When the lighting switch is in 2nd position, the BCM receives input requesting the headlamps to illuminate. This input is communicated to the IPDM E/R across the CAN communication lines. The CPU of the IPDM E/R controls the headlamp low relay coil which supplies power to the low beam headlamps.

HIGH BEAM OPERATION/FLASH-TO-PASS OPERATION

With the lighting switch in the 2nd position and placed in HIGH position, the BCM receives input requesting the headlamp high beams to illuminate. The flash to pass feature can be used any time and also sends a signal to the BCM. This input is communicated to the IPDM E/R across the CAN communication lines. The CPU of the combination meter controls the ON/OFF status off the HIGH BEAM indicator. The CPU of the IPDM E/R controls the headlamp high relay coil which supplies power to the high beam headlamps.
The combination meter receives a high beam request signal (ON) through the CAN communication lines and turns the high beam indicator lamp ON.

EXTERIOR LAMP BATTERY SAVER CONTROL

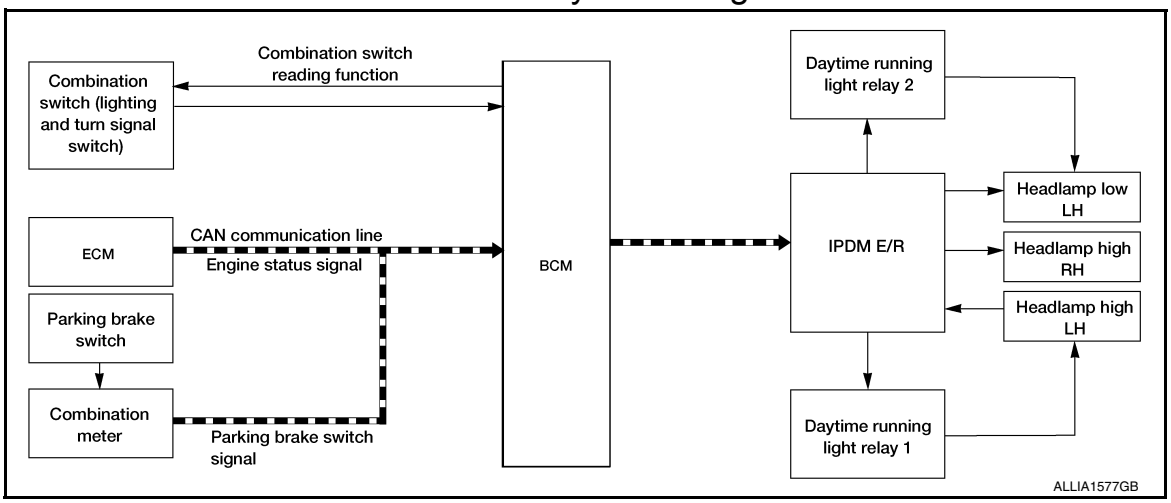
With the combination switch (lighting and turn signal switch) in the 2nd position and the ignition switch is turned from ON or ACC to OFF, the battery saver feature is activated.

Under this condition, the headlamps remain illuminated for 45 seconds unless the lighting switch position is changed. If the lighting switch position is changed, then the headlamps are turned off.
This setting can be changed by CONSULT. Refer to BCS-20, "HEADLAMP : CONSULT Function (BCM - HEAD LAMP)" (with Intelligent Key system) or BCS-93, "HEADLAMP : CONSULT Function (BCM - HEAD LAMP)" (without Intelligent Key system).

DAYTIME RUNNING LIGHT SYSTEM

DAYTIME RUNNING LIGHT SYSTEM : System Diagram

INFOID:0000000012432771



DAYTIME RUNNING LIGHT SYSTEM : System Description

INFOID:0000000012432772

The headlamp system is equipped with a daytime running light control that activates the high beam headlamps at approximately half illumination whenever the engine is operating. If the parking brake is applied before the engine is started the daytime running lights will not be illuminated. The daytime running lights will illuminate once the parking brake is released. Thereafter, the daytime running lights will continue to operate when the parking brake is applied.

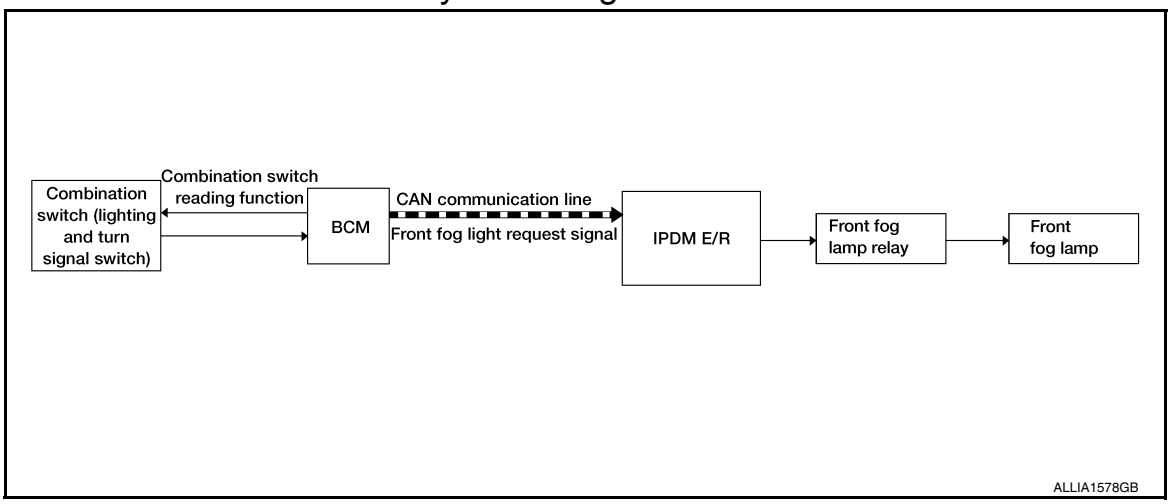
OPERATION

The BCM monitors inputs from the parking brake switch and the combination switch (lighting and turn signal switch) to determine when to activate the daytime running light system. The BCM sends a daytime running light request to the IPDM E/R via the CAN communication lines. The IPDM E/R grounds the daytime running light relay 1 which in turn, provides power to the LH high beam lamp. Power flows through the LH high beam lamp to the RH high beam lamp. The high beam lamps are wired in series which causes them to illuminate at a reduced intensity. When daytime light relay 2 is open, it prevents headlamp low beam from turning on while daytime running lights are operating.

FRONT FOG LAMP SYSTEM

FRONT FOG LAMP SYSTEM : System Diagram

INFOID:0000000012432773



FRONT FOG LAMP SYSTEM : System Description

INFOID:0000000012432774

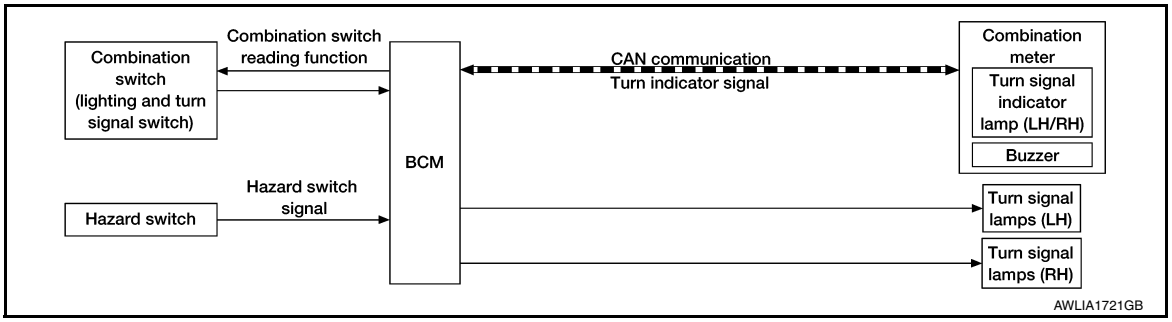
FRONT FOG LAMP OPERATION

When the combination switch (lighting and turn signal switch) is in front fog lamp ON position and also in 1ST or 2ND position (headlamp is ON), the BCM detects FR FOG ON and the HEAD LAMP 1 or 2 ON. The BCM sends a front fog lamp request ON signal through the CAN communication lines to the IPDM E/R. The IPDM E/R then turns ON the front fog lamp relay sending power to the front fog lamps.

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM : System Diagram

INFOID:0000000012432775



TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM : System Description

INFOID:0000000012432776

TURN SIGNAL OPERATION

When the turn signal switch is in LH or RH position with the ignition switch in ON position, the BCM detects the TURN RH or TURN LH ON request. The BCM outputs the flasher output signal to the respective turn signal lamp. The BCM sends a turn indicator signal ON request through the CAN communication lines to the combination meter. The combination meter then activates the appropriate turn signal indicator and audible buzzer.

HAZARD LAMP OPERATION

When the hazard switch is in ON position, the BCM detects the hazard switch signal ON. The BCM outputs the flasher output signal (right and left). The BCM sends a hazard indicator signal ON request through the CAN communication lines to the combination meter. The combination meter then activates the hazard indicator and audible buzzer.

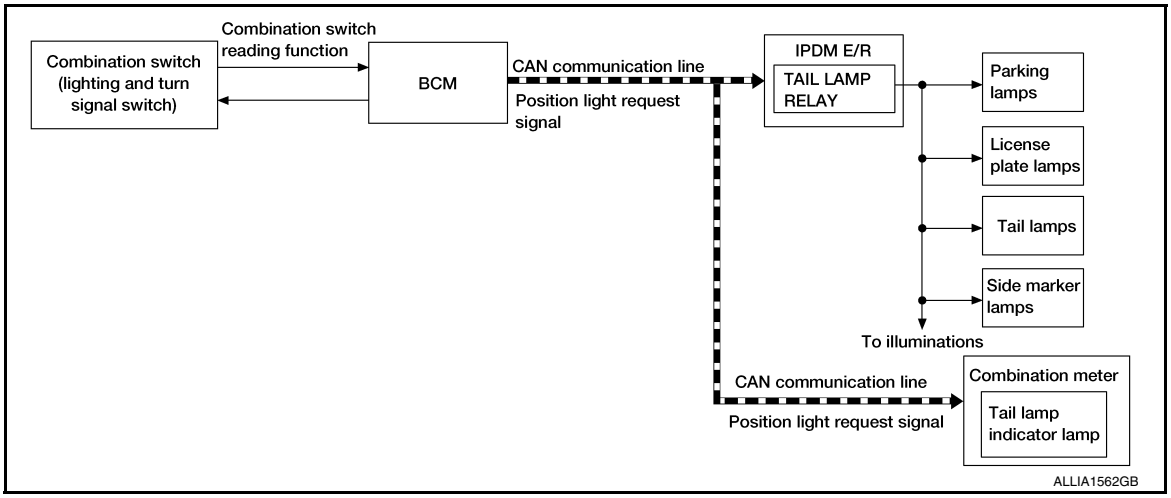
REMOTE KEYLESS ENTRY OPERATION

The remote keyless entry receiver transmits hazard lamp signal to BCM, then BCM controls hazard lamps.
Refer to DLK-25, "REMOTE KEYLESS ENTRY FUNCTION : System Description" (with Intelligent Key system) or DLK-199, "REMOTE KEYLESS ENTRY SYSTEM : System Description" (without Intelligent Key system).

PARKING, LICENSE PLATE AND TAIL LAMP SYSTEM

PARKING, LICENSE PLATE AND TAIL LAMP SYSTEM : System Diagram

INFOID:0000000012432777



PARKING, LICENSE PLATE AND TAIL LAMP SYSTEM : System Description

INFOID:0000000012432778

PARKING, LICENSE PLATE AND TAIL LAMPS OPERATION

When the combination switch (lighting and turn signal switch) is in 1st position, BCM detects the LIGHTING SWITCH 1st POSITION ON. The BCM sends a parking light ON request through the CAN communication lines to the IPDM E/R. The IPDM E/R then activates the tail lamp relay which sends power to the parking and instrument illumination circuits.

EXTERIOR LAMP BATTERY SAVER CONTROL

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

Under this condition, the headlamps remain illuminated for 5 minutes unless the lighting switch position is changed. If the lighting switch position is changed, then the headlamps are turned off.

This setting can be changed by CONSULT. Refer to BCS-26, "BATTERY SAVER : CONSULT Function (BCM - BATTERY SAVER)" (with Intelligent Key system) or BCS-97, "BATTERY SAVER : CONSULT Function (BCM - BATTERY SAVER)" (without Intelligent Key system).

DIAGNOSIS SYSTEM (BCM) (WITH INTELLIGENT KEY SYSTEM)
COMMON ITEM

COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

INFOID:0000000012542302

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	HEAD LAMP			×	×	×		
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			×	×	×		
Vehicle security system	THEFT ALM			×	×			
RAP system	RETAINED PWR			×				
Signal buffer system	SIGNAL BUFFER			×				
TPMS	AIR PRESSURE MONITOR		×	×	×	×		
Panic alarm system	PANIC ALARM				×			

HEADLAMP

HEADLAMP : CONSULT Function (BCM - HEAD LAMP)

INFOID:0000000012542303

DATA MONITOR

Monitor Item [Unit]	Description
PUSH SW [On/Off]	Indicates condition of push-button ignition switch.
ENGINE STATE [Stop/Stall/Crank/Run]	Indicates engine status received from ECM on CAN communication line.
VEH SPEED 1 [km/h]	Indicates vehicle speed signal received from ABS on CAN communication line.
TURN SIGNAL R [On/Off]	Indicates condition of combination switch.
TURN SIGNAL L [On/Off]	
TAIL LAMP SW [On/Off]	
HI BEAM SW [On/Off]	
HEAD LAMP SW 1 [On/Off]	
HEAD LAMP SW 2 [On/Off]	
PASSING SW [On/Off]	
FR FOG SW [On/Off]	
DOOR SW-DR [On/Off]	Indicates condition of front door switch LH.
DOOR SW-AS [On/Off]	Indicates condition of front door switch RH.
DOOR SW-RR [On/Off]	Indicates condition of rear door switch RH.
DOOR SW-RL [On/Off]	Indicates condition of rear door switch LH.
DOOR SW-BK [On/Off]	Indicates condition of back door switch.

ACTIVE TEST

Test Item	Description
FR FOG LAMP	This test is able to check front fog lamp operation [On/Off].
HEAD LAMP	This test is able to check head lamp operation [Hi/Low/Off].
ILL DIM SIGNAL	This test is able to check head lamp illumination dimming operation [On/Off].
TAIL LAMP	This test is able to check tail lamp operation [On/Off].

WORK SUPPORT

Support Item	Setting		Description
BATTERY SAVER SET	On*		Exterior lamp battery saver function ON.
	Off		Exterior lamp battery saver function OFF.
ILL DELAY SET	MODE 8	180 sec.	Sets delay timer function operation time (All doors closed).
	MODE 7	150 sec.	
	MODE 6	120 sec.	
	MODE 4	60 sec.	
	MODE 5	90 sec.	
	MODE 3	30 sec.	
	MODE 2	OFF	
	MODE 1*	45 sec.	

*: Initial setting

FLASHER

FLASHER : CONSULT Function (BCM - FLASHER)

INFOID:0000000012542304

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.
TURN SIGNAL R [On/Off]	Indicates condition of turn signal function of combination switch.
TURN SIGNAL L [On/Off]	
HAZARD SW [On/Off]	Indicates condition of hazard 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-PANIC [On/Off]	Indicates condition of panic alarm signal from Intelligent Key.

ACTIVE TEST

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

WORK SUPPORT

Support Item	Setting	Description
HAZARD ANSWER BACK	Lock/Unlock*	Hazard warning lamp activation when doors are locked or unlocked with Intelligent Key.
	Unlock Only	Hazard warning lamp activation when doors are unlocked with Intelligent Key.
	Lock Only	Hazard warning lamp activation when doors are locked with Intelligent Key.
	Off	No hazard warning lamp activation when doors are locked or unlocked with Intelligent Key.

* : Initial setting

COMB SW

COMB SW : CONSULT Function (BCM - COMB SW)

INFOID:0000000012542305

DATA MONITOR

Monitor Item [Unit]	Description
FR WIPER HI [On/Off]	Indicates condition of wiper operation of combination switch.
FR WIPER LOW [On/Off]	
FR WASHER SW [On/Off]	
FR WIPER INT [On/Off]	
INT VOLUME [1 - 7]	Indicates condition of intermittent wiper operation of combination switch.
RR WIPER ON [On/Off]	Indicates condition of rear wiper operation of combination switch.
RR WIPER INT [On/Off]	
RR WASHER SW [On/Off]	
TURN SIGNAL R [On/Off]	Indicates condition of right turn signal operation of combination switch.
TURN SIGNAL L [On/Off]	Indicates condition of left turn signal operation of combination switch.
TAIL LAMP SW [On/Off]	Indicates condition of tail lamp switch operation of combination switch.

Monitor Item [Unit]	Description
HI BEAM SW [On/Off]	Indicates condition of Hi beam switch operation of combination switch.
HEAD LAMP SW 1 [On/Off]	Indicates condition of head lamp switch 1 operation of combination switch.
HEAD LAMP SW 2 [On/Off]	Indicates condition of head lamp switch 2 operation of combination switch.
PASSING SW [On/Off]	Indicates condition of passing switch operation of combination switch.
FR FOG SW [On/Off]	Indicates condition of front fog lamp switch operation of combination switch.

BATTERY SAVER

BATTERY SAVER : CONSULT Function (BCM - BATTERY SAVER)

INFOID:0000000012542307

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 back door 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.
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].

WORK SUPPORT

Support Item	Setting		Description
BATTERY SAVER SET	ON*		Exterior lamp battery saver function ON.
	OFF		Exterior lamp battery saver function OFF.
ROOM LAMP TIMER SET	MODE 3*	10 min.	Sets interior room lamp battery saver timer operating time.
	MODE 2	60 min.	
	MODE 1	15 min.	

*: Initial setting

DIAGNOSIS SYSTEM (BCM) (WITHOUT INTELLIGENT KEY SYSTEM)
COMMON ITEM

COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

INFOID:0000000012542311

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			×	×	×		
Remote keyless entry system	MULTI REMOTE ENT			×	×	×		
Exterior lamp	HEAD LAMP			×	×	×		
Wiper and washer	WIPER			×	×	×		
Turn signal and hazard warning lamps	FLASHER			×	×			
Air conditioner	AIR CONDITIONER			×				
Combination switch	COMB SW			×				
BCM	BCM	×	×			×	×	×
Immobilizer	IMMU		×		×	×		
Interior room lamp battery saver	BATTERY SAVER			×	×	×		
Vehicle security system	THEFT ALM			×		×		
RAP system	RETAINED PWR			×		×		
Signal buffer system	SIGNAL BUFFER			×				
TPMS	AIR PRESSURE MONITOR		×	×	×	×		
Panic alarm system	PANIC ALARM				×			

HEADLAMP

HEADLAMP : CONSULT Function (BCM - HEAD LAMP)

INFOID:0000000012542312

DATA MONITOR

Monitor Item [Unit]	Description
IGN ON SW [On/Off]	Indicates condition of ignition switch ON position.
ACC ON SW [On/Off]	Indicates condition of ignition switch ACC position.
HI BEAM SW [On/Off]	Indicates condition of combination switch.
HEAD LAMP SW 1 [On/Off]	
HEAD LAMP SW 2 [On/Off]	
TAIL LAMP SW [On/Off]	
PASSING SW [On/Off]	
FR FOG SW [On/Off]	
DOOR SW-DR [On/Off]	Indicates condition of front door switch LH.
DOOR SW-AS [On/Off]	Indicates condition of front door switch RH.
DOOR SW-RR [On/Off]	Indicates condition of rear door switch RH.
DOOR SW-RL [On/Off]	Indicates condition of rear door switch LH.
DOOR SW-BK [On/Off]	Indicates condition of back door switch.
TURN SIGNAL R [On/Off]	Indicates condition of combination switch.
TURN SIGNAL L [On/Off]	
KEY ON SW [On/Off]	Indicates condition of key switch.
KEYLESS LOCK [On/Off]	Indicates condition of lock signal from keyfob.
PKB SW [On/Off]	Indicates park brake switch signal received from combination meter on CAN communication line.
ENGINE RUN [On/Off]	Indicates engine run signal received from ECM on CAN communication line.
VEHICLE SPEED [km/h/mph]	Indicates vehicle speed signal received from combination meter on CAN communication line.

ACTIVE TEST

Test Item	Description
TAIL LAMP	This test is able to check tail lamp operation [On/Off].
HEAD LAMP	This test is able to check head lamp operation [Hi/Low/Off].
FR FOG LAMP	This test is able to check front fog lamp operation [On/Off].
ILL DIM SIGNAL	This test is able to check head lamp illumination dimming operation [On/Off].

WORK SUPPORT

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

* : Initial setting

FLASHER

FLASHER : CONSULT Function (BCM - FLASHER)

INFOID:0000000012542313

DATA MONITOR

Monitor Item [Unit]	Description
HAZARD SW [On/Off]	Indicates condition of hazard switch.
TURN SIGNAL R [On/Off]	Indicates condition of turn signal function of combination switch.
TURN SIGNAL L [On/Off]	

ACTIVE TEST

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

COMB SW

COMB SW : CONSULT Function (BCM - COMB SW)

INFOID:0000000012542314

DATA MONITOR

Monitor Item [Unit]	Description
TURN SIGNAL R [On/Off]	Indicates condition of right turn signal operation of combination switch.
TURN SIGNAL L [On/Off]	Indicates condition of left turn signal operation of combination switch.
HI BEAM SW [On/Off]	Indicates condition of Hi beam switch operation of combination switch.
HEAD LAMP SW 1 [On/Off]	Indicates condition of head lamp switch 1 operation of combination switch.
HEAD LAMP SW 2 [On/Off]	Indicates condition of head lamp switch 2 operation of combination switch.
TAIL LAMP SW [On/Off]	Indicates condition of tail lamp switch operation of combination switch.
PASSING SW [On/Off]	Indicates condition of passing switch operation of combination switch.
FR FOG SW [On/Off]	Indicates condition of front fog lamp switch operation of combination switch.
FR WIPER HI [On/Off]	Indicates condition of front wiper operation of combination switch.
FR WIPER LOW [On/Off]	
FR WIPER INT [On/Off]	
FR WASHER SW [On/Off]	
INT VOLUME [1 - 7]	Indicates condition of intermittent front wiper operation of combination switch.
RR WIPER ON [On/Off]	Indicates condition of rear wiper operation of combination switch.
RR WIPER INT [On/Off]	
RR WASHER SW [On/Off]	

BATTERY SAVER

BATTERY SAVER : CONSULT Function (BCM - BATTERY SAVER)

INFOID:0000000012542315

DATA MONITOR

Monitor Item [Unit]	Description
IGN ON SW [On/Off]	Indicates condition of ignition switch ON position.
KEY ON SW [On/Off]	Indicates condition of key switch.
DOOR SW-DR [On/Off]	Indicates condition of front door switch LH.
DOOR SW-AS [On/Off]	Indicates condition of front door switch RH.
DOOR SW-RR [On/Off]	Indicates condition of rear door switch RH.
DOOR SW-RL [On/Off]	Indicates condition of rear door switch LH.
DOOR SW-BK [On/Off]	Indicates condition of back door switch.
CDL LOCK SW [On/Off]	Indicates condition of lock signal from door lock and unlock switch.

Monitor Item [Unit]	Description
CDL UNLOCK SW [On/Off]	Indicates condition of unlock signal from door lock and unlock switch.
KEYLESS LOCK [On/Off]	Indicates condition of lock signal from keyfob.
KEYLESS UNLOCK [On/Off]	Indicates condition of unlock signal from keyfob.
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.
ACC SW [On/Off]	Indicates condition of ignition switch ACC position.

ACTIVE TEST

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

WORK SUPPORT

Support Item	Setting		Description
ROOM LAMP TIMER SET	MODE 3*	10 min.	Sets interior room lamp battery saver timer operating time.
	MODE 2	60 min.	
	MODE 1	15 min.	

* : Initial setting

DIAGNOSIS SYSTEM (IPDM E/R)

Diagnosis Description

INFOID:0000000012542316

AUTO ACTIVE TEST

Description

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

- Front wiper (LO, HI)
- Parking lamp
- Side marker lamp
- License plate lamp
- Tail lamp
- Front fog lamp
- Headlamp (LO, HI)
- A/C compressor (magnet clutch)
- Cooling fan

Operation Procedure

NOTE:

Never perform auto active test in the following conditions:

- Passenger door is open
- CONSULT is connected

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

NOTE:

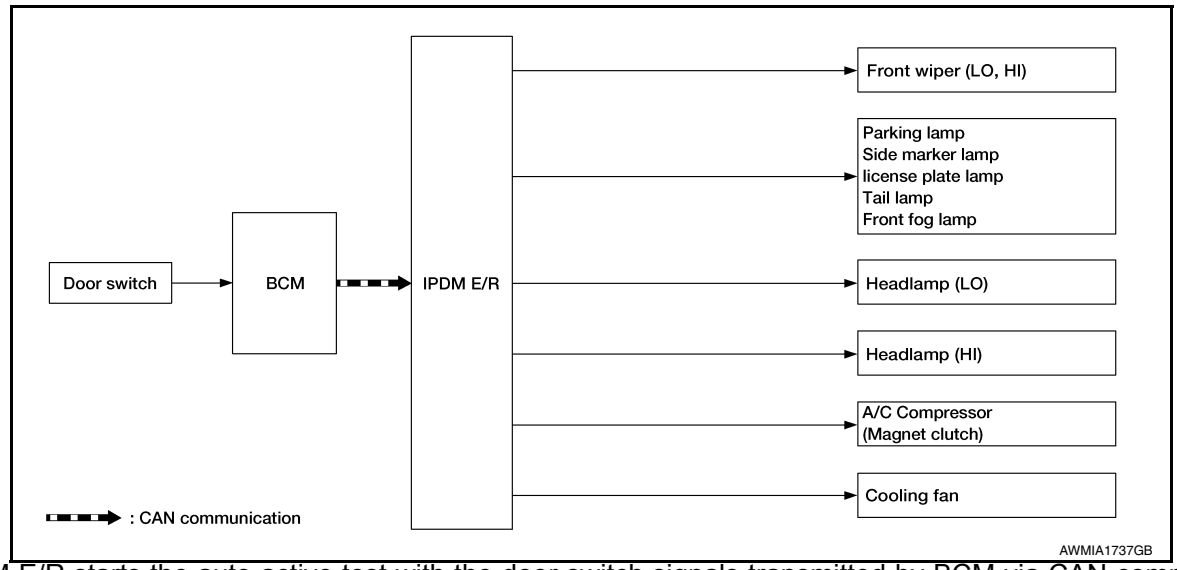
- When auto active test has to be cancelled halfway through test, turn the ignition switch OFF.
- When auto active test is not activated, door switch may be the cause. Check door switch. Refer to DLK-98, "Component Function Check" (with Intelligent Key system) or DLK-232, "Component Function Check" (without Intelligent Key system).

Inspection in Auto Active Test

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

Operation sequence	Inspection location	Operation
1	Front wiper	LO for 5 seconds → HI for 5 seconds
2	• Parking lamp • Side marker lamp • License plate lamp • Tail lamp • Front fog lamp (if equipped)	10 seconds
3	Headlamp	LO for 10 seconds →HI ON ⇔ OFF 5 times
4	A/C compressor (magnet clutch)	ON ⇔ OFF 5 times
5	Cooling fan	LO for 5 seconds → MID for 3 seconds → HI for 2 seconds

Concept of Auto Active Test



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

Diagnosis Chart in Auto Active Test

Symptom	Inspection contents		Possible cause
Any of the following components do not operate: • Parking lamp • Side marker lamp • License plate lamp • Tail lamp • Front fog lamp • Headlamp (HI, LO) • Front wiper (HI, LO)	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
A/C compressor does not operate	Perform auto active test. Does the magnet clutch operate?	YES	• BCM signal input circuit • CAN communication signal between BCM and ECM • CAN communication signal between ECM and IPDM E/R
		NO	• Magnet clutch • Harness or connector between IPDM E/R and magnet clutch • IPDM E/R
Cooling fan does not operate	Perform auto active test. Does the cooling fan operate?	YES	• ECM signal input circuit • CAN communication signal between ECM and IPDM E/R
		NO	• Cooling fan motor • Harness or connector between IPDM E/R and cooling fan motor • IPDM E/R

CONSULT Function (IPDM E/R)

INFOID:0000000012542317

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.

Direct Diagnostic Mode	Description
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-20, "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
THFT HRN REQ [On/Off]		Indicates theft warning horn request signal received from BCM on CAN communication line
HORN CHIRP [On/Off]		Indicates horn reminder signal received from BCM on CAN communication line

ACTIVE TEST

Test item	Description
HORN	This test is able to check horn operation [On].
FRONT WIPER	This test is able to check wiper motor operation [Hi/Lo/Off].

Test item	Description
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-13, "CAN Diagnostic Support Monitor".

ECU DIAGNOSIS INFORMATION

BCM, IPDM E/R

List of ECU Reference

INFOID:0000000012432791

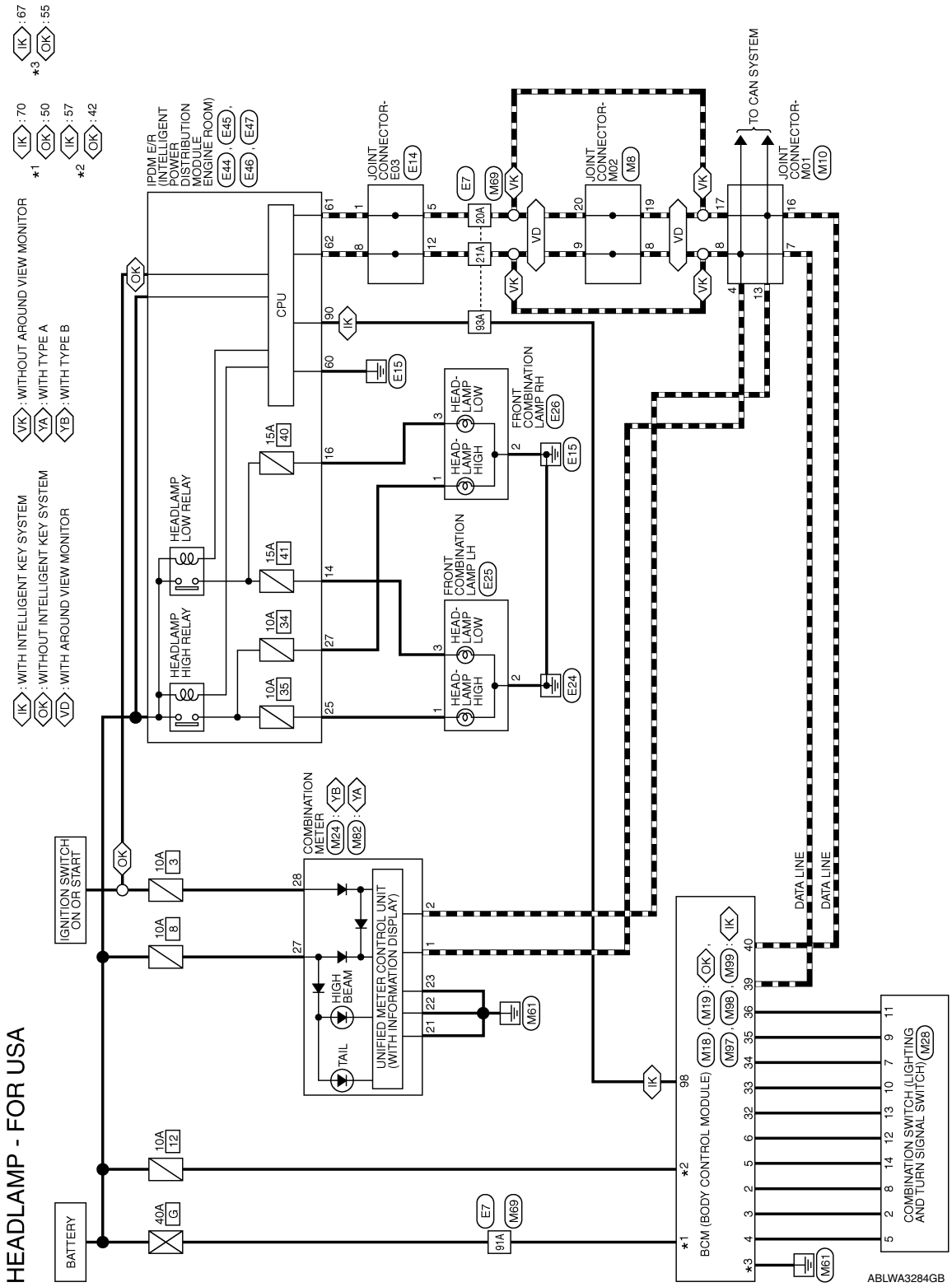
ECU	Reference
BCM (with Intelligent Key system)	BCS-30, "Reference Value"
	BCS-48, "Fail-safe"
	BCS-49, "DTC Inspection Priority Chart"
	BCS-50, "DTC Index"
BCM (without Intelligent Key system)	BCS-101, "Reference Value"
	BCS-115, "Fail-safe"
	BCS-115, "DTC Inspection Priority Chart"
	BCS-115, "DTC Index"
IPDM E/R	PCS-13, "Reference Value"
	PCS-19, "Fail-safe"
	PCS-20, "DTC Index"

WIRING DIAGRAM

HEADLAMP

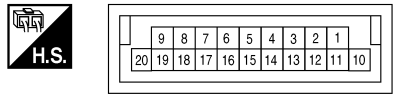
Wiring Diagram - For USA

INFOID:0000000012432792



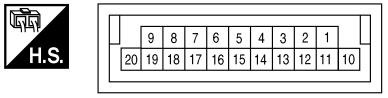
HEADLAMP - FOR USA CONNECTORS

Connector No.	M8
Connector Name	JOINT CONNECTOR-M02
Connector Color	GREEN



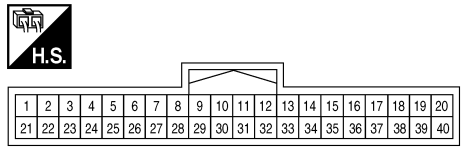
Terminal No.	Color of Wire	Signal Name
8	L	–
9	L	–
19	P	–
20	P	–

Connector No.	M10
Connector Name	JOINT CONNECTOR-M01
Connector Color	BLUE



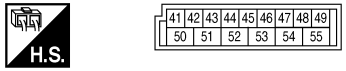
Terminal No.	Color of Wire	Signal Name
4	L	–
7	L	–
8	L	–
13	P	–
16	P	–
17	P	–

Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)
Connector Color	WHITE



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

Connector No.	M19
Connector Name	BCM (BODY CONTROL MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
42	Y	BATTERY (FUSE)
50	G	BATTERY (F/L)
55	B	GND

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Terminal No.	Color of Wire	Signal Name
9	GR	–
10	V	–
11	LG	–
12	R	–
13	P	–
14	G	–

Connector No.	M28
Connector Name	COMBINATION SWITCH (LIGHTING AND TURN SIGNAL 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	Y	–
5	L	–
7	W	–
8	BR	–

Connector No.	M82
Connector Name	COMBINATION METER (WITH TYPE A)
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	L	CAN-H
2	P	CAN-L
21	B	GND (ILLUMINATION)
22	B	GND (POWER)
23	B	GND (CIRCUIT)
27	R/W	BAT
28	GR	IGN

Connector No.	M24
Connector Name	COMBINATION METER (WITH TYPE B)
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	L	CAN-H
2	P	CAN-L
21	B	GND (ILL)
22	B	GND (POWER)
23	B	GND (CIRCUIT)
27	R/W	BAT
28	GR	IGN

Connector No.	M69
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

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

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

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

81A	80A	79A	78A	77A	76A	75A	74A	73A	72A	71A
	90A	89A	88A	87A	86A	85A	84A	83A	82A	

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

Terminal No.	Color of Wire	Signal Name
20A	P	–
21A	L	–
91A	G	–
93A	BG	– (WITH INTELLIGENT KEY SYSTEM)

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Connector No.	M97
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	BLACK

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	BR	COMBINATION SW INPUT 5
3	Y	COMBINATION SW INPUT 4
4	L	COMBINATION SW INPUT 3
5	G	COMBINATION SW INPUT 2
6	R	COMBINATION SW INPUT 1
32	P	COMBINATION SW OUTPUT 5
33	V	COMBINATION SW OUTPUT 4
34	W	COMBINATION SW OUTPUT 3
35	GR	COMBINATION SW OUTPUT 2
36	LG	COMBINATION SW OUTPUT 1
39	L	CAN-H
40	P	CAN-L

Connector No.	M98
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

H.S.

71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110

Terminal No.	Color of Wire	Signal Name
98	BG	IGN RELAY OUTPUT 1 (USM)

Connector No.	M99
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

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	Y	BATTERY (FUSE)
67	B	GND
70	G	BATTERY (F/L)

ABLIA8102GB

Connector No.	E7
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
20A	P	–
21A	L	–
91A	Y	–
93A	L	–

Connector No.	E14
Connector Name	JOINT CONNECTOR-E03
Connector Color	BLUE

H.S.

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

Connector No.	E25
Connector Name	FRONT COMBINATION LAMP LH
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	G	–
2	B	– (WITHOUT DAYTIME RUNNING LIGHT SYSTEM)
3	L	–

Connector No.	E26
Connector Name	FRONT COMBINATION LAMP RH
Connector Color	BLACK

H.S.

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

Connector No.	E44
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BROWN

H.S.

Terminal No.	Color of Wire	Signal Name
14	L	HEADLAMP LO LH
16	P	HEADLAMP LO RH

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Connector No.	E45
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BROWN

H.S.

21	20		19	18	17
28	27	26	25	24	23	22

Terminal No.	Color of Wire	Signal Name
25	G	HEADLAMP HI LH
27	Y	HEADLAMP HI RH

Connector No.	E46
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

64	63	62	61	60	59	58	57	56	55	54	53
76	75	74	73	72	71	70	69	68	67	66	65

Terminal No.	Color of Wire	Signal Name
60	B	S-GND
61	P	CAN-L
62	L	CAN-H

Connector No.	E47
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENEGINE ROOM)
Connector Color	WHITE

H.S.

84	83	82	81	80	79	78	77
92	91	90	89	88	87	86	85

Terminal No.	Color of Wire	Signal Name
90	L	IGN SIGNAL

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Wiring Diagram - For Canada

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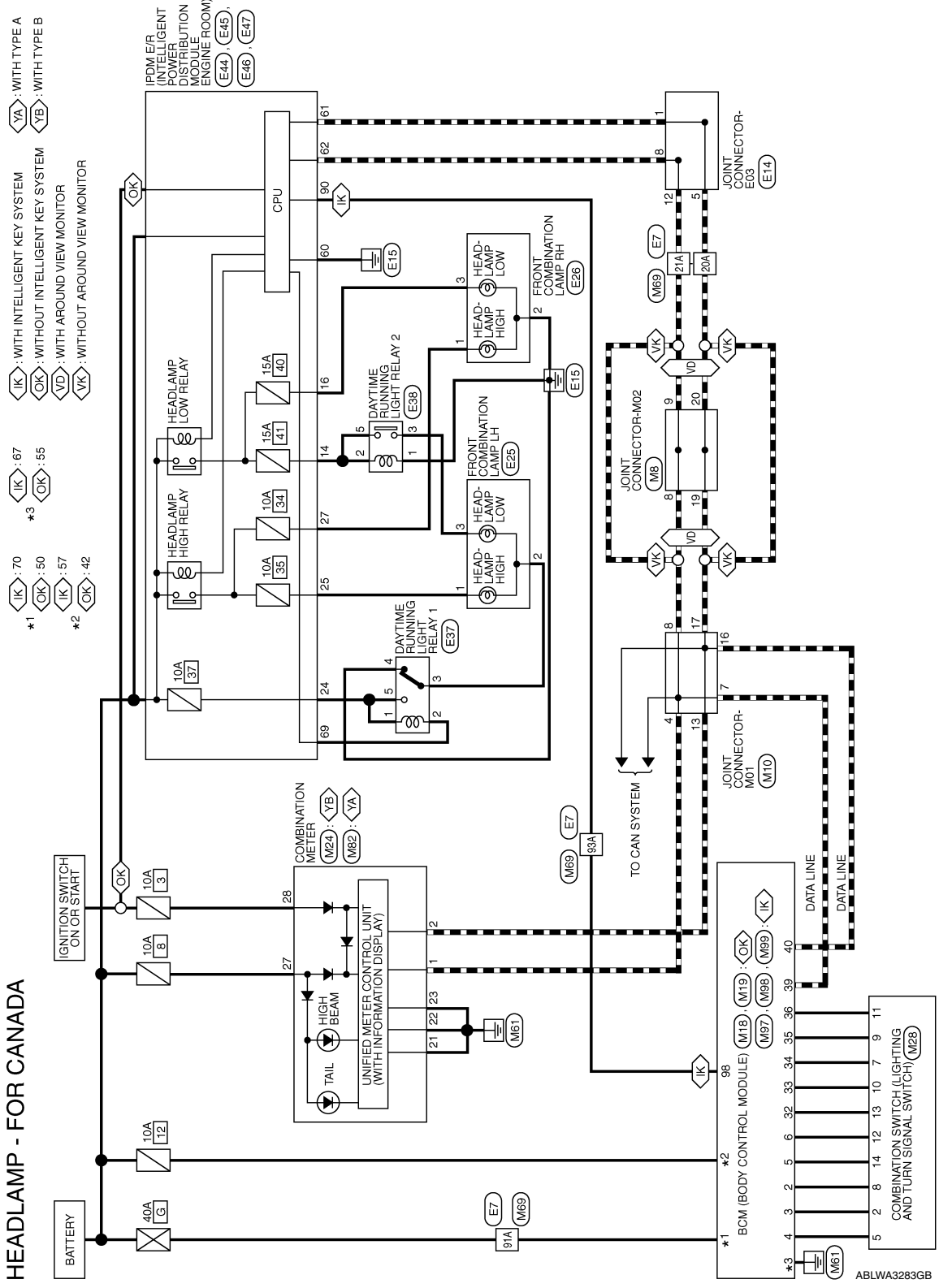
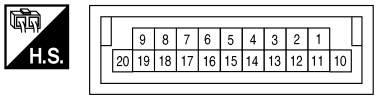


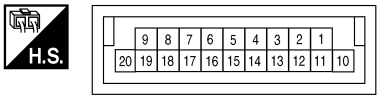
HEADLAMP - FOR CANADA CONNECTORS

Connector No.	M8
Connector Name	JOINT CONNECTOR-M02
Connector Color	GREEN



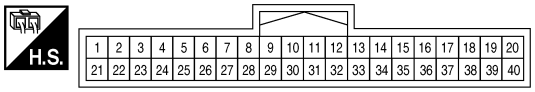
Terminal No.	Color of Wire	Signal Name
8	L	–
9	L	–
19	P	–
20	P	–

Connector No.	M10
Connector Name	JOINT CONNECTOR-M01
Connector Color	BLUE



Terminal No.	Color of Wire	Signal Name
4	L	–
7	L	–
8	L	–
13	P	–
16	P	–
17	P	–

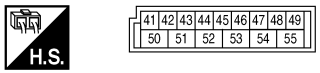
Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	BR	COMBINATION SW INPUT 5
3	Y	COMBINATION SW INPUT 4
4	L	COMBINATION SW INPUT 3
5	G	COMBINATION SW INPUT 2

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

Connector No.	M19
Connector Name	BCM (BODY CONTROL MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
42	Y	BATTERY (FUSE)
50	G	BATTERY (F/L)
55	B	GND

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Connector No.	M69
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
20A	P	–
21A	L	–
91A	G	–
93A	BG	– (WITH INTELLIGENT KEY SYSTEM)

Connector No.	M28
Connector Name	COMBINATION SWITCH (LIGHTING AND TURN SIGNAL SWITCH)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
2	Y	–
5	L	–
7	W	–
8	BR	–
9	GR	–
10	V	–
11	LG	–
12	R	–
13	P	–
14	G	–

Connector No.	M24
Connector Name	COMBINATION METER (WITH TYPE B)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	L	CAN-H
2	P	CAN-L
21	B	GND (ILL)
22	B	GND (POWER)
23	B	GND (CIRCUIT)
27	R/W	BAT
28	GR	IGN

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Connector No.	M82
Connector Name	COMBINATION METER (WITH TYPE A)
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	L	CAN-H
2	P	CAN-L
21	B	GND (ILLUMINATION)
22	B	GND (POWER)
23	B	GND (CIRCUIT)
27	R/W	BAT
28	GR	IGN

Connector No.	M97
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	BLACK

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	BR	COMBINATION SW INPUT 5
3	Y	COMBINATION SW INPUT 4

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

Connector No.	M98
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

H.S.

71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110

Terminal No.	Color of Wire	Signal Name
98	BG	IGN RELAY OUTPUT 1 (USM)

Connector No.	M99
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

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	Y	BATTERY (FUSE)
67	B	GND
70	G	BATTERY (F/L)

ABLIA8098GB

Connector No.	E7
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
20A	P	–
21A	L	–
91A	Y	–
93A	L	–

Connector No.	E14
Connector Name	JOINT CONNECTOR-E03
Connector Color	BLUE

H.S.

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

Connector No.	E25
Connector Name	FRONT COMBINATION LAMP LH
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	G	–
2	GR	– (WITH DAYTIME RUNNING LIGHT SYSTEM)
3	L	–

Connector No.	E26
Connector Name	FRONT COMBINATION LAMP RH
Connector Color	BLACK

H.S.

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

Connector No.	E37
Connector Name	DAYTIME RUNNING LIGHT RELAY 1
Connector Color	BLACK

H.S.

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

ABLIA8099GB

Connector No.	E38
Connector Name	DAYTIME RUNNING LIGHT RELAY 2
Connector Color	BLUE

H.S.

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

Connector No.	E44
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BROWN

H.S.

Terminal No.	Color of Wire	Signal Name
14	L	HEADLAMP LO LH
16	P	HEADLAMP LO RH

Connector No.	E45
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BROWN

H.S.

Terminal No.	Color of Wire	Signal Name
24	W	DTRL
25	G	HEADLAMP HI LH
27	Y	HEADLAMP HI RH

Connector No.	E46
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
60	B	S-GND
61	P	CAN-L
62	L	CAN-H
69	GR	DTRL RLY

Connector No.	E47
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

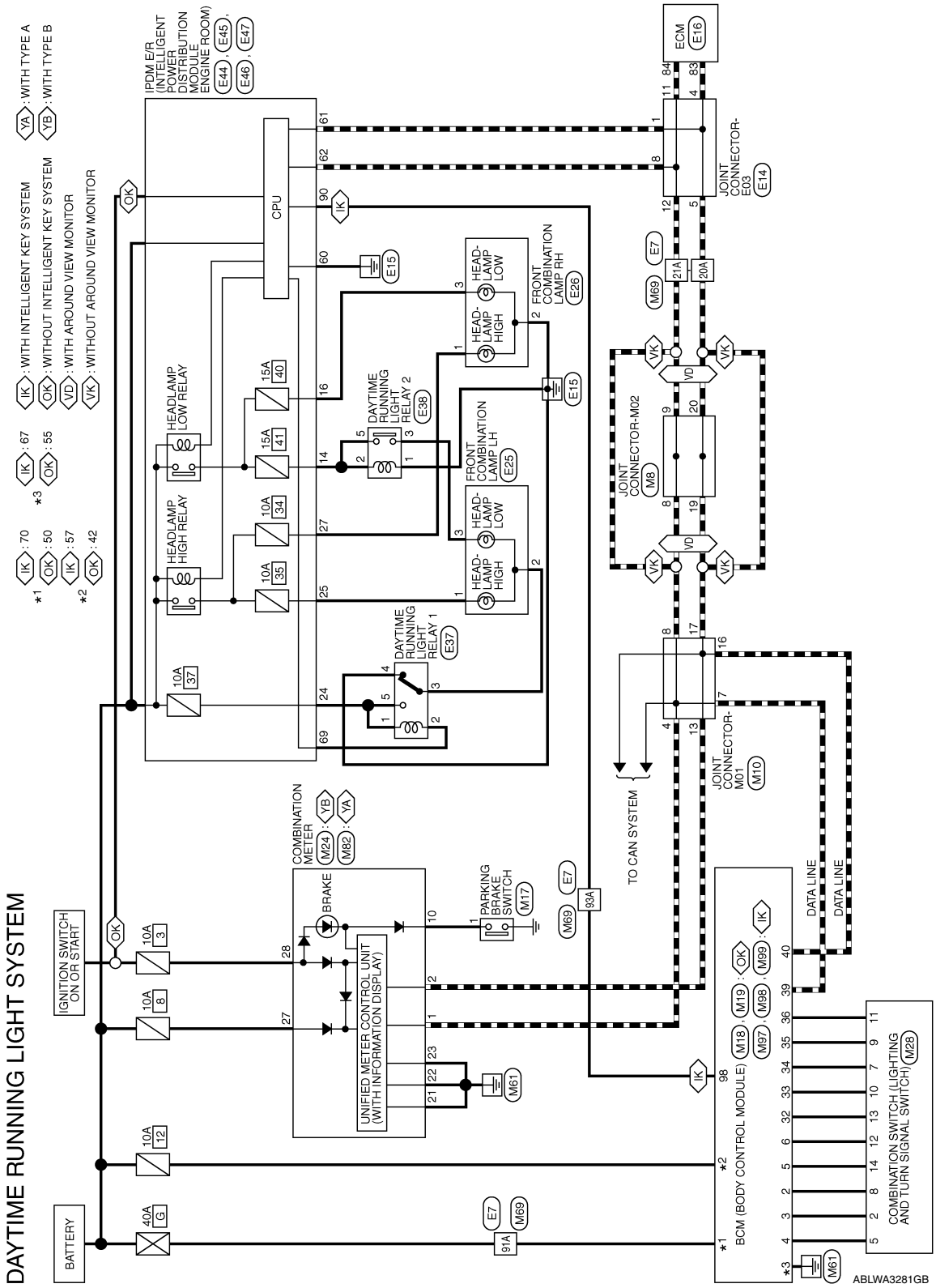
Terminal No.	Color of Wire	Signal Name
90	L	IGN SIGNAL

ABLIA8100GB

DAYTIME LIGHT SYSTEM

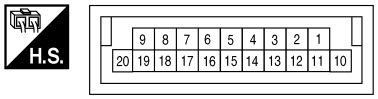
Wiring Diagram

INFOID:0000000012432794



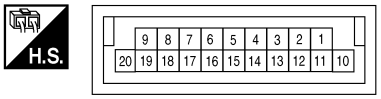
DAYTIME RUNNING LIGHT SYSTEM CONNECTORS

Connector No.	M8
Connector Name	JOINT CONNECTOR-M02
Connector Color	GREEN



Terminal No.	Color of Wire	Signal Name
8	L	–
9	L	–
19	P	–
20	P	–

Connector No.	M10
Connector Name	JOINT CONNECTOR-M01
Connector Color	BLUE

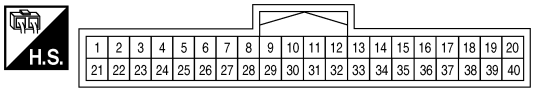


Terminal No.	Color of Wire	Signal Name
4	L	–
7	L	–
8	L	–
13	P	–
16	P	–
17	P	–

Connector No.	M17
Connector Name	PARKING BRAKE SWITCH
Connector Color	BLACK

Terminal No.	Color of Wire	Signal Name
1	SB	–

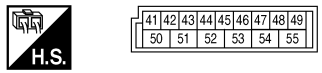
Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	BR	COMBINATION SW INPUT 5
3	Y	COMBINATION SW INPUT 4
4	L	COMBINATION SW INPUT 3
5	G	COMBINATION SW INPUT 2

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

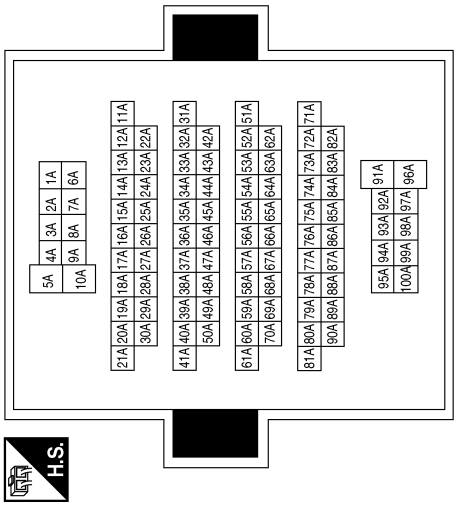
Connector No.	M19
Connector Name	BCM (BODY CONTROL MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
42	Y	BATTERY (FUSE)
50	G	BATTERY (F/L)
55	B	GND

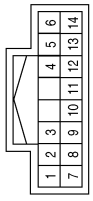
AALIA2870GB

Connector No.	M69
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
20A	P	–
21A	L	–
91A	G	–
93A	BG	– (WITH INTELLIGENT KEY SYSTEM)

Connector No.	M28
Connector Name	COMBINATION SWITCH (LIGHTING AND TURN SIGNAL SWITCH)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	Y	–
5	L	–
7	W	–
8	BR	–
9	GR	–
10	V	–
11	LG	–
12	R	–
13	P	–
14	G	–

Connector No.	M24
Connector Name	COMBINATION METER (WITH TYPE B)
Connector Color	WHITE

Terminal No.	Color of Wire	Signal Name
1	L	CAN-H
2	P	CAN-L
10	SB	PKB SW
21	B	GND (ILL)
22	B	GND (POWER)
23	B	GND (CIRCUIT)
27	R/W	BAT
28	GR	IGN

ABLIA8090GB

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

Connector No.	M82
Connector Name	COMBINATION METER (WITH TYPE A)
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	L	CAN-H
2	P	CAN-L
10	SB	PKB SW
21	B	GND (ILLUMINATION)
22	B	GND (POWER)
23	B	GND (CIRCUIT)
27	R/W	BAT
28	GR	IGN

Connector No.	M97
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	BLACK

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	BR	COMBINATION SW INPUT 5
3	Y	COMBINATION SW INPUT 4

Connector No.	M99
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

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	Y	BATTERY (FUSE)
67	B	GND
70	G	BATTERY (F/L)

Connector No.	M98
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

H.S.

71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110

Terminal No.	Color of Wire	Signal Name
98	BG	IGN RELAY OUTPUT 1 (USM)

ABLIA8091GB

Connector No.	E7
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

11A	12A	13A	14A	15A	16A	17A	18A	19A	20A	21A
	22A	23A	24A	25A	26A	27A	28A	29A	30A	
31A	32A	33A	34A	35A	36A	37A	38A	39A	40A	41A
	42A	43A	44A	45A	46A	47A	48A	49A	50A	
51A	52A	53A	54A	55A	56A	57A	58A	59A	60A	61A
	62A	63A	64A	65A	66A	67A	68A	69A	70A	
71A	72A	73A	74A	75A	76A	77A	78A	79A	80A	81A
	82A	83A	84A	85A	86A	87A	88A	89A	90A	

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

Terminal No.	Color of Wire	Signal Name
20A	P	–
21A	L	–
91A	Y	–
93A	L	–

Connector No.	E14
Connector Name	JOINT CONNECTOR-E03
Connector Color	BLUE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	P	–
4	P	–
5	P	–
8	L	–
11	L	–
12	L	–

Connector No.	E16
Connector Name	ECM
Connector Color	BLACK

H.S.

81	85	89	93	97	101	105	109
82	86	90	94	98	102	106	110
83	87	91	95	99	103	107	111
84	88	92	96	100	104	108	112

Terminal No.	Color of Wire	Signal Name
83	P	CAN-L
84	L	CAN-H

Connector No.	E25
Connector Name	FRONT COMBINATION LAMP LH
Connector Color	BLACK

H.S.

3	2	1

Terminal No.	Color of Wire	Signal Name
1	G	–
2	GR	– (WITH DAYTIME RUNNING LIGHT SYSTEM)
3	L	–

Connector No.	E26
Connector Name	FRONT COMBINATION LAMP RH
Connector Color	BLACK

H.S.

3	2	1

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

ABLIA8092GB

Connector No.	E37
Connector Name	DAYTIME RUNNING LIGHT RELAY 1
Connector Color	BLACK

H.S.

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

Connector No.	E38
Connector Name	DAYTIME RUNNING LIGHT RELAY 2
Connector Color	BLUE

H.S.

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

Connector No.	E44
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BROWN

H.S.

Terminal No.	Color of Wire	Signal Name
14	L	HEADLAMP LO LH
16	P	HEADLAMP LO RH

Connector No.	E47
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
90	L	IGN SIGNAL

Connector No.	E45
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BROWN

H.S.

Terminal No.	Color of Wire	Signal Name
24	W	DTRL
25	G	HEADLAMP HI LH
27	Y	HEADLAMP HI RH

Connector No.	E46
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

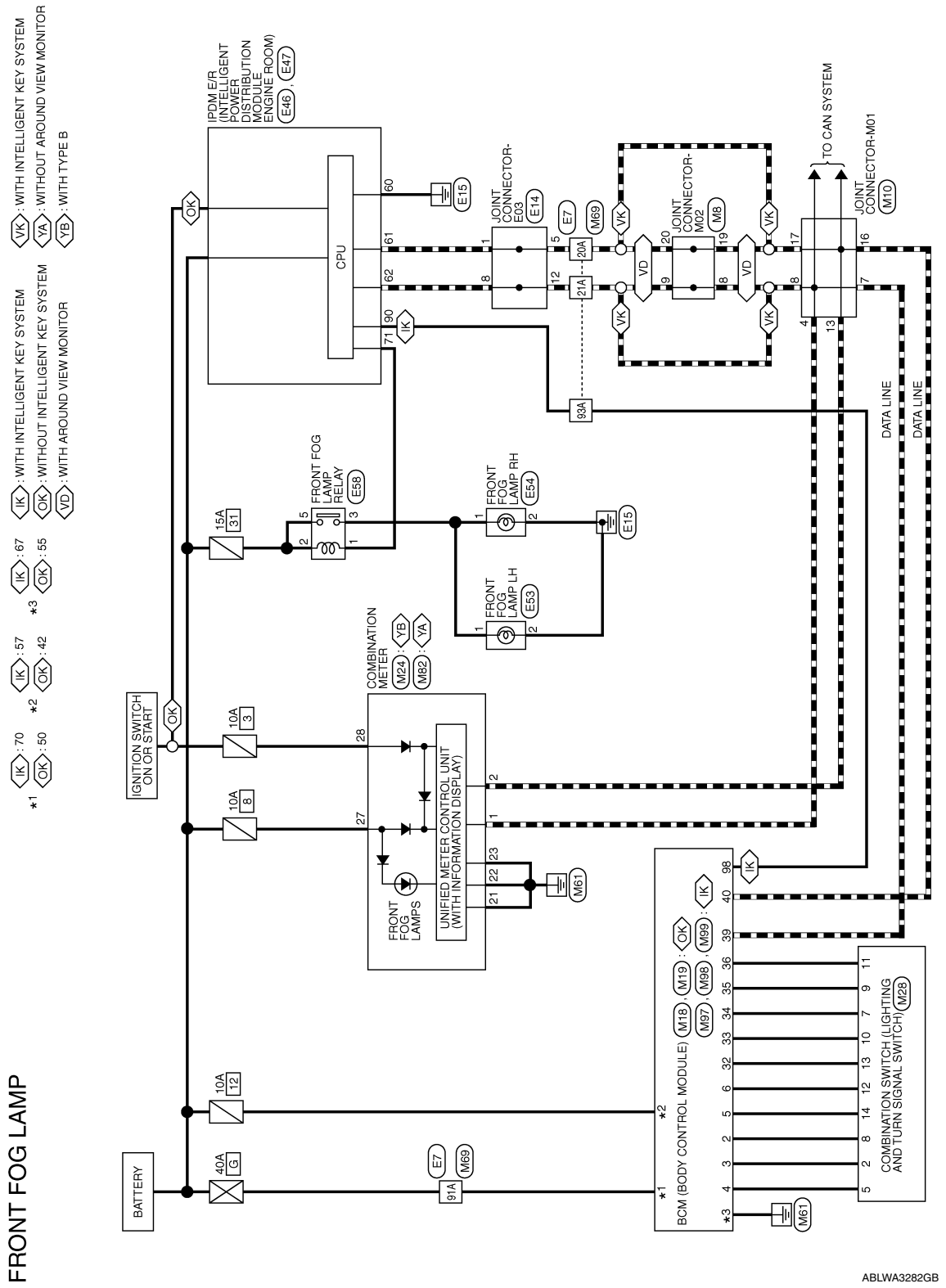
Terminal No.	Color of Wire	Signal Name
60	B	S-GND
61	P	CAN-L
62	L	CAN-H
69	GR	DTRL RLY

ABLIA8093GB

FRONT FOG LAMP

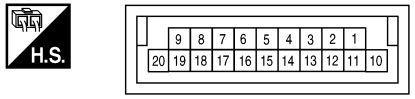
Wiring Diagram

INFOID:0000000012432795



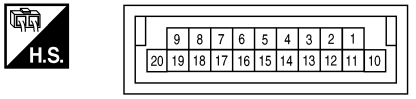
FRONT FOG LAMP CONNECTORS

Connector No.	M8
Connector Name	JOINT CONNECTOR-M02
Connector Color	GREEN



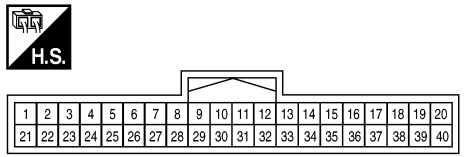
Terminal No.	Color of Wire	Signal Name
8	L	–
9	L	–
19	P	–
20	P	–

Connector No.	M10
Connector Name	JOINT CONNECTOR-M01
Connector Color	BLUE



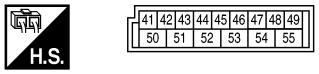
Terminal No.	Color of Wire	Signal Name
4	L	–
7	L	–
8	L	–
13	P	–
16	P	–
17	P	–

Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)
Connector Color	WHITE



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

Connector No.	M19
Connector Name	BCM (BODY CONTROL MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
42	Y	BATTERY (FUSE)
50	G	BATTERY (F/L)
55	B	GND

AALIA1443GB

Connector No.	M24
Connector Name	COMBINATION METER (WITH TYPE B)
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	L	CAN-H
2	P	CAN-L
21	B	GND (ILL)
22	B	GND (POWER)
23	B	GND (CIRCUIT)
27	R/W	BAT
28	GR	IGN

Connector No.	M28
Connector Name	COMBINATION SWITCH (LIGHTING AND TURN SIGNAL 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	Y	–
5	L	–
7	W	–
8	BR	–

Terminal No.	Color of Wire	Signal Name
9	GR	–
10	V	–
11	LG	–
12	R	–
13	P	–
14	G	–

Connector No.	M69
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

21A	20A	19A	18A	17A	16A	15A	14A	13A	12A	11A	41A	40A	39A	38A	37A	36A	35A	34A	33A	32A	31A
	30A	29A	28A	27A	26A	25A	24A	23A	22A			50A	49A	48A	47A	46A	45A	44A	43A	42A	
61A	60A	59A	58A	57A	56A	55A	54A	53A	52A	51A	81A	80A	79A	78A	77A	76A	75A	74A	73A	72A	71A
	70A	69A	68A	67A	66A	65A	64A	63A	62A			90A	89A	88A	87A	86A	85A	84A	83A	82A	

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

Terminal No.	Color of Wire	Signal Name
20A	P	–
21A	L	–
91A	G	–
93A	BG	– (WITH INTELLIGENT KEY SYSTEM)

Connector No.	M82
Connector Name	COMBINATION METER (WITH TYPE A)
Connector Color	WHITE

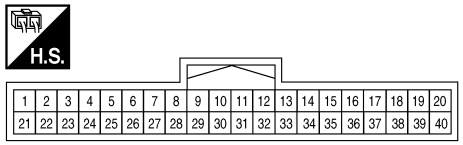
H.S.

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	L	CAN-H
2	P	CAN-L
21	B	GND (ILLUMINATION)
22	B	GND (POWER)
23	B	GND (CIRCUIT)
27	R/W	BAT
28	GR	IGN

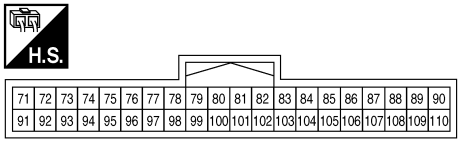
ABLIA8094GB

Connector No.	M97
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	BLACK



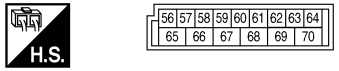
Terminal No.	Color of Wire	Signal Name
2	BR	COMBINATION SW INPUT 5
3	Y	COMBINATION SW INPUT 4
4	L	COMBINATION SW INPUT 3
5	G	COMBINATION SW INPUT 2
6	R	COMBINATION SW INPUT 1
32	P	COMBINATION SW OUTPUT 5
33	V	COMBINATION SW OUTPUT 4
34	W	COMBINATION SW OUTPUT 3
35	GR	COMBINATION SW OUTPUT 2
36	LG	COMBINATION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

Connector No.	M98
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	WHITE



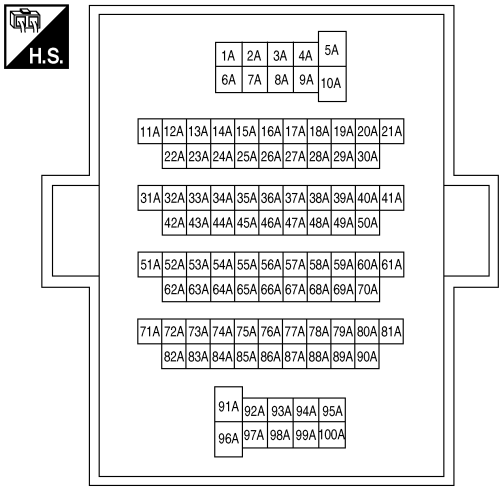
Terminal No.	Color of Wire	Signal Name
98	BG	IGN RELAY OUTPUT 1 (USM)

Connector No.	M99
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
57	Y	BATTERY (FUSE)
67	B	GND
70	G	BATTERY (F/L)

Connector No.	E7
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
20A	P	–
21A	L	–
91A	Y	–
93A	L	–

ABLIA8095GB

Connector No.	E14
Connector Name	JOINT CONNECTOR-E03
Connector Color	BLUE

H.S.

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

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

Connector No.	E46
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

64	63	62	61	60	59	58	57	56	55	54	53
76	75	74	73	72	71	70	69	68	67	66	65

Terminal No.	Color of Wire	Signal Name
60	B	S-GND
61	P	CAN-L
62	L	CAN-H
71	W	FR FOG RLY

Connector No.	E47
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

84	83	82	81	80	79	78	77
92	91	90	89	88	87	86	85

Terminal No.	Color of Wire	Signal Name
90	L	IGN SIGNAL

Connector No.	E53
Connector Name	FRONT FOG LAMP LH
Connector Color	BLACK

H.S.

2	1

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

Connector No.	E54
Connector Name	FRONT FOG LAMP RH
Connector Color	BLACK

H.S.

2	1

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

Connector No.	E58
Connector Name	FRONT FOG LAMP RELAY
Connector Color	BLUE

H.S.

3		1
	5	
2		

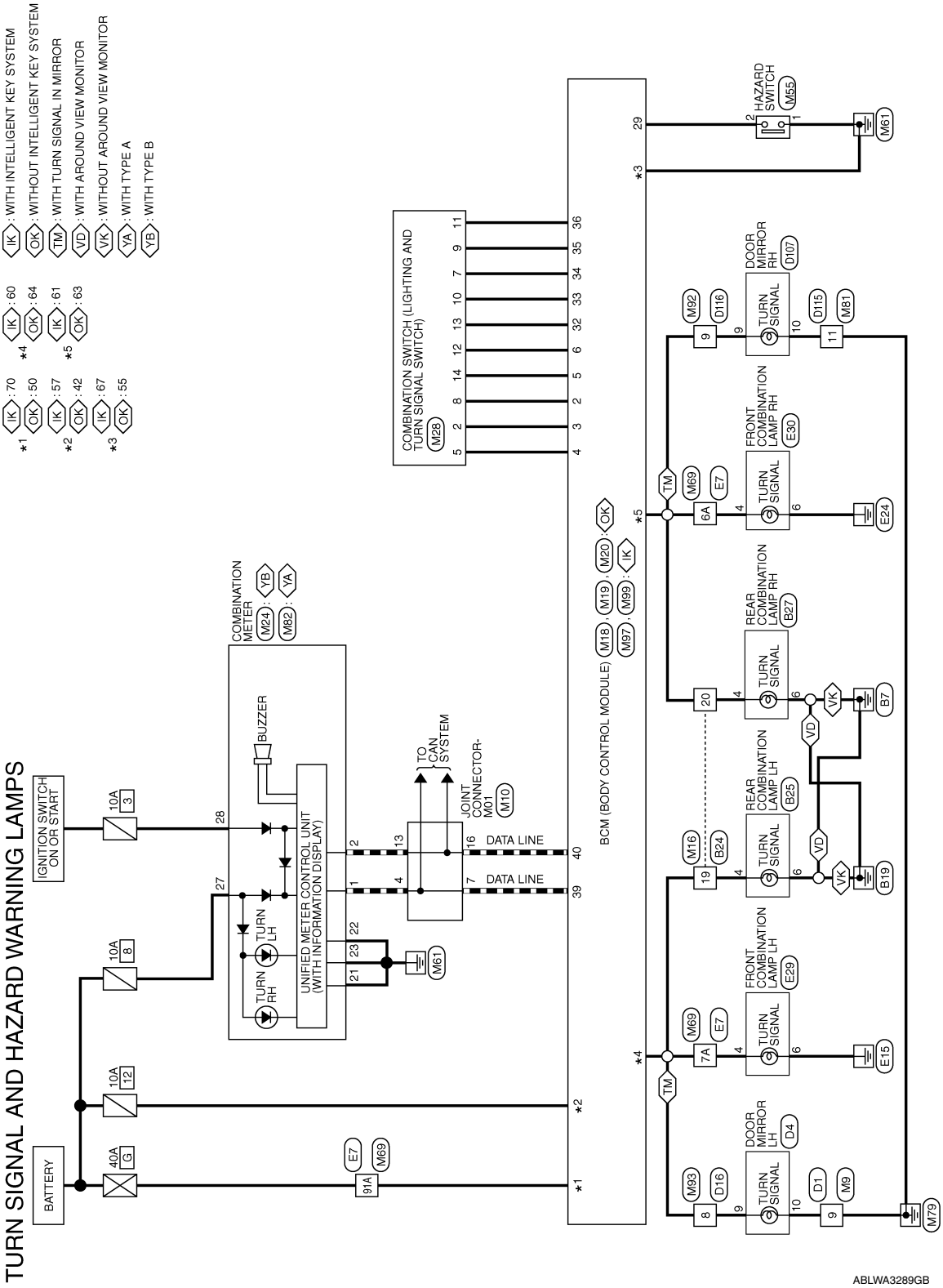
Terminal No.	Color of Wire	Signal Name
1	W	–
2	V	–
3	Y	–
5	V	–

ABLIA8096GB

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

Wiring Diagram

INFOID:0000000012432796



TURN SIGNAL AND HAZARD WARNING LAMPS CONNECTORS

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

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.	M10
Connector Name	JOINT CONNECTOR-M01
Connector Color	BLUE

H.S.

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

Terminal No.	Color of Wire	Signal Name
4	L	–
7	L	–
13	P	–
16	P	–

Connector No.	M16
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	V	–
20	W	–

Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE) (WITHOUT INTELLIGENT KEY 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
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	BR	COMBINATION SW INPUT 5
3	Y	COMBINATION SW INPUT 4
4	L	COMBINATION SW INPUT 3
5	G	COMBINATION SW INPUT 2
6	R	COMBINATION SW INPUT 1
29	BG	HAZARD SW

Terminal No.	Color of Wire	Signal Name
32	P	COMBINATION SW OUTPUT 5
33	V	COMBINATION SW OUTPUT 4
34	W	COMBINATION SW OUTPUT 3
35	GR	COMBINATION SW OUTPUT 2
36	LG	COMBINATION SW OUTPUT 1
39	L	CAN-H
40	P	CAN-L

Connector No.	M19
Connector Name	BCM (BODY CONTROL MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)
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
42	Y	BATTERY (FUSE)
50	G	BATTERY (F/L)
55	B	GND

ABLIA8115GB

Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)
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
63	W	FLASHER OUTPUT (RIGHT)
64	V	FLASHER OUTPUT (LEFT)

Connector No.	M24
Connector Name	COMBINATION METER (WITH TYPE B)
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	L	CAN-H
2	P	CAN-L
21	B	GND (ILL)
22	B	GND (POWER)
23	B	GND (CIRCUIT)
27	R/W	BAT
28	GR	IGN

Connector No.	M28
Connector Name	COMBINATION SWITCH (LIGHTING AND TURN SIGNAL 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	Y	–
5	L	–
7	W	–
8	BR	–
9	GR	–
10	V	–
11	LG	–
12	R	–
13	P	–
14	G	–

Connector No.	M55
Connector Name	HAZARD SWITCH
Connector Color	WHITE

H.S.

3	1	2	4

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

ABLIA8116GB

Connector No.	M69
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

21A	20A	19A	18A	17A	16A	15A	14A	13A	12A	11A
	30A	29A	28A	27A	26A	25A	24A	23A	22A	
41A	40A	39A	38A	37A	36A	35A	34A	33A	32A	31A
	50A	49A	48A	47A	46A	45A	44A	43A	42A	
61A	60A	59A	58A	57A	56A	55A	54A	53A	52A	51A
	70A	69A	68A	67A	66A	65A	64A	63A	62A	
81A	80A	79A	78A	77A	76A	75A	74A	73A	72A	71A
	90A	89A	88A	87A	86A	85A	84A	83A	82A	
		95A	94A	93A	92A	91A				
		100A	99A	98A	97A	96A				

Terminal No.	Color of Wire	Signal Name
6A	G	–
7A	V	–
91A	G	–

Connector No.	M81
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
11	B	–

Connector No.	M82
Connector Name	COMBINATION SWITCH (WITH TYPE A)
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	L	CAN-H
2	P	CAN-L
21	B	GND (ILLUMINATION)
22	B	GND (POWER)
23	B	GND (CIRCUIT)
27	R/W	BAT
28	GR	IGN

Connector No.	M92
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
9	W	–

Connector No.	M93
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
8	V	–

ABLIA8117GB

Connector No.	M97
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	BLACK

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	BR	COMBINATION SW INPUT 5

Terminal No.	Color of Wire	Signal Name
3	Y	COMBINATION SW INPUT 4
4	L	COMBINATION SW INPUT 3
5	G	COMBINATION SW INPUT 2
6	R	COMBINATION SW INPUT 1
29	BG	HAZARD SW
32	P	COMBINATION SW OUTPUT 5

Terminal No.	Color of Wire	Signal Name
33	V	COMBINATION SW OUTPUT 4
34	W	COMBINATION SW OUTPUT 3
35	GR	COMBINATION SW OUTPUT 2
36	LG	COMBINATION SW OUTPUT 1
39	L	CAN-H
40	P	CAN-L

Connector No.	M99
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

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	Y	BATTERY (FUSE)
60	V	FLASHER OUTPUT (LEFT)
61	W	FLASHER OUTPUT (RIGHT)
67	B	GND
70	G	BATTERY (F/L)

Connector No.	E7
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

									1A	2A	3A	4A	5A						
									6A	7A	8A	9A	10A						
11A	12A	13A	14A	15A	16A	17A	18A	19A	20A	21A									
	22A	23A	24A	25A	26A	27A	28A	29A	30A										
31A	32A	33A	34A	35A	36A	37A	38A	39A	40A	41A									
	42A	43A	44A	45A	46A	47A	48A	49A	50A										
51A	52A	53A	54A	55A	56A	57A	58A	59A	60A	61A									
	62A	63A	64A	65A	66A	67A	68A	69A	70A										
71A	72A	73A	74A	75A	76A	77A	78A	79A	80A	81A									
	82A	83A	84A	85A	86A	87A	88A	89A	90A										
										91A	92A	93A	94A	95A					
										96A	97A	98A	99A	100A					

Terminal No.	Color of Wire	Signal Name
6A	W	–
7A	V	–
91A	Y	–

ABLIA8118GB

Connector No.	E29
Connector Name	FRONT COMBINATION LAMP LH
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
4	V	–
6	B	–

Connector No.	E30
Connector Name	FRONT COMBINATION LAMP RH
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
4	W	–
6	B	–

Connector No.	B24
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
19	G	–
20	W	–

Connector No.	B25
Connector Name	REAR COMBINATION LAMP LH
Connector Color	WHITE

H.S.

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

Connector No.	B27
Connector Name	REAR COMBINATION LAMP RH
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
4	W	–
6	B	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
9	B	–

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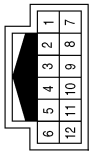
Connector No.	D4
Connector Name	DOOR MIRROR LH
Connector Color	WHITE

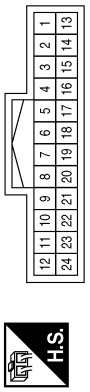
H.S.



Terminal No.	Color of Wire	Signal Name
9	W	–
10	B	–

Connector No.	D16
Connector Name	WIRE TO WIRE
Connector Color	WHITE

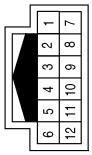
H.S.



Terminal No.	Color of Wire	Signal Name
8	W	–

Connector No.	D107
Connector Name	DOOR MIRROR RH
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
9	W	–
10	B	–

Connector No.	D115
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
11	B	–

Connector No.	D116
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

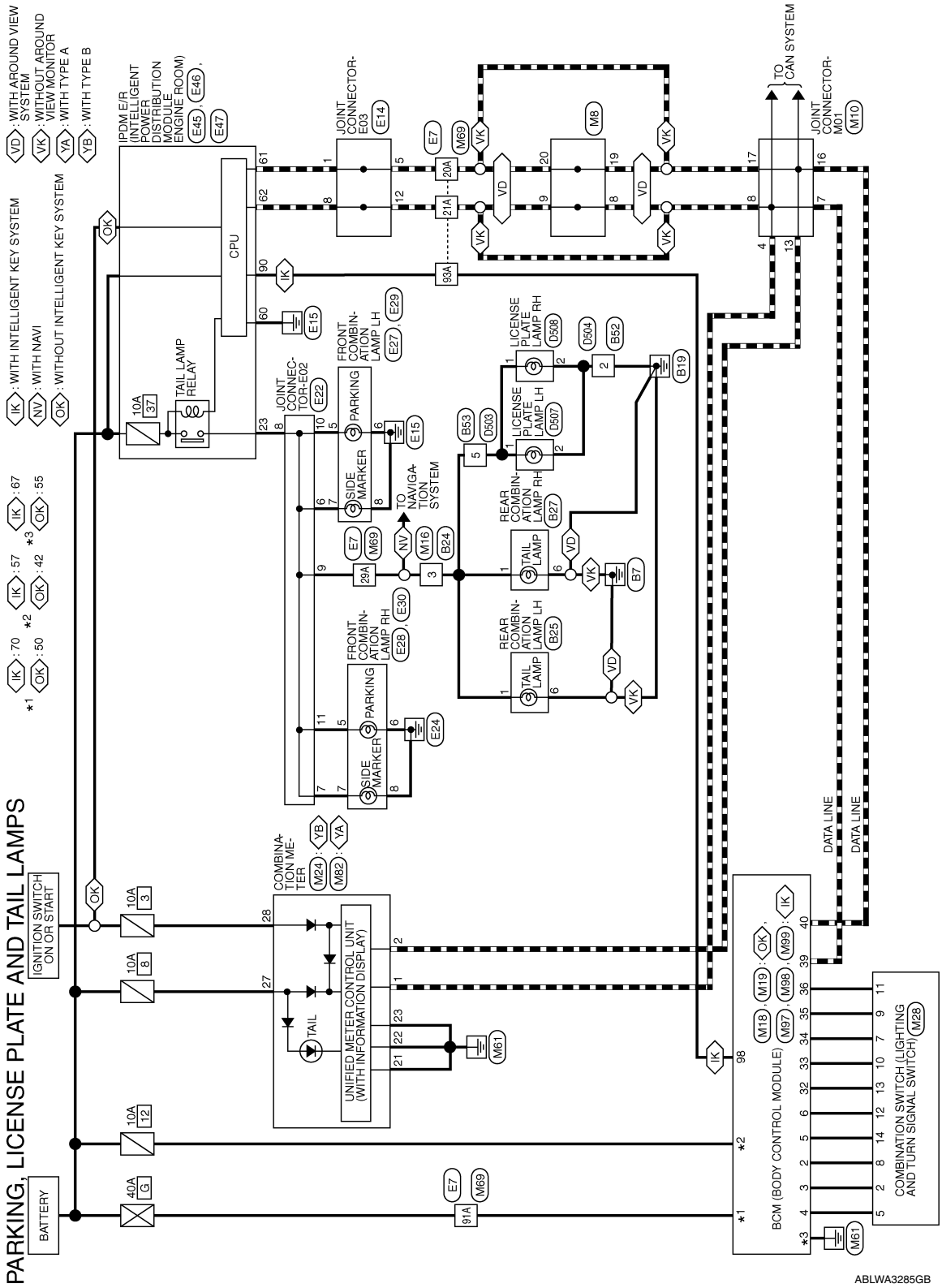
Terminal No.	Color of Wire	Signal Name
9	W	–

AALIA2898GB

PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

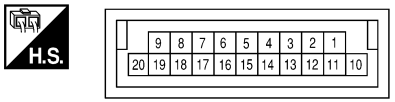
Wiring Diagram

INFOID:0000000012432797



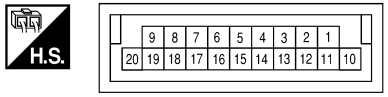
PARKING, LICENSE PLATE AND TAIL LAMPS CONNECTERS

Connector No.	M8
Connector Name	JOINT CONNECTOR-M02
Connector Color	GREEN



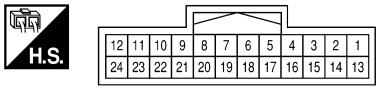
Terminal No.	Color of Wire	Signal Name
8	L	–
9	L	–
19	P	–
20	P	–

Connector No.	M10
Connector Name	JOINT CONNECTOR-M01
Connector Color	BLUE



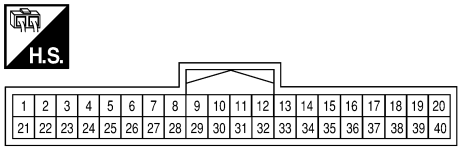
Terminal No.	Color of Wire	Signal Name
4	L	–
7	L	–
8	L	–
13	P	–
16	P	–
17	P	–

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



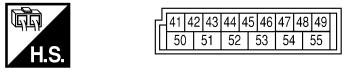
Terminal No.	Color of Wire	Signal Name
3	R	–

Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)
Connector Color	WHITE



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

Connector No.	M19
Connector Name	BCM (BODY CONTROL MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
42	Y	BATTERY (FUSE)
50	G	BATTERY (F/L)
55	B	GND

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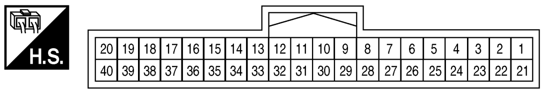
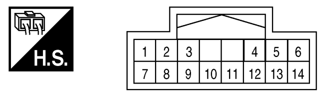
Connector No.	M24
Connector Name	COMBINATION METER (WITH TYPE B)
Connector Color	WHITE



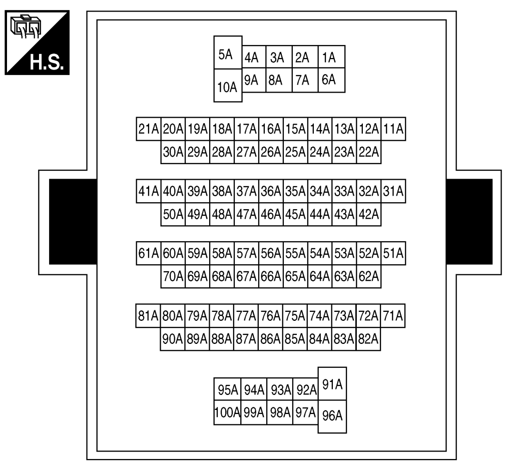
Terminal No.	Color of Wire	Signal Name
1	L	CAN-H
2	P	CAN-L
21	B	GND (ILL)
22	B	GND (POWER)
23	B	GND (CIRCUIT)
27	R/W	BAT
28	GR	IGN

Connector No.	M28
Connector Name	COMBINATION SWITCH (LIGHTING AND TURN SIGNAL SWITCH)
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	Y	–
5	L	–
7	W	–
8	BR	–
9	GR	–
10	V	–
11	LG	–
12	R	–
13	P	–
14	G	–

Connector No.	M69
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
20A	P	–
21A	L	–
29A	R	–
91A	G	–
93A	BG	– (WITH INTELLIGENT KEY SYSTEM)

ABLIA8103GB

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

Connector No.	M97
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	BLACK

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	BR	COMBINATION SW INPUT 5
3	Y	COMBINATION SW INPUT 4
4	L	COMBINATION SW INPUT 3
5	G	COMBINATION SW INPUT 2

Connector No.	M82
Connector Name	COMBINATION METER (WITH TYPE A)
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	L	CAN-H
2	P	CAN-L
21	B	GND (ILLUMINATION)
22	B	GND (POWER)
23	B	GND (CIRCUIT)
27	R/W	BAT
28	GR	IGN

Connector No.	M99
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

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	Y	BATTERY (FUSE)
67	B	GND
70	G	BATTERY (F/L)

Connector No.	M98
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

H.S.

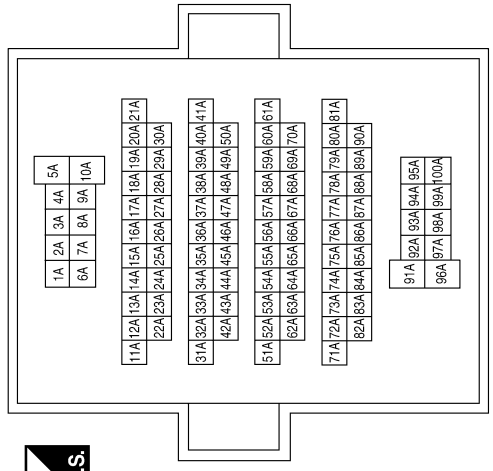
71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110

Terminal No.	Color of Wire	Signal Name
98	BG	IGN RELAY OUTPUT 1 (USM)

ABLIA8104GB

Connector No.	E7
Connector Name	WIRE TO WIRE
Connector Color	WHITE

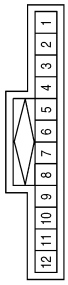
H.S.



Terminal No.	Color of Wire	Signal Name
20A	P	–
21A	L	–
29A	R	–
91A	Y	–
93A	L	–

Connector No.	E14
Connector Name	JOINT CONNECTOR-E03
Connector Color	BLUE

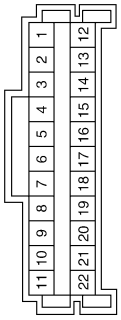
H.S.



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

Connector No.	E22
Connector Name	JOINT CONNECTOR-E02
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
6	R	–
7	R	–
8	R	–
9	R	–
10	R	–
11	R	–

Connector No.	E27
Connector Name	FRONT COMBINATION LAMP LH
Connector Color	BLACK

H.S.

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

Connector No.	E28
Connector Name	FRONT COMBINATION LAMP RH
Connector Color	BLACK

H.S.

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

AALIA1470GB

Connector No.	E29
Connector Name	FRONT COMBINATION LAMP LH
Connector Color	GRAY

H.S.

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

Connector No.	E30
Connector Name	FRONT COMBINATION LAMP RH
Connector Color	GRAY

H.S.

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

Connector No.	E45
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BROWN

H.S.

Terminal No.	Color of Wire	Signal Name
23	R	CLEARANCE

Connector No.	B24
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
3	L	–

Connector No.	E46
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
60	B	S-GND
61	P	CAN-L
62	L	CAN-H

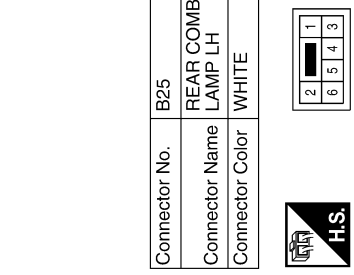
Connector No.	E47
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
90	L	IGN SIGNAL

AALIA2891GB

Connector No.	B25
Connector Name	REAR COMBINATION LAMP LH
Connector Color	WHITE

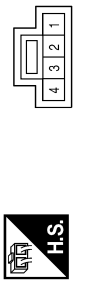


Terminal No.	Color of Wire	Signal Name
1	L	–
6	B	–

Connector No.	B27
Connector Name	REAR COMBINATION LAMP RH
Connector Color	WHITE

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

Connector No.	B52
Connector Name	WIRE TO WIRE
Connector Color	WHITE

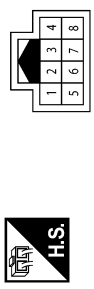


Terminal No.	Color of Wire	Signal Name
2	B	–

Connector No.	B53
Connector Name	WIRE TO WIRE
Connector Color	WHITE

Terminal No.	Color of Wire	Signal Name
5	GR	–

Connector No.	D503
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5	GR	–

Connector No.	D504
Connector Name	WIRE TO WIRE
Connector Color	WHITE

Terminal No.	Color of Wire	Signal Name
2	B	–

AALIA1472GB

Connector No.	D508
Connector Name	LICENSE PLATE LAMP RH
Connector Color	BROWN

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

Connector No.	D507
Connector Name	LICENSE PLATE LAMP LH
Connector Color	BROWN

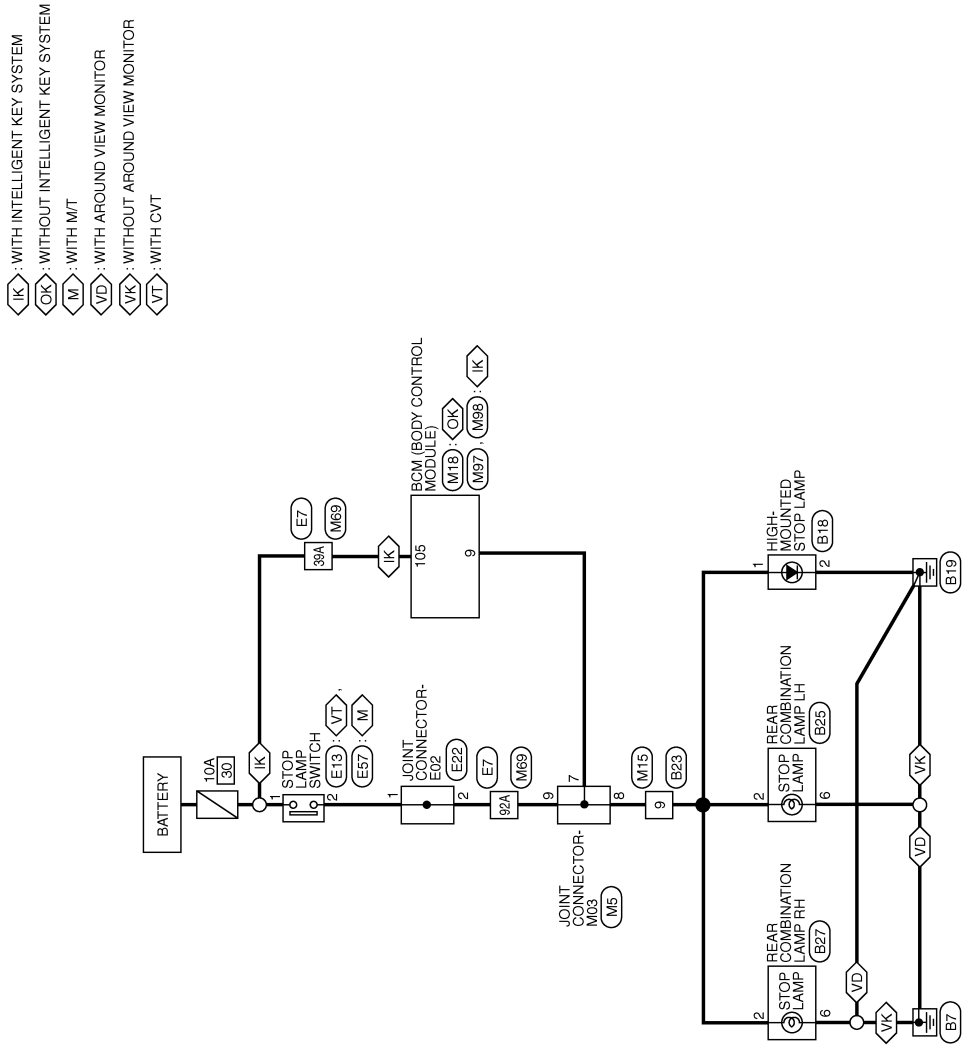
Terminal No.	Color of Wire	Signal Name
1	GR	–
2	B	–

AALIA1488GB

STOP LAMP

Wiring Diagram

INFOID:0000000012432798



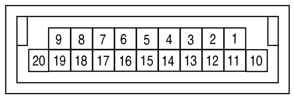
STOP LAMP

ABLWA3286GB

STOP LAMP CONNECTORS

Connector No.	M5
Connector Name	JOINT CONNECTOR-M03
Connector Color	WHITE

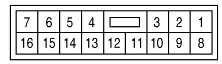
H.S.



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

Connector No.	M15
Connector Name	WIRE TO WIRE
Connector Color	WHITE

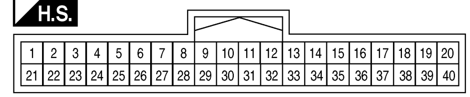
H.S.



Terminal No.	Color of Wire	Signal Name
9	R	–

Connector No.	M18
Connector Name	BCM (BODY CONTROL MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

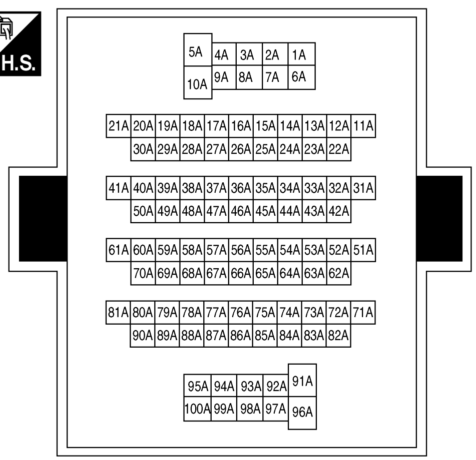
H.S.



Terminal No.	Color of Wire	Signal Name
9	LG	BRAKE SW 1

Connector No.	M69
Connector Name	WIRE TO WIRE
Connector Color	WHITE

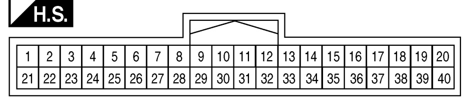
H.S.



Terminal No.	Color of Wire	Signal Name
39A	SB	–
92A	R	–

Connector No.	M97
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	BLACK

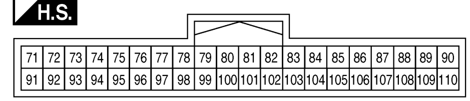
H.S.



Terminal No.	Color of Wire	Signal Name
9	LG	BRAKE SW 1

Connector No.	M98
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
105	SB	BRAKE SW 2

ABLIA8105GB

Connector No.	E13
Connector Name	STOP LAMP SWITCH (WITH CVT)
Connector Color	WHITE

H.S.

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

Connector No.	B18
Connector Name	HIGH-MOUNTED STOP LAMP
Connector Color	BLACK

H.S.

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

Connector No.	E7
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
39A	SB	–
92A	LG	–

Connector No.	E57
Connector Name	STOP LAMP SWITCH (WITH M/T)
Connector Color	BLACK

H.S.

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

Connector No.	E22
Connector Name	JOINT CONNECTOR-E02
Connector Color	WHITE

H.S.

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

AALIA1424GB

Connector No.	B23
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	–

Connector No.	B25
Connector Name	REAR COMBINATION LAMP LH
Connector Color	WHITE

H.S.

2		1
6	5	4	3

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

Connector No.	B27
Connector Name	REAR COMBINATION LAMP RH
Connector Color	WHITE

H.S.

2		1
6	5	4	3

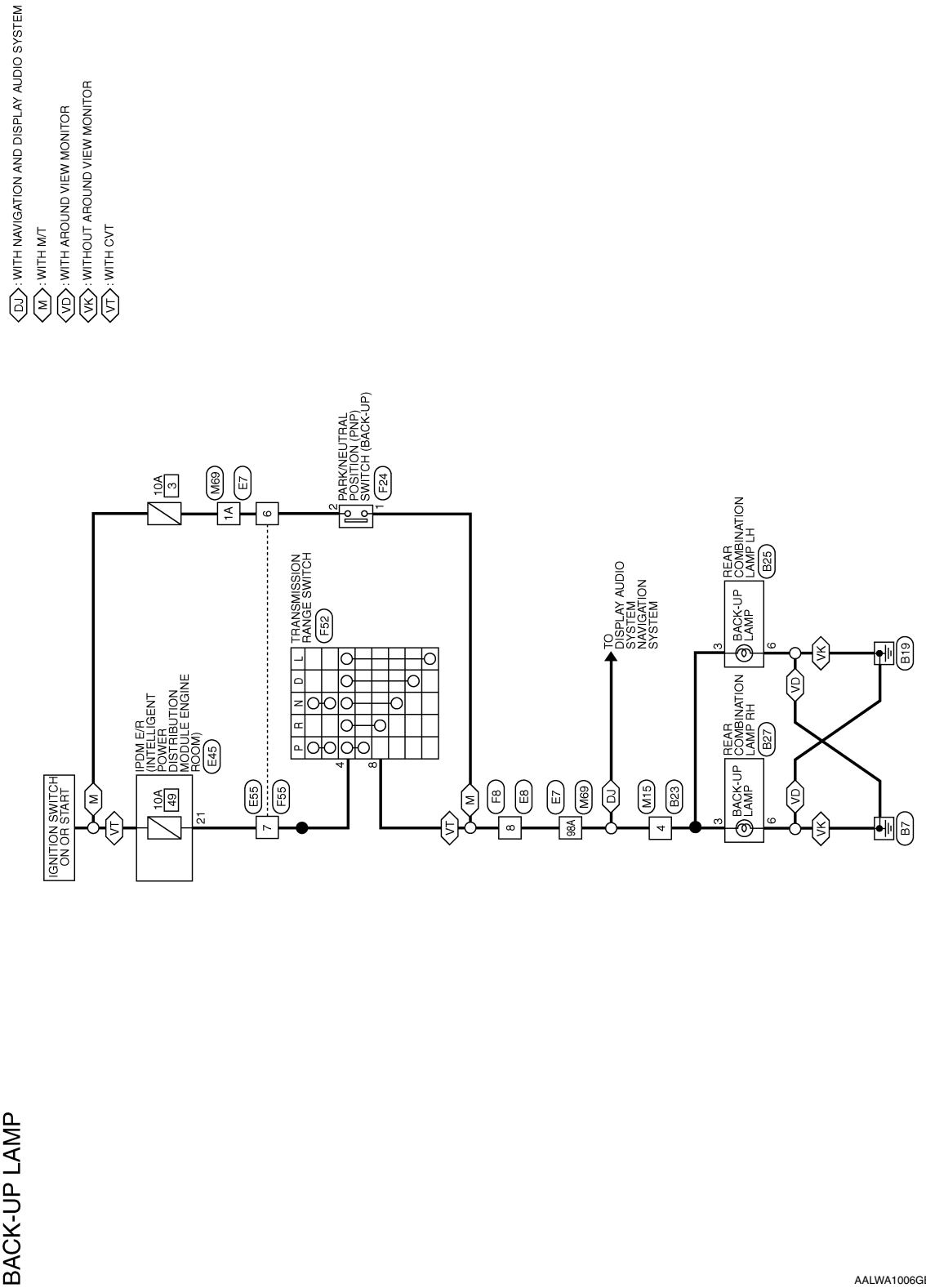
Terminal No.	Color of Wire	Signal Name
2	R	–
6	B	–

AALIA1425GB

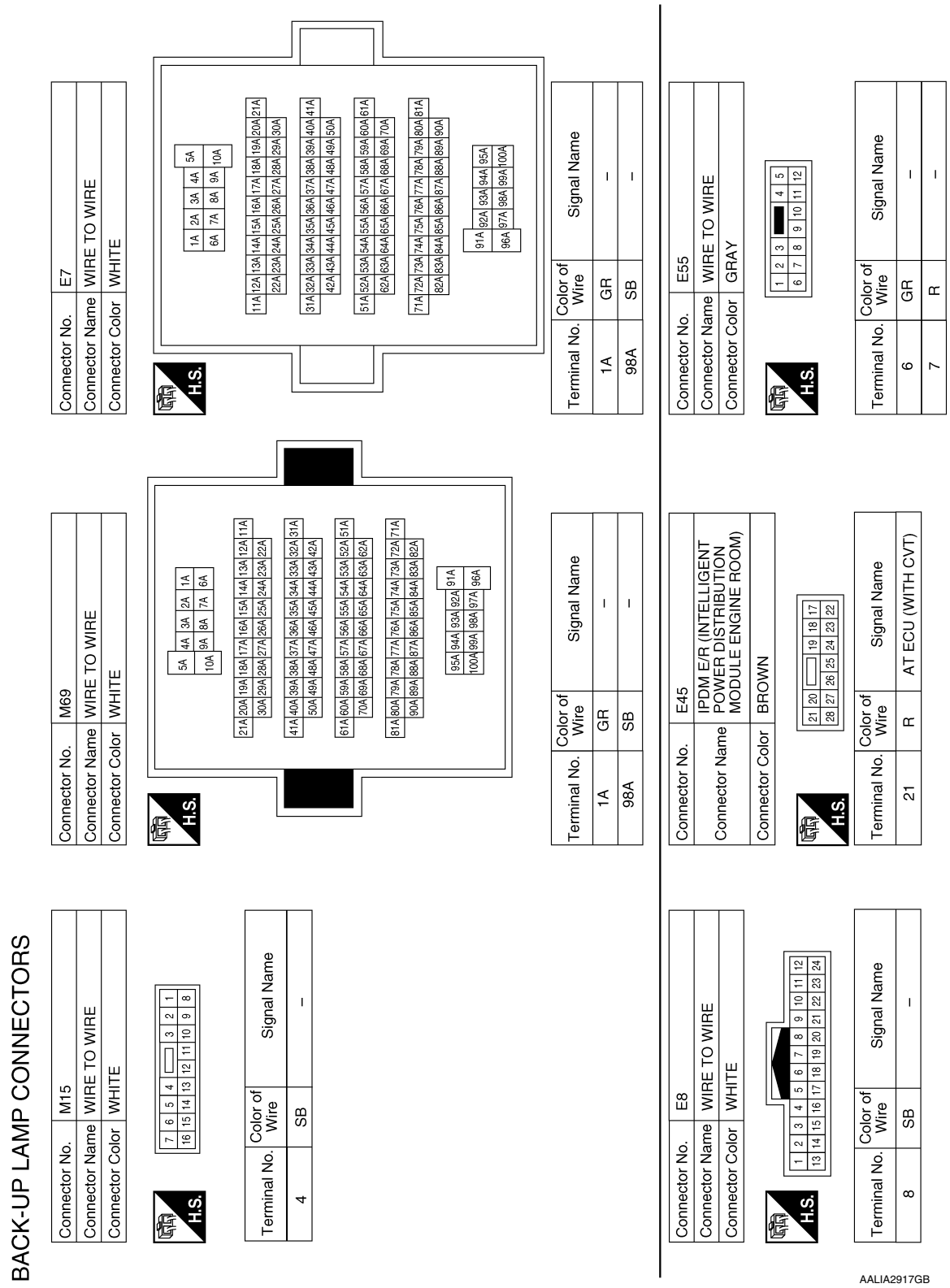
BACK-UP LAMP

Wiring Diagram

INFOID:0000000012432799

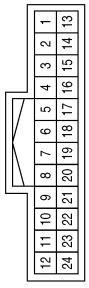


AALWA1006GB


BACK-UP LAMP CONNECTORS
Connector No. M15
Connector Name WIRE TO WIRE
Connector Color WHITE
H.S.
Terminal No. Color of Wire Signal Name
4 SB –
Connector No. M69
Connector Name WIRE TO WIRE
Connector Color WHITE
H.S.
Terminal No. Color of Wire Signal Name
1A GR –
98A SB –
Connector No. E7
Connector Name WIRE TO WIRE
Connector Color WHITE
H.S.
Terminal No. Color of Wire Signal Name
1A GR –
98A SB –
Connector No. E8
Connector Name WIRE TO WIRE
Connector Color WHITE
H.S.
Terminal No. Color of Wire Signal Name
8 SB –
Connector No. E45
Connector Name IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color BROWN
H.S.
Terminal No. Color of Wire Signal Name
21 R AT ECU (WITH CVT)
Connector No. E55
Connector Name WIRE TO WIRE
Connector Color GRAY
H.S.
Terminal No. Color of Wire Signal Name
6 GR –
7 R –
AALIA2917GB

Connector No.	F8
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
8	O	–

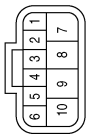
Connector No.	F24
Connector Name	PARK/NEUTRAL POSITION (PNP) SWITCH
Connector Color	GREEN

H.S.

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

Connector No.	F52
Connector Name	TRANSMISSION RANGE SWITCH
Connector Color	BLACK

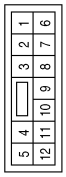
H.S.



Terminal No.	Color of Wire	Signal Name
4	R/W	–
8	O	–

Connector No.	F55
Connector Name	WIRE TO WIRE
Connector Color	GRAY

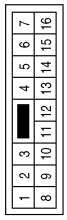
H.S.



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

Connector No.	B23
Connector Name	WIRE TO WIRE
Connector Color	WHITE

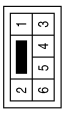
H.S.



Terminal No.	Color of Wire	Signal Name
4	Y	–

Connector No.	B25
Connector Name	REAR COMBINATION LAMP LH
Connector Color	WHITE

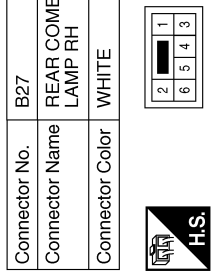
H.S.



Terminal No.	Color of Wire	Signal Name
3	Y	–
6	B	–

ABLIA8088GB

Connector No.	B27
Connector Name	REAR COMBINATION LAMP RH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
3	Y	–
6	B	–

ABLIA8089GB

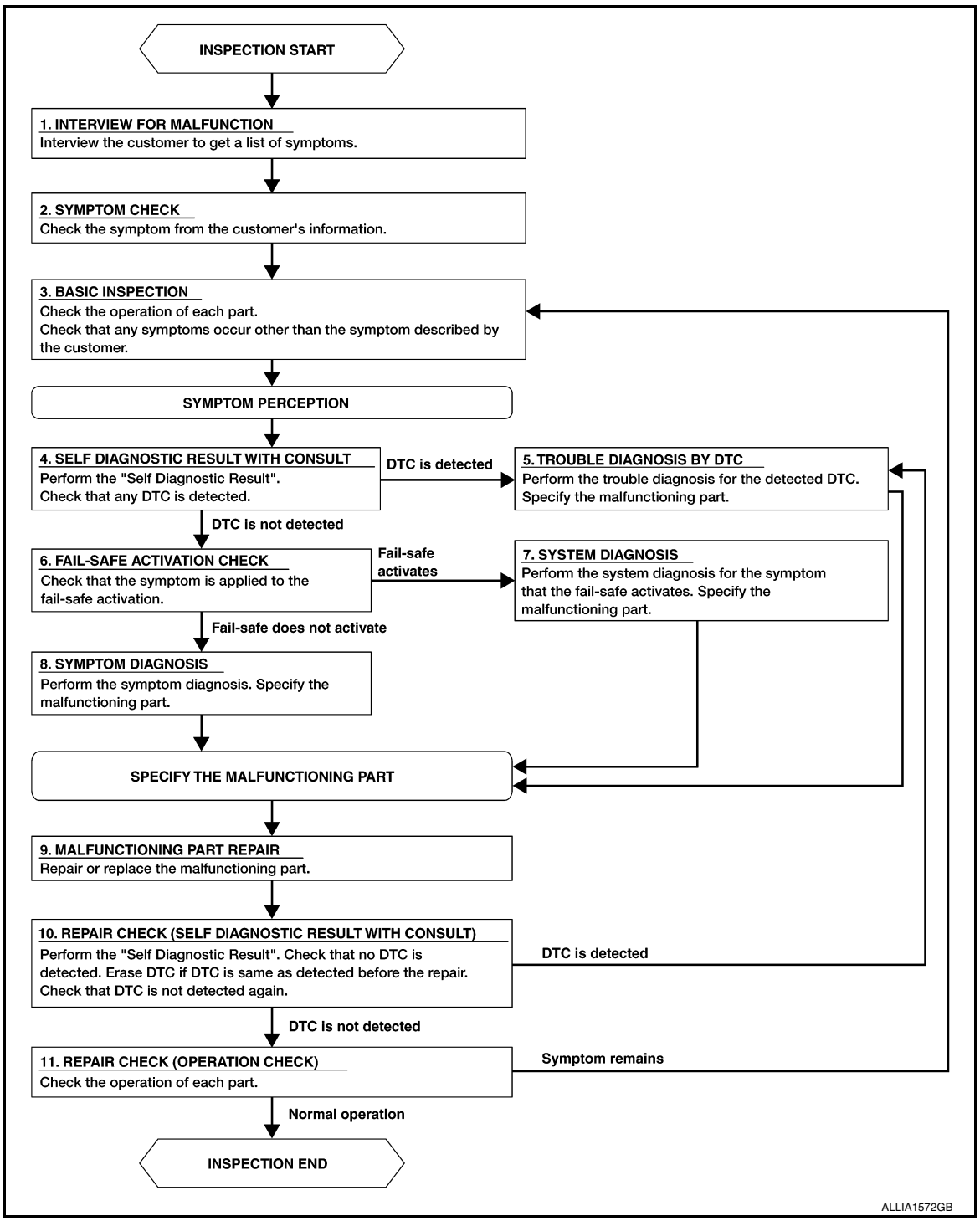
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:0000000012432800

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 DIAGNOSTIC RESULT WITH CONSULT

Perform the “Self Diagnostic Result”. Check that any DTC is detected.

Is any DTC detected?

YES >> GO TO 5.
NO >> GO TO 6.

5.TROUBLE DIAGNOSIS BY DTC

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

>> GO TO 9.

6.FAIL-SAFE ACTIVATION CHECK

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

Does the fail-safe activate?

YES >> GO TO 7.
NO >> GO TO 8.

7.SYSTEM DIAGNOSIS

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

>> GO TO 9.

8.SYMPTOM DIAGNOSIS

Perform the symptom diagnosis, refer to EXL-91, "Symptom Table". Specify the malfunctioning part.

>> GO TO 9.

9.MALFUNCTION PART REPAIR

Repair or replace the malfunctioning part.

>> GO TO 10.

10.REPAIR CHECK (SELF-DIAGNOSTIC RESULT WITH CONSULT)

Perform the “Self Diagnostic Result”. 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.

DTC/CIRCUIT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

BCM (BODY CONTROL SYSTEM) (WITH INTELLIGENT KEY SYSTEM)

BCM (BODY CONTROL SYSTEM) (WITH INTELLIGENT KEY SYSTEM) : Diagnosis Procedure

INFOID:0000000012542318

Regarding Wiring Diagram information, refer to BCS-52, "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	12 (10A)
70		G (40A)

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. Disconnect BCM connector M99.
2. Check voltage between BCM connector M99 and ground.

BCM		Ground	Voltage
Connector	Terminal		
M99	57	—	Battery voltage
	70		

Is the inspection result normal?

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

3.CHECK GROUND CIRCUIT

Check continuity between BCM connector M99 and ground.

BCM		Ground	Continuity
Connector	Terminal		
M99	67	—	Yes

Is the inspection result normal?

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

BCM (BODY CONTROL SYSTEM) (WITHOUT INTELLIGENT KEY SYSTEM)

BCM (BODY CONTROL SYSTEM) (WITHOUT INTELLIGENT KEY SYSTEM) : Diagnosis Procedure

INFOID:0000000012542319

Regarding Wiring Diagram information, refer to BCS-117, "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.
37	Battery power supply	8 (10A)
42		12 (10A)
50		G (40A)
11	Ignition switch ACC or ON	18 (10A)
38	Ignition switch ON or START	2 (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 connectors.
3. Check voltage between BCM connector and ground.

BCM		Ground	Ignition switch position		
Connector	Terminal		OFF	ACC	ON
M18	11	—	0 V	Battery voltage	Battery voltage
	37		Battery voltage		
	38		0 V	0 V	
M19	42		Battery voltage	Battery voltage	
	50				

Is the inspection result normal?

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

3.CHECK GROUND CIRCUIT

Check continuity between BCM connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M19	55	—	Yes

Is the inspection result normal?

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

IPDM E/R

IPDM E/R : Diagnosis Procedure

INFOID:0000000012542320

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

1. CHECK FUSE AND FUSIBLE LINKS

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

Terminal No.	Signal name	Fuse and fusible link Nos.
1	Battery power supply	A (120A), E (80A)
2		B (60A)

Is the fuse blown?

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

2. CHECK BATTERY POWER SUPPLY CIRCUIT

1. Disconnect IPDM E/R connector E42.
2. Check voltage between IPDM E/R connector E42 and ground.

IPDM E/R		Ground	Voltage (Approx.)
Connector	Terminal		
E42	1	—	Battery voltage
	2		

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 E45, E46 and E47.
2. Check continuity between IPDM E/R connectors and ground.

IPDM E/R		Ground	Continuity
Connector	Terminal		
E45	19	Ground	Yes
E46	60		
E47	89		

Is the inspection result normal?

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

HEADLAMP (HI) CIRCUIT

Description

INFOID:0000000012432804

The IPDM E/R (intelligent power distribution module engine room) controls the headlamp high relay based on inputs from the BCM via the CAN communication lines. When the headlamp high relay is energized, power flows through fuses 34 and 35, located in the IPDM E/R. Power then flows to the front combination lamp LH and RH high beams.

Component Function Check

INFOID:0000000012432805

1.CHECK HEADLAMP (HI) OPERATION

WITHOUT CONSULT
1. Start IPDM E/R auto active test. Refer to PCS-9, "Diagnosis Description".
2. Check that the headlamp switches to the high beam.

CONSULT
1. Select EXTERNAL LAMPS of IPDM E/R active test item.
2. While operating the test items, check that the headlamp switches to the high beam.

HI : Headlamp switches to the high beam.
OFF : Headlamp OFF

Does the headlamp switch to high beam?

YES >> Headlamp (HI) circuit is normal.
NO >> Refer to EXL-77, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012432806

Regarding Wiring Diagram information, refer to EXL-25, "Wiring Diagram - For USA" or EXL-31, "Wiring Diagram - For Canada".

1.CHECK HEADLAMP (HI) FUSES

1. Turn the ignition switch OFF.
2. Check that the following fuses are not blown:

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

Is the fuse blown?

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

2.CHECK HIGH BEAM BULB

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

Is the bulb OK?

YES >> GO TO 3.
NO >> Replace the bulb.

3.CHECK HEADLAMP (HI) OUTPUT VOLTAGE

1. Turn the ignition switch OFF.
2. Disconnect the front combination lamp connector E25 or E26.
3. Turn the ignition switch ON.
4. Turn the high beam headlamps ON.
5. With the high beam headlamps ON, check the voltage between the combination lamp connector and ground.

(+)			(−)	Voltage
Connector		Terminal		
LH	E25	1	Ground	Battery voltage
RH	E26			

Is the inspection result normal?

YES >> GO TO 5.
NO >> GO TO 4.

4. CHECK HEADLAMP (HI) CIRCUIT FOR OPEN

1. Turn the ignition switch OFF.
2. Disconnect IPDM E/R connector E45.
3. Check continuity between the IPDM E/R harness connector E45 and the front combination lamp harness connector E25 or E26.

Connector		Terminal	Connector	Terminal	Continuity
LH	E45	25	E25	1	Yes
RH		27	E26		

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-30, "Removal and Installation".
NO >> Repair or replace the harness or connector.

5. CHECK FRONT COMBINATION LAMP (HI) GROUND CIRCUIT

Check continuity between the front combination lamp harness connector and ground.

Connector		Terminal	—	Continuity
LH	E25	2	Ground	Yes
RH	E26			

Is the inspection result normal?

YES >> Replace malfunctioning lamp.
NO >> Repair or replace the harness or connector (without daytime running light system).
>> GO TO 6 (with daytime running light system).

6. CHECK FRONT COMBINATION LAMP LH TO DAYTIME RUNNING LIGHT RELAY 1 GROUND CIRCUIT

1. Disconnect daytime running light relay 1 connector E37.
2. Check continuity between the daytime running light relay 1 harness connector E37 and the front combination lamp LH harness connector E25.

Connector	Terminal	Connector	Terminal	Continuity
E37	3	E25	2	Yes

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace the harness or connector.

7. CHECK DAYTIME RUNNING LIGHT RELAY 1 GROUND CIRCUIT

Check continuity between the daytime running light relay 1 harness connector E37 and ground.

Connector	Terminal	—	Continuity
E37	4	Ground	Yes

Is the inspection result normal?

YES >> Replace daytime running light relay 1.
NO >> Repair or replace the harness or connector.

HEADLAMP (LO) CIRCUIT

Description

INFOID:0000000012432807

The IPDM E/R (intelligent power distribution module engine room) controls the headlamp low relay based on inputs from the BCM via the CAN communication lines. When the headlamp low relay is energized, power flows through fuses 40 and 41, located in the IPDM E/R.
(Without daytime running light system) power then flows to the front combination lamp LH and RH low beams.
(With daytime running light system) power then flows to the front combination lamp LH low beam and the daytime running light relay 2 which becomes energized and then power is sent to the front combination lamp RH low beam.

Component Function Check

INFOID:0000000012432808

1.CHECK HEADLAMP (LO) OPERATION

WITHOUT CONSULT
1. Start IPDM E/R auto active test. Refer to PCS-9, "Diagnosis Description".
2. Check that the headlamp is turned ON.

CONSULT
1. Select EXTERNAL LAMPS of IPDM E/R active test item.
2. While operating the test items, check that the headlamp is turned ON.

LO : Headlamp ON
OFF : Headlamp OFF

Is the headlamp turned ON?

YES >> Headlamp (LO) is normal.
NO >> Refer to EXL-79, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012432809

Regarding Wiring Diagram information, refer to EXL-25, "Wiring Diagram - For USA" or EXL-31, "Wiring Diagram - For Canada".

1.CHECK HEADLAMP (LO) FUSES

1. Turn the ignition switch OFF.
2. Check that the following fuses are not blown:

Unit	Location	Fuse No.	Capacity
Headlamp LO (LH)	IPDM E/R	41	15A
Headlamp LO (RH)	IPDM E/R	40	15A

Is the fuse blown?

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

2.CHECK LOW BEAM BULB

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

Is the bulb OK?

YES >> GO TO 3.
NO >> Replace the bulb.

3.CHECK HEADLAMP (LO) OUTPUT VOLTAGE

1. Turn the ignition switch OFF.
2. Disconnect the front combination lamp connector E25 or E26.
3. Turn the ignition switch ON.

4. Turn the low beam headlamps ON.
5. With the low beam headlamps ON, check the voltage between the combination lamp connector and ground.

(+)			(–)	Voltage
Connector		Terminal		
LH	E25	3	Ground	Battery voltage
RH	E26			

Is the inspection result normal?

YES >> GO TO 9.
NO >> GO TO 4 (without daytime running light system).
>> GO TO 5 (with daytime running light system).

4. CHECK HEADLAMP (LO) CIRCUIT FOR OPEN

1. Turn the ignition switch OFF.
2. Disconnect IPDM E/R connector E44.
3. Check continuity between the IPDM E/R harness connector E44 and the front combination lamp harness connectors E25 and E26.

Connector		Terminal	Connector	Terminal	Continuity
LH	E44	14	E25	3	Yes
RH		16	E26		

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-30, "Removal and Installation".
NO >> Repair or replace the harness or connector.

5. CHECK DAYTIME RUNNING LIGHT RELAY 2 TO FRONT COMBINATION LAMP LH CIRCUIT FOR OPEN

1. Disconnect daytime running light relay 2 connector E38.
2. Check continuity between the daytime running light relay 2 harness connector E38 and the front combination lamp LH harness connector E25.

Connector	Terminal	Connector	Terminal	Continuity
E38	3	E25	3	Yes

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace the harness or connector.

6. CHECK DAYTIME RUNNING LIGHT RELAY 2 VOLTAGE CIRCUIT

With the low beam headlamps ON, check the voltage between the daytime running light relay 2 connector E38 and ground.

(+)		(–)	Voltage
Connector	Terminal		
E38	2	Ground	Battery voltage
	5		

Is the inspection result normal?

YES >> GO TO 7.
NO >> GO TO 8.

7. CHECK DAYTIME RUNNING LIGHT RELAY 2 GROUND CIRCUIT

Check continuity between the daytime running light relay 2 harness connector E38 and ground.

Connector	Terminal	—	Continuity
E38	1	Ground	Yes

Is the inspection result normal?

YES >> Replace daytime light relay 2.
NO >> Repair or replace the harness or connector.

8. CHECK IPDM E/R TO DAYTIME LIGHT RELAY 2 CIRCUIT FOR OPEN

1. Disconnect IPDM E/R connector E44.
2. Check continuity between the daytime running light relay 2 harness connector E38 and the IPDM E/R connector E44.

Connector	Terminal	Connector	Terminal	Continuity
E38	2	E44	14	Yes
	5			

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-30, "Removal and Installation".
NO >> Repair or replace the harness or connector.

9. CHECK FRONT COMBINATION LAMP (LO) GROUND CIRCUIT

Check continuity between the front combination lamp harness connector and ground.

Connector		Terminal	—	Continuity
LH	E25	2	Ground	Yes
RH	E26			

Is the inspection result normal?

YES >> Replace malfunctioning lamp.
NO >> Repair or replace the harness or connector (without daytime running light system).
>> GO TO 10 (with daytime running light system).

10. CHECK FRONT COMBINATION LAMP LH TO DAYTIME RUNNING LIGHT RELAY 1 GROUND CIRCUIT

1. Disconnect daytime running light relay 1 connector E37.
2. Check continuity between the daytime running light relay 1 harness connector E37 and the front combination lamp LH harness connector E25.

Connector	Terminal	Connector	Terminal	Continuity
E37	3	E25	2	Yes

Is the inspection result normal?

YES >> GO TO 11.
NO >> Repair or replace the harness or connector.

11. CHECK DAYTIME RUNNING LIGHT RELAY 1 GROUND CIRCUIT

Check continuity between the daytime running light relay 1 harness connector E37 and ground.

Connector	Terminal	—	Continuity
E37	4	Ground	Yes

Is the inspection result normal?

YES >> Replace daytime running light relay 1.
NO >> Repair or replace the harness or connector.

PARKING LAMP CIRCUIT

Description

INFOID:0000000012432810

The IPDM E/R (intelligent power distribution module engine room) controls the tail lamp relay based on inputs from the BCM via the CAN communication lines. When the tail lamp relay is energized, power flows through fuse 37, located in the IPDM E/R. Power then flows through the tail lamp relay to the front and rear combination lamps, license plate lamps.

Component Function Check

INFOID:0000000012432811

1.CHECK PARKING LAMP OPERATION

WITHOUT CONSULT
1. Start IPDM E/R auto active test. Refer to PCS-9, "Diagnosis Description".
2. Check that the parking lamps are turned ON.

CONSULT
1. Select EXTERNAL LAMPS of IPDM E/R active test item.
2. While operating the test items, check that the parking lamps are turned ON.

TAIL : Parking lamp ON
OFF : Parking lamp OFF

Is the parking lamp turned ON?

YES >> Parking lamp circuit is normal.
NO >> Refer to EXL-82, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012432812

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

1.CHECK PARKING LAMP FUSES

1. Turn the ignition switch OFF.
2. Check that the following fuses are not blown:

Unit	Location	Fuse No.	Capacity
Parking lamps	IPDM E/R	37	10A

Is the fuse blown?

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

2.CHECK PARKING LAMP BULB

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

Is the bulb OK?

YES >> GO TO 3.
NO >> Replace the bulb.

3.CHECK TAIL LAMP RELAY OUTPUT (VOLTAGE)

1. Turn the ignition switch OFF.
2. Disconnect the front combination lamp connector, rear combination lamp connector and license plate lamp connector.
3. Turn the ignition switch ON.
4. Turn the parking lamps ON.
5. With the parking lamps ON, check voltage between the front combination lamp connectors and ground.

(+)			(−)	Voltage
Connector		Terminal		
LH	E27	7	Ground	Battery voltage
	E29	5		
RH	E28	7		
	E30	5		

6. With the parking lamps ON, check voltage between the rear combination lamp connectors and ground.

(+)			(−)	Voltage
Connector		Terminal		
LH	B25	1	Ground	Battery voltage
RH	B27			

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

(+)			(−)	Voltage
Connector		Terminal		
LH	D507	1	Ground	Battery voltage
RH	D508			

Are the inspection results normal?

YES >> GO TO 5.
NO >> GO TO 4.

4. CHECK PARKING, LICENSE PLATE AND TAIL LAMP CIRCUIT (OPEN)

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

Connector		Terminal	Connector	Terminal	Continuity
LH	E45	23	E27	7	Yes
			E29	5	
RH			E28	7	
			E30	5	

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

Connector		Terminal	Connector	Terminal	Continuity
LH	E45	23	B25	1	Yes
RH			B27		

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

Connector	Terminal	Connector	Terminal	Continuity
E45	23	D507	1	Yes
		D508		

Are the inspection results normal?

YES >> Replace IPDM E/R. Refer to PCS-30, "Removal and Installation".
NO >> Repair or replace the harness or connector.

5. CHECK PARKING, LICENSE AND TAIL LAMP GROUND CIRCUITS

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

Connector		Terminal	—	Continuity
LH	E27	8	Ground	Yes
	E29	6		
RH	E28	8		
	E30	6		

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

Connector		Terminal	—	Continuity
LH	B25	6	Ground	Yes
RH	B27			

3. Check continuity between the license plate lamp harness connectors and ground.

Connector	Terminal	—	Continuity
B507	2	Ground	Yes
B508			

Are the inspection results normal?

YES >> Replace the malfunctioning lamp.
NO >> Repair or replace the harness or connector.

TURN SIGNAL LAMP CIRCUIT

Description

INFOID:0000000012432813

The BCM monitors inputs from the combination switch (lighting and turn signal switch) to determine when to activate the turn signals. The BCM outputs voltage direction to the left and right turn signals during turn signal operation or both during hazard warning operation. The BCM sends a turn signal indicator request to the combination meter via the CAN communication lines.
The BCM performs the fast flasher operation (fail-safe) if any bulb or harness of the turn signal lamp circuit is open.
NOTE:
Turn signal lamp blinks at normal speed when using the hazard warning lamp.

Component Function Check

INFOID:0000000012432814

1.CHECK TURN SIGNAL LAMP

CONSULT
1. Select FLASHER of BCM (FLASHER) active test item.
2. While operating the test items, check that the turn signal lamp blinks.

LH : Turn signal lamp LH blinking
RH : Turn signal lamp RH blinking
OFF : The turn signal lamp OFF

Does the turn signal lamp blink?

YES >> Turn signal lamp circuit is normal.
NO >> Refer to EXL-85, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012432815

Regarding Wiring Diagram information, refer to EXL-48, "Wiring Diagram".

1.CHECK TURN SIGNAL LAMP BULB

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

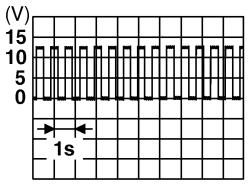
Is the bulb OK?

YES >> GO TO 2.
NO >> Replace the bulb.

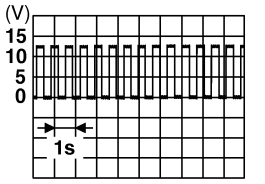
2.CHECK TURN SIGNAL LAMP OUTPUT VOLTAGE

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

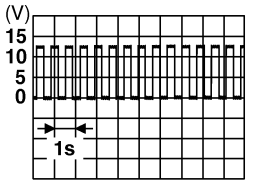
(+)		(–)	Voltage
Connector	Terminal		

LH	E29	4	Ground	 PKIC6370E
RH	E30	4		

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

(+)			(–)	Voltage
Connector		Terminal		
LH	B25	4	Ground	 PKIC6370E
RH	B27	4		

6. With turn signal switch operating, check the voltage between the door mirror lamp harness connector and ground.

(+)			(–)	Voltage
Connector		Terminal		
LH	D4	9	Ground	 PKIC6370E
RH	D107	9		

Are the inspection results normal?

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

3. CHECK TURN SIGNAL LAMP CIRCUIT FOR OPEN

1. Turn the ignition switch OFF.
2. Disconnect BCM connector.
3. Check continuity between the BCM harness connector and the front combination lamp connector.

Connector		Terminal	Connector	Terminal	Continuity
Front LH	M99 (With Intelligent Key system)	60	E29	4	Yes
Front RH		61	E30		
Front LH	M19 (Without Intelligent Key system)	64	E29		
Front RH		63	E30		

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

Connector	Terminal	Connector	Terminal	Continuity

Rear LH	M99 (With Intelligent Key system)	60	B25	4	Yes
Rear RH		61	B27		
Rear LH	M19 (Without Intelligent Key system)	64	B25		
Rear RH		63	B27		

5. Check continuity between the BCM harness connector and the door mirror lamp connector.

Connector		Terminal	Connector	Terminal	Continuity
LH	M99 (With Intelligent Key system)	60	D4	9	Yes
RH		61	D107		
LH	M19 (Without Intelligent Key system)	64	D4		
RH		63	D107		

Are the inspection results normal?

YES >> GO TO 4.
NO >> Repair or replace the harness or connector.

4. CHECK TURN SIGNAL LAMP SHORT CIRCUIT

Check continuity between the BCM harness connector and ground.

Connector		Terminal	—	Continuity
LH	M99 (With Intelligent Key system)	60	Ground	No
RH		61		
LH	M19 (Without Intelligent Key system)	64		
RH		63		

Is the inspection results normal?

YES >> Repair or replace the harness or connector.
NO >> Replace BCM. Refer to BCS-74, "Removal and Installation" (with Intelligent Key system) or BCS-137, "Removal and Installation" (without Intelligent Key system).

5. CHECK TURN SIGNAL LAMP GROUND CIRCUIT

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

Connector		Terminal	—	Continuity
Front LH	E29	6	Ground	Yes
Front RH	E30			

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

Connector		Terminal	—	Continuity
Rear LH	B25	6	Ground	Yes
Rear RH	B27			

3. Check continuity between the door mirror lamp harness connector and ground.

Connector		Terminal	—	Continuity
LH	D4	10	Ground	Yes
RH	D107			

Are the inspection results normal?

YES >> Replace the malfunctioning lamp.
NO >> Repair or replace the harness or connector.

FRONT FOG LAMP CIRCUIT

Component Function Check

INFOID:0000000012432816

1.CHECK FRONT FOG LAMP OPERATION

WITHOUT CONSULT
1. Start IPDM E/R auto active test. Refer to PCS-9, "Diagnosis Description".
2. Check that the front fog lamp is turned ON.

CONSULT
1. Select EXTERNAL LAMPS of IPDM E/R active test item.
2. While operating the test items, check that the front fog lamp is turned ON.

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

Is the front fog lamp turned ON?

YES >> Front fog lamp circuit is normal.
NO >> Refer to EXL-88, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012432817

Regarding Wiring Diagram information, refer to EXL-43, "Wiring Diagram".

1.CHECK FRONT FOG LAMP FUSE

1. Turn ignition switch OFF.
2. Check that the following fuse is not blown:

Unit	Fuse No.	Capacity
Front fog lamp	31	15 A

Is the fuse blown?

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

2.CHECK FOG LAMP BULB

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

Is the bulb OK?

YES >> GO TO 3.
NO >> Replace the bulb.

3.CHECK FRONT FOG LAMP OUTPUT VOLTAGE

CONSULT ACTIVE TEST
1. Turn ignition switch OFF.
2. Disconnect front fog lamp connector.
3. Turn ignition switch ON.
4. Select EXTERNAL LAMPS of IPDM E/R active test item.
5. While operating the fog lamps, check voltage between front fog lamp harness connector and ground.

(+)		(–)	Test item	Voltage (Approx.)
Front fog lamp				
Connector	Terminal			

RH	E54	1	Ground	EXTERNAL LAMPS	Fog	Battery voltage
					Off	0 V
LH	E53				Fog	Battery voltage
					Off	0 V

Is the inspection result normal?

YES >> GO TO 4.
NO >> GO TO 5.

4. CHECK FRONT FOG LAMP GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Check continuity between front fog lamp harness connector and ground.

Front fog lamp			Ground	Continuity
Connector		Terminal		
RH	E54	2		Yes
LH	E53			

Is the inspection result normal?

YES >> Replace malfunctioning lamp.
NO >> Repair or replace the harness or connector.

5. CHECK FRONT FOG LAMP RELAY TO FRONT FOG LAMPS CIRCUIT FOR OPEN

1. Disconnect front fog lamp connector E58.
2. Check continuity between the front fog lamp relay harness connector E58 and the front fog lamp connectors E53 and E54.

Connector	Terminal	Connector	Terminal	Continuity
E58	3	E53	1	Yes
		E54	1	

Is the inspection result normal?

YES >> GO TO 6.
NO >> Repair or replace the harness or connector.

6. CHECK FRONT FOG LAMP RELAY VOLTAGE CIRCUIT

Check the voltage between the front fog lamp relay connector E58 and ground.

(+)		(−)	Voltage
Connector	Terminal		
E58	2	Ground	Battery voltage
	5		

Is the inspection result normal?

YES >> GO TO 7.
NO >> Repair or replace the harness or connector.

7. CHECK IPDM E/R TO FRONT FOG LAMP RELAY CIRCUIT FOR OPEN

1. Disconnect IPDM E/R connector E46.
2. Check continuity between the front fog lamp relay harness connector E58 and the IPDM E/R connector E46.

Connector	Terminal	Connector	Terminal	Continuity
E58	1	E46	71	Yes

Is the inspection result normal?

YES >> Check the front fog lamp relay. Refer to EXL-90, "Component Inspection".

NO >> Repair or replace the harness or connector.

Component Inspection

INFOID:0000000012432818

1. CHECK FRONT FOG LAMP RELAY

1. Turn ignition switch OFF.
2. Remove front fog lamp relay.
3. Check the continuity between front fog lamp relay terminals 3 and 5 when voltage is supplied between terminals 1 and 2.

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

Is the inspection result normal?

YES >> Inspection End.
NO >> Replace front fog lamp relay.

SYMPTOM DIAGNOSIS

EXTERIOR LIGHTING SYSTEM SYMPTOMS

Symptom Table

INFOID:0000000012432819

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

Symptom		Possible cause	Inspection item
Headlamp does not switch to the high beam.	One side	• Fuse • Harness between IPDM E/R and the front combination lamp • Front combination lamp (High beam relay) • IPDM E/R	Headlamp (HI) circuit Refer to EXL-77.
	Both sides	—	**Symptom diagnosis** "BOTH SIDE HEADLAMPS DO NOT SWITCH TO HIGH BEAM" Refer to EXL-93.
High beam indicator lamp is not turned ON. (Headlamp switches to the high beam.)		• Combination meter • BCM	• Combination meter. Data monitor "HI-BEAM IND" • BCM (HEAD LAMP) Active test "HEADLAMP"
Headlamp does not switch to the low beam.	One side	Front combination lamp (low beam relay)	—
	Both sides	• Combination switch (lighting and turn signal switch) • Harness between the combination switch (lighting and turn signal switch) and BCM • BCM	Combination switch (lighting and turn signal switch) Refer to BCS-72 (with Intelligent Key system) or BCS-134 (without Intelligent Key system).
		High beam request signal • BCM • IPDM E/R	IPDM E/R Data monitor "HL HI REQ"
		IPDM E/R	—
Headlamp does not turn ON.	One side	• Bulb • Harness between IPDM E/R and the front combination lamp • Front combination lamp • IPDM E/R	Headlamp (LO) circuit Refer to EXL-79.
	Both sides	—	**Symptom diagnosis** "BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON" Refer to EXL-94.
Headlamp does not turn OFF.	When the ignition switch is turned ON	• BCM • Combination switch (lighting and turn signal switch)	Combination switch (lighting and turn signal switch) Refer to BCS-72 (with Intelligent Key system) or BCS-134 (without Intelligent Key system).
Daytime light system does not activate.		• Either high beam bulb • Parking brake switch • Combination switch (lighting and turn signal switch) • BCM • IPDM E/R • Daytime light relays • Harness between IPDM E/R and daytime light relays.	Daytime light system description. Refer to EXL-9.

Symptom		Possible cause	Inspection item
Front fog lamp is not turned ON.	One side	• Front fog lamp bulb • Harness between the front fog lamp and ground	Front fog lamp circuit Refer to EXL-88.
	Both sides	—	**Symptom diagnosis** "BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON" Refer to EXL-96.
Parking lamp is not turned ON.	One side	• Fuse • Parking lamp bulb • Harness between IPDM E/R and the front/rear combination lamp • Front/rear combination lamp • IPDM E/R	Parking lamp circuit Refer to EXL-82.
	Both sides	—	**Symptom diagnosis** "PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON" Refer to EXL-95.
Turn signal lamp does not blink.	Indicator lamp is normal. (The applicable side performs the high flasher activation).	• Harness between BCM and each turn signal lamp • Turn signal lamp bulb	Turn signal lamp circuit Refer to EXL-85.
Turn signal indicator lamp does not blink.	One side	Combination meter	—
	Both sides (Always)	• Turn signal indicator lamp signal • Combination meter • BCM	• Combination meter. Data monitor "TURN IND" • BCM (FLASHER) Active test "FLASHER"
	Both sides (Does blink when activating the hazard warning lamp with the ignition switch OFF)	• The combination meter power supply and the ground circuit • Combination meter	Combination meter Power supply and the ground circuit Refer to MWI-43 (Type A). Refer to MWI-98 (Type B).

BOTH SIDE HEADLAMPS DO NOT SWITCH TO HIGH BEAM

Description

INFOID:0000000012432820

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

Diagnosis Procedure

INFOID:0000000012432821

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

Check the combination switch (lighting and turn signal switch). Refer to BCS-72, "Symptom Table" (with Intelligent Key system) or BCS-134, "Symptom Table" (without Intelligent Key system).

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

YES >> GO TO 2.
NO >> Repair or replace the malfunctioning part.

2.CHECK HEADLAMP (HI) REQUEST SIGNAL INPUT

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

Monitor item	Condition		Monitor status
HL HI REQ	Combination switch (lighting and turn signal switch)	HI or PASS	ON
		Except for HI or PASS	OFF

Is the item status normal?

YES >> GO TO 3.
NO >> Replace BCM. Refer to BCS-74, "Removal and Installation" (with Intelligent Key system) or BCS-137, "Removal and Installation" (without Intelligent Key system).

3.HEADLAMP (HI) CIRCUIT INSPECTION

Check the headlamp (HI) circuit. Refer to EXL-77, "Diagnosis Procedure".

Is the headlamp (HI) circuit normal?

YES >> Replace IPDM E/R. Refer to PCS-30, "Removal and Installation".
NO >> Repair or replace the malfunctioning part.

BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

Description

INFOID:0000000012432822

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

Diagnosis Procedure

INFOID:0000000012432823

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

Check the combination switch (lighting and turn signal switch). Refer to BCS-72, "Symptom Table" (with Intelligent Key system) or BCS-134, "Symptom Table" (without Intelligent Key system).

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

YES >> GO TO 2.
NO >> Repair or replace the malfunctioning part.

2.CHECK HEADLAMP (LO) REQUEST SIGNAL INPUT

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

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

Is the item status normal?

YES >> GO TO 3.
NO >> Replace BCM. Refer to BCS-74, "Removal and Installation" (with Intelligent Key system) or BCS-137, "Removal and Installation" (without Intelligent Key system).

3.HEADLAMP (LO) CIRCUIT INSPECTION

Check the headlamp (LO) circuit. Refer to EXL-79, "Diagnosis Procedure".

Is the headlamp (LO) circuit normal?

YES >> Replace IPDM E/R. Refer to PCS-30, "Removal and Installation".
NO >> Repair or replace the malfunctioning part.

PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON

Description

INFOID:0000000012432824

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

Diagnosis Procedure

INFOID:0000000012432825

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

Check the combination switch (lighting and turn signal switch). Refer to BCS-72, "Symptom Table" (with Intelligent Key system) or BCS-134, "Symptom Table" (without Intelligent Key system).

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

YES >> GO TO 2.
NO >> Repair or replace the malfunctioning part.

2.CHECK TAIL LAMP RELAY REQUEST SIGNAL INPUT

CONSULT DATA MONITOR
1. Select TAIL & CLR REQ of IPDM E/R DATA MONITOR item.
2. While operating the combination switch (lighting and turn signal switch), check the monitor status.

Monitor item	Condition		Monitor status
TAIL & CLR REQ	Combination switch (lighting and turn signal switch)	1st	ON
		OFF	OFF

Is the item status normal?

YES >> GO TO 3.
NO >> Replace BCM. Refer to BCS-74, "Removal and Installation" (with Intelligent Key system) or BCS-137, "Removal and Installation" (without Intelligent Key system).

3.PARK LAMP CIRCUIT INSPECTION

Check the parking lamp circuit. Refer to EXL-82, "Diagnosis Procedure".

Is the tail lamp circuit normal?

YES >> Replace IPDM E/R. Refer to PCS-30, "Removal and Installation".
NO >> Repair or replace the malfunctioning part.

BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

Description

INFOID:0000000012432826

The front fog lamps do not turn ON in any setting.

Diagnosis Procedure

INFOID:0000000012432827

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

Check the combination switch (lighting and turn signal switch). Refer to BCS-72, "Symptom Table" (with Intelligent Key system) or BCS-134, "Symptom Table" (without Intelligent Key system).

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

YES >> GO TO 2.
NO >> Repair or replace the malfunctioning part.

2.CHECK FRONT FOG LAMP REQUEST SIGNAL INPUT

CONSULT DATA MONITOR
1. Select FR FOG REQ of IPDM E/R DATA MONITOR item.
2. With operating the front fog lamp switch, check the monitor status.

Monitor item	Condition		Monitor status
FR FOG REQ	Front fog lamp switch (Lighting switch 2ND)	ON	ON
		OFF	OFF

Is the item status normal?

YES >> GO TO 3.
NO >> Replace BCM. Refer to BCS-74, "Removal and Installation" (with Intelligent Key system) or BCS-137, "Removal and Installation" (without Intelligent Key system).

3.FRONT FOG LAMP CIRCUIT INSPECTION

Check the front fog lamp circuit. Refer to EXL-88, "Diagnosis Procedure".

Is the front fog lamp circuit normal?

YES >> Replace IPDM E/R. Refer to PCS-30, "Removal and Installation".
NO >> Repair or replace the malfunctioning part.

PERIODIC MAINTENANCE

HEADLAMP AIMING ADJUSTMENT

Inspection

INFOID:0000000012432828

PREPARATION BEFORE ADJUSTING

Before performing aiming adjustment, check the following:

- Ensure all tires are inflated to correct pressure.
- Place vehicle and screen on level surface.
- Ensure there is no load in vehicle other than the driver (or equivalent weight placed in driver's position).
- Coolant and engine oil filled to correct level, and fuel tank full.
- Remove cargo and/or luggage to maintain an unloaded vehicle condition.
- Confirm spare tire, jack and tools are properly stowed.
- Carefully wipe off any dirt from headlamp lens.

CAUTION:

Do not use organic solvent (thinner, gasoline etc.)

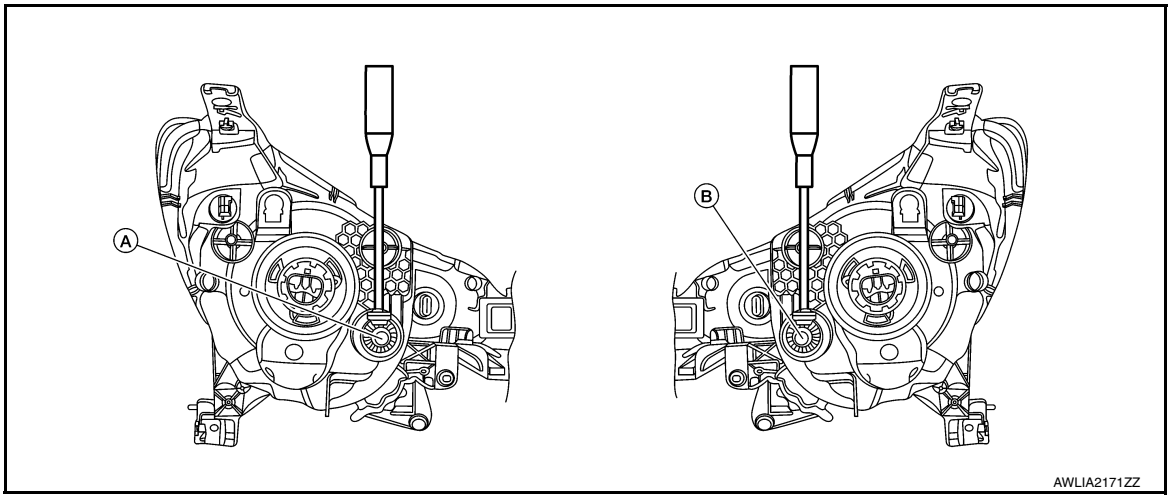
- Place a driver or equivalent weight of 68.5 kg (150 lb) on the driver seat.
- By hand, bounce the front and rear of the vehicle to settle the suspension and eliminate any static load.
- Place the front tires in the straight ahead position.
- Confirm headlamp aiming switch is set to "0" (zero) position.
- Aim each headlamp individually and ensure other headlamp beam pattern is blocked from screen.

NOTE:

- For headlamp aiming details, refer to regulations in your area.
- By regulation, no means for horizontal aim adjustment is provided from the factory; only vertical aim is adjustable.
- Use adjusting screw to perform aiming adjustment.
- Perform headlamp aiming if:

- The vehicle front body has been repaired.
- The front combination lamp has been removed or replaced.
- Any outfitting has been installed.
- The vehicle’s standard load condition has been substantially increased.

AIMING ADJUSTMENT SCREW

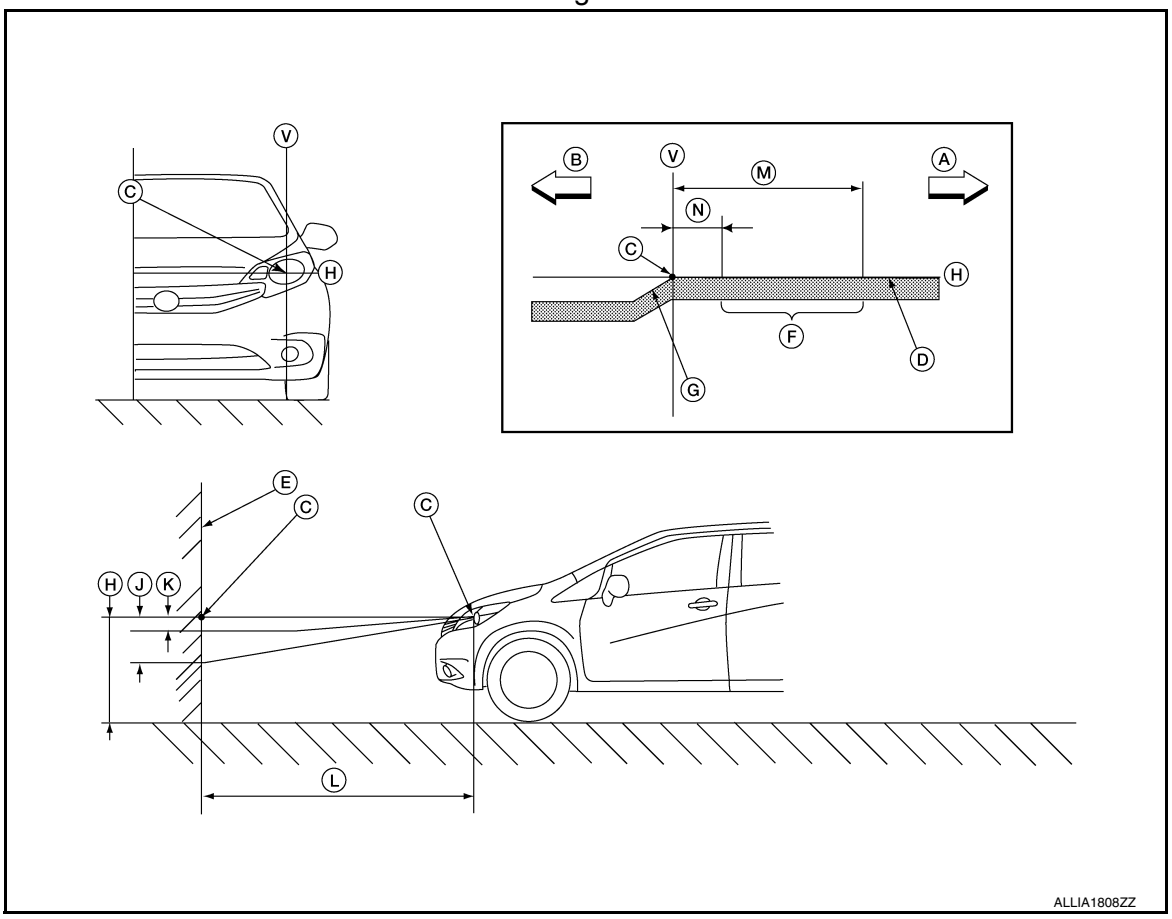


A. Adjusting screw (LH) B. Adjusting screw (RH)

Aiming Adjustment Procedure

INFOID:0000000012432829

Aiming Chart



A.	Right	B.	Left	C.	Center of headlamp bulb (H-V point)
D.	Cutoff line	E.	Screen	F.	Aim evaluation segment
G.	Step	H.	Horizontal center line of headlamp	J.	26.6 mm (1.05 in)
K.	13.3 mm (0.52 in)	L.	7.62 m (25 ft)	M.	399 mm (15.71 in)
N.	133 mm (5.24 in)	V.	Vertical center line of headlamp		

LOW BEAM AND HIGH BEAM

NOTE:

- Basic illuminating area for evaluation and/or adjustment should be within range shown on aiming chart.

1. Use adjustment screw to perform aiming adjustment.
   - **Ensure fog lamps (if equipped) are turned off.**
2. Block the opposite headlamp from projecting a beam pattern onto the adjustment screen, using a suitable object. Aim each headlamp individually.
   CAUTION:
   Do not cover the lens surface with tape etc. The lens is made of resin.
3. Place the screen on the same level and flat surface as the vehicle.
   NOTE:
   - Surface should be free of any debris that would cause a difference between the headlamp center and the adjustment screen.
4. Face the front of the vehicle to the screen and measure distance between the headlamp center and the screen surface.

Distance (D) between the headlamp center and the screen : 7.62 m (25 ft)

5. Start the engine and turn the headlamp on.
6. Determine the preferred vertical aim range dimensions, using the aiming chart.

7. Measure the projected beam within the aim evaluation segment on the screen.
8. Adjust the beam pattern of each headlamp until the aim evaluation segment (the area relative to both the highest and lowest cutoff line height) is positioned within the vertical aim range dimensions shown on the aiming chart.

FRONT FOG LAMP AIMING ADJUSTMENT

Inspection

INFOID:0000000012432830

PREPARATION BEFORE ADJUSTING

Before performing aiming adjustment procedure, check the following:
- Ensure all tires are inflated to correct pressure.
- Place vehicle and screen on level surface.
- Ensure there is no load in vehicle other than the driver (or equivalent weight placed in driver's position).
- Coolant and engine oil filled to correct level, and fuel tank full.
- Remove cargo and/or luggage to maintain an unloaded vehicle condition.
- Confirm spare tire, jack and tools are properly stowed.
- Carefully wipe off any dirt from fog lamp lens.

  CAUTION:

  Do not use organic solvent (thinner, gasoline etc.)
- Place a driver or equivalent weight of 68.5 kg (150 lb) on the driver seat.
- By hand, bounce the front and rear of the vehicle to settle the suspension and eliminate any static load.
- Place the front tires in the straight ahead position.
- Aim each headlamp individually and ensure other headlamp beam pattern is blocked from screen.

NOTE:
- For headlamp aiming details, refer to regulations in your area.
- By regulation, no means for horizontal aim adjustment is provided from the factory; only vertical aim is adjustable.
- Use adjusting screw to perform aiming adjustment.
- Perform headlamp aiming if:

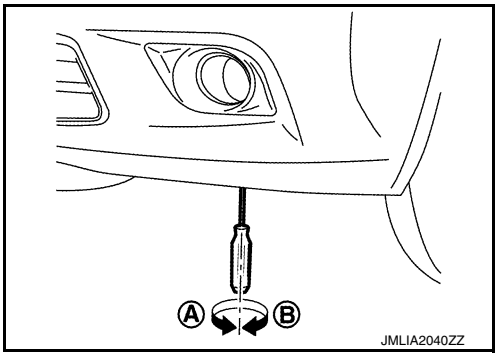
- The vehicle front body has been repaired.
- The front combination lamp has been removed or replaced.
- Any outfitting has been installed.
- The vehicle’s standard load condition has been substantially increased.

AIMING ADJUSTMENT SCREW

- Turn the aiming adjusting screw using a suitable tool to aim the fog lamp.

  A: UP

  B: DOWN



Aiming Adjustment Procedure

INFOID:0000000012432831

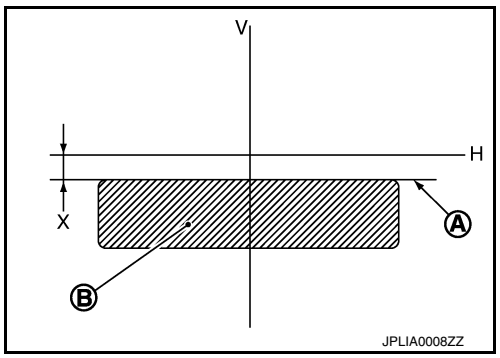
1. Screen placement.

   NOTE:
   - Place the screen perpendicular to the level road.
   - Position the vehicle facing the screen with 10 m (33 ft) between the front fog lamp center and the screen.
2. Start the engine. Illuminate the front fog lamp.

   CAUTION:

   Do not cover the lens surface with a tape etc. The lens are made of resin.

3. Adjust the cutoff line height (A) with the aiming adjustment screw so that the distance (X) between the horizontal center line of front fog lamp (H) and (A) becomes 200 mm (7.87 in).
   Front fog lamp light distribution on the screen
   - A :Cutoff line
   - B :High illuminance
   - H :Horizontal center line of front fog lamp
   - V :Vertical center line of front fog lamp
   - X :Cutoff line height

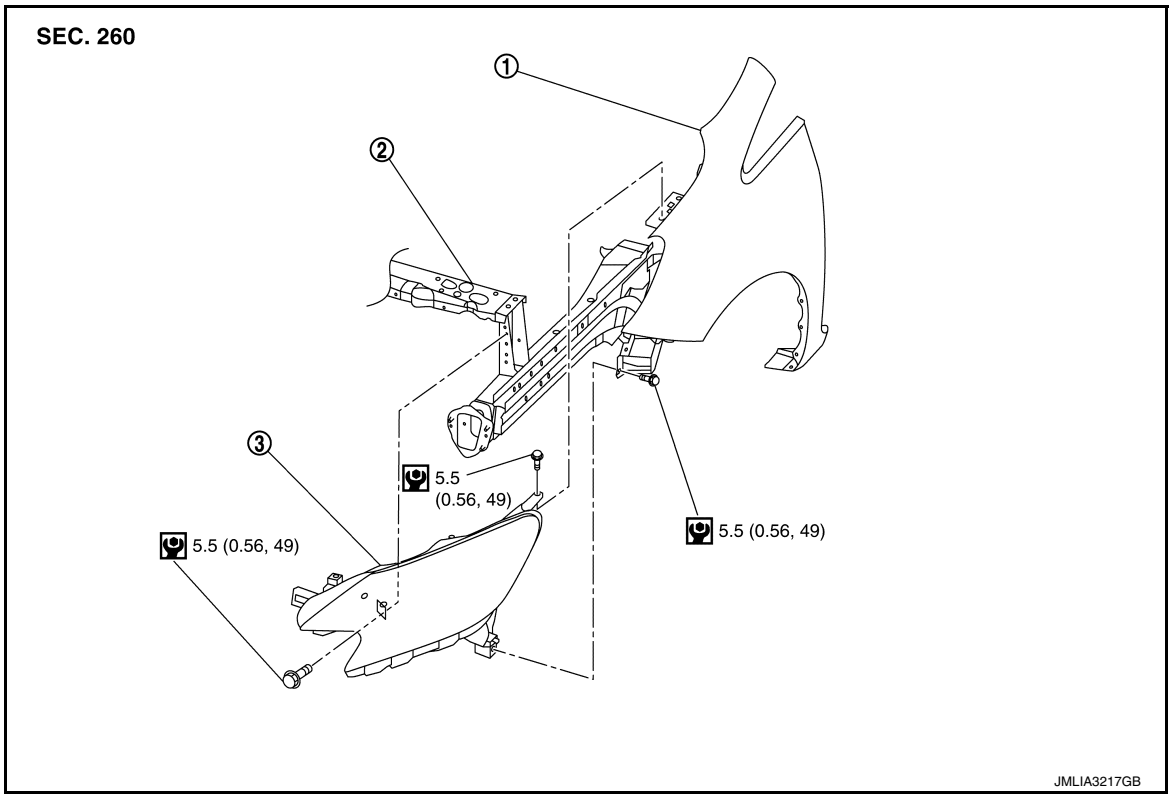


REMOVAL AND INSTALLATION

FRONT COMBINATION LAMP

Exploded View

INFOID:0000000012432832



1. Front fender
2. Radiator core upper support
3. Front combination lamp

Removal and Installation

INFOID:0000000012432833

REMOVAL

1. Remove front bumper fascia. Refer to EXT-24, "Removal and Installation".
2. Remove the front combination lamp bolts.
3. Pull front combination lamp forward.
4. Disconnect the harness connectors from front combination lamp and remove.

INSTALLATION

Installation is in the reverse order of removal.

NOTE:

After installation, perform headlamp aiming adjustment procedure. Refer to EXL-98, "Aiming Adjustment Procedure".

Bulb Replacement

INFOID:0000000012432834

WARNING:

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

CAUTION:

- **Do not touch the glass surface of the bulb with bare hands or allow oil or grease to get on it to prevent damage to the bulb.**
- **Do not leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.**

HEADLAMP BULB

Removal

1. Remove plastic cover.
2. Remove bulb from the front combination lamp.

Installation

Installation is in the reverse order of removal.

CAUTION:

After installing the bulb, install the bulb socket securely for watertightness.

SIDE MARKER LAMP BULB

Removal

1. Rotate bulb socket counterclockwise and remove.
2. Remove the bulb from bulb socket.

Installation

Installation is in the reverse order of removal.

CAUTION:

After installing the bulb, install the bulb socket securely for watertightness.

FRONT TURN SIGNAL/PARKING LAMP BULB

Removal

1. Rotate bulb socket counterclockwise and remove.
2. Remove the bulb from bulb socket.

Installation

Installation is in the reverse order of removal.

CAUTION:

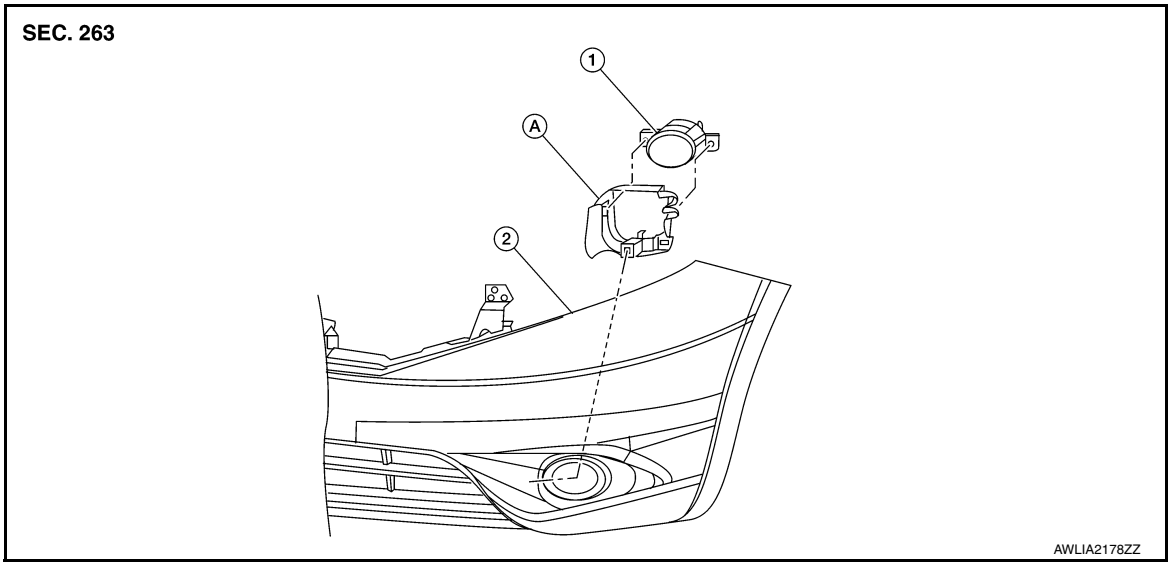
After installing the bulb, install the bulb socket securely for watertightness.

FRONT FOG LAMP

Exploded View

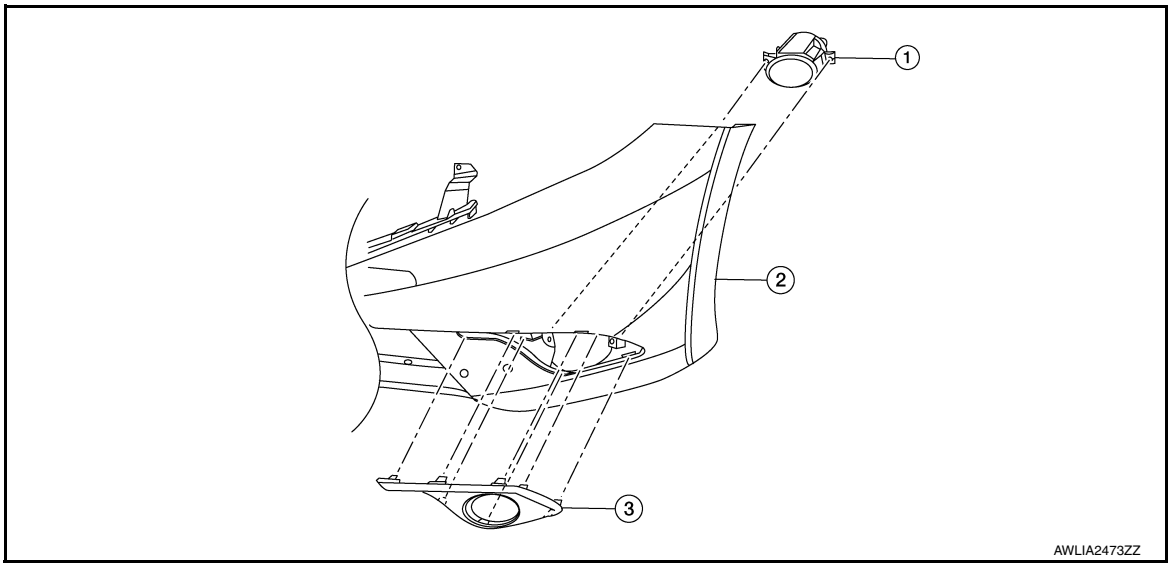
INFOID:0000000012432835

TYPE 1



1. Front fog lamp
2. Front bumper fascia
A. Front fog lamp bracket

TYPE 2



1. Front fog lamp
2. Front bumper fascia
3. Front fog lamp finisher

Removal and Installation

INFOID:0000000012432836

REMOVAL

1. Partially remove front fender protector. Refer to EXT-38, "Exploded View".
2. Disconnect the harness connector from front fog lamp.
3. Remove screws and front fog lamp.

INSTALLATION

Installation is in the reverse order of removal.

NOTE:

After installation, perform fog lamp aiming adjustment procedure. Refer to EXL-100, "Aiming Adjustment Procedure".

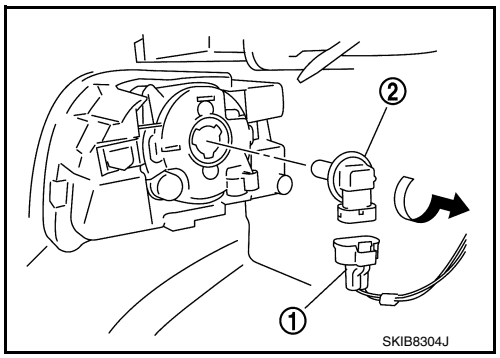
Bulb Replacement

INFOID:0000000012432837

WARNING:
Do not touch bulb by hand while it is lit or right after being turned off. Burning may result.
CAUTION:
- **Do not touch the glass surface of the bulb with bare hands or allow oil or grease to get on it to prevent damage to the bulb.**
- **Do not leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.**

REMOVAL

1. Partially remove fender protector. Refer to EXT-38, "Exploded View".
2. Disconnect harness connector (1) from front fog lamp bulb.
3. Rotate the bulb (2) counterclockwise and remove.



INSTALLATION

Installation is in the reverse order of removal.
CAUTION:
After installing the bulb, install the bulb socket securely for watertightness.

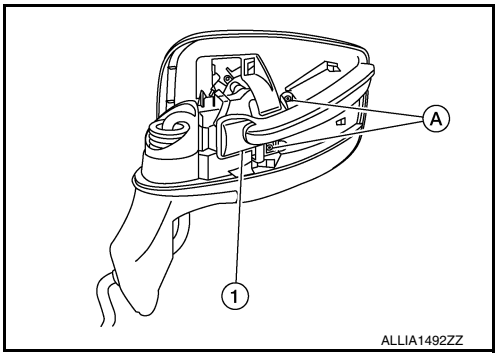
DOOR MIRROR TURN SIGNAL LAMP

Removal and Installation

INFOID:0000000012432838

REMOVAL

1. Remove the door mirror rear finisher. Refer to MIR-18, "Removal and Installation".
2. Remove the screws (A) and door mirror turn signal lamp (1).



3. Disconnect the harness connector from the door mirror turn signal lamp and remove.

INSTALLATION

Installation is in the reverse order of removal.

Bulb Replacement

INFOID:0000000012432839

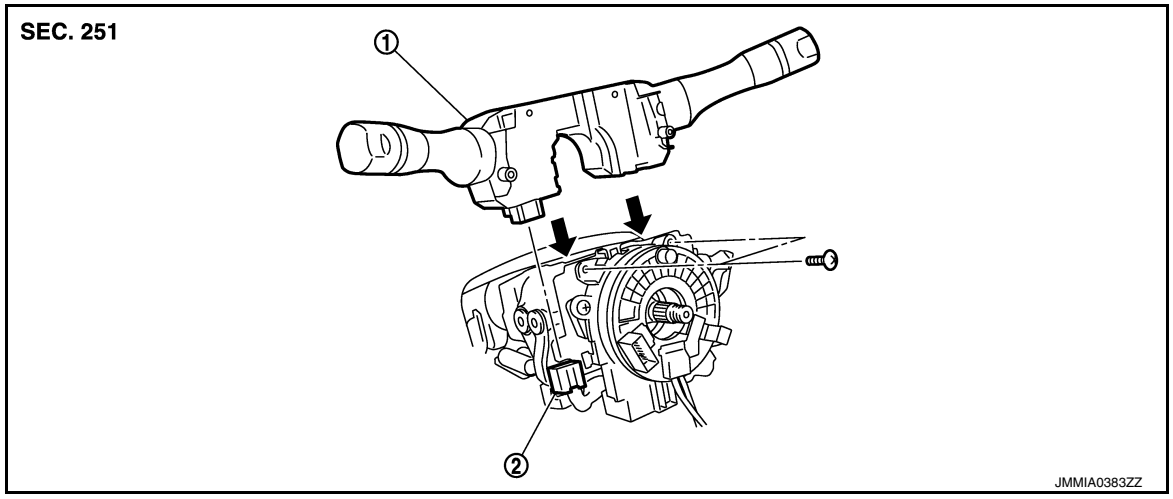
DOOR MIRROR SIDE TURN SIGNAL LAMP

The door mirror side turn signal lamp bulb is integrated into the door mirror side turn signal lamp and is serviced as an assembly. Refer to EXL-106, "Removal and Installation".

COMBINATION SWITCH

Exploded View

INFOID:0000000012432840



1. Combination switch
2. Combination switch harness connector

Removal and Installation

INFOID:0000000012432841

REMOVAL

1. Remove the steering wheel. Refer to ST-8, "Removal and Installation".
2. Remove steering column covers. Refer to IP-17, "Removal and Installation".
3. Remove the combination switch screws.
4. Disconnect the harness connector from the combination switch.
5. Remove the combination switch by lifting upward.

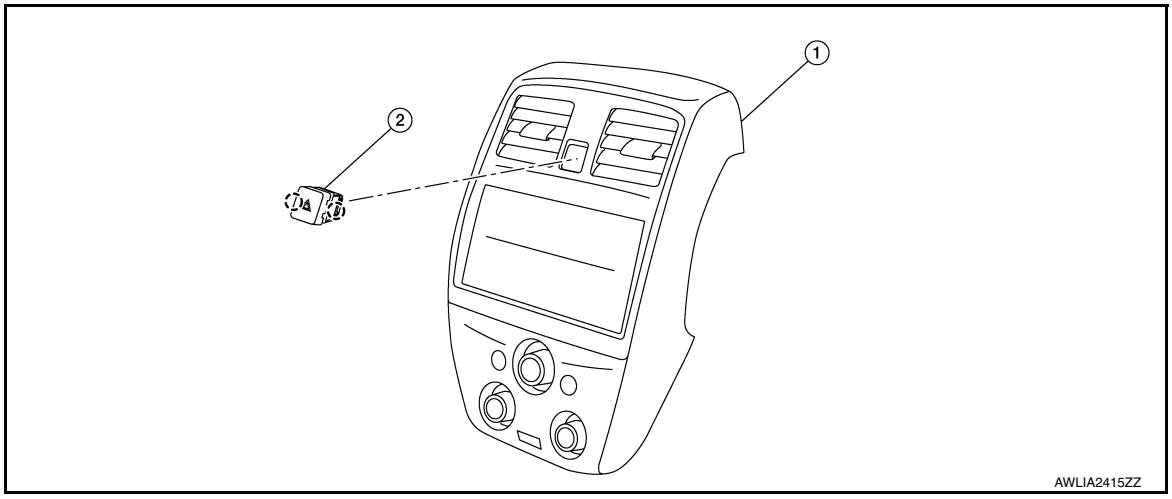
INSTALLATION

Installation is in the reverse order of removal.

HAZARD SWITCH

Exploded View

INFOID:0000000012432842



1. Cluster lid C
2. Hazard switch
Pawl

Removal and Installation

INFOID:0000000012432843

REMOVAL

1. Remove cluster lid C. Refer to IP-22, "Removal and Installation".
2. Release pawls and remove hazard switch.

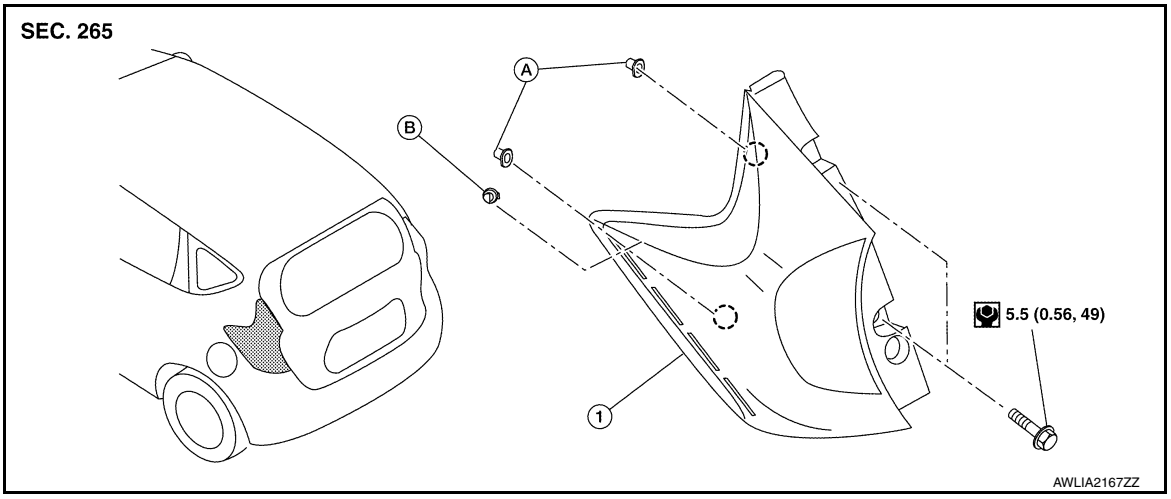
INSTALLATION

Installation is in the reverse order of removal.

REAR COMBINATION LAMP

Exploded View

INFOID:0000000012432844



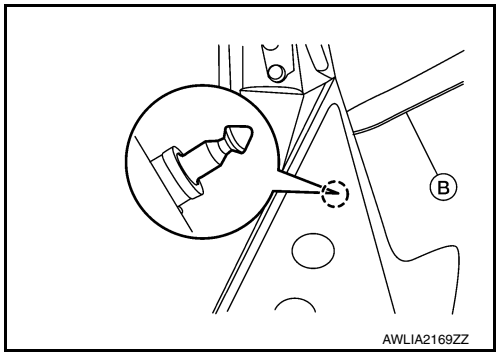
1. Rear combination lamp
A. Grommet
B. Clip
Locating pin

Removal and Installation

INFOID:0000000012432845

REMOVAL

1. Remove rear combination lamp bolts.
2. Release the locating pin (A) of the rear combination lamp using a suitable tool (B) as shown.



3. Disconnect the harness connector from the rear combination lamp and remove.

INSTALLATION

Installation is in the reverse order of removal.

Bulb Replacement

INFOID:0000000012432846

WARNING:
Do not touch bulb with bare hand while it is lit or right after being turned off. Burning may result.
CAUTION:
- **Do not touch the glass surface of the bulb with bare hands or allow oil or grease to get on it to prevent damage to the bulb.**
- **Do not leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.**

STOP/TAIL LAMP BULB

Removal

1. Remove rear combination lamp. Refer to EXL-109, "Removal and Installation".

2. Rotate stop/tail lamp bulb socket counterclockwise and remove.
3. Remove stop/tail lamp bulb from bulb socket.

Installation
Installation is in the reverse order of removal.
CAUTION:
After installing the bulb, install bulb socket securely for watertightness.

REAR TURN SIGNAL LAMP BULB

Removal

1. Remove rear combination lamp. Refer to EXL-109, "Removal and Installation".
2. Rotate rear turn signal lamp bulb socket counterclockwise and remove.
3. Remove rear turn signal lamp bulb from bulb socket.

Installation
Installation is in the reverse order of removal.
CAUTION:
After installing the bulb, install bulb socket securely for watertightness.

BACK-UP LAMP BULB

Removal

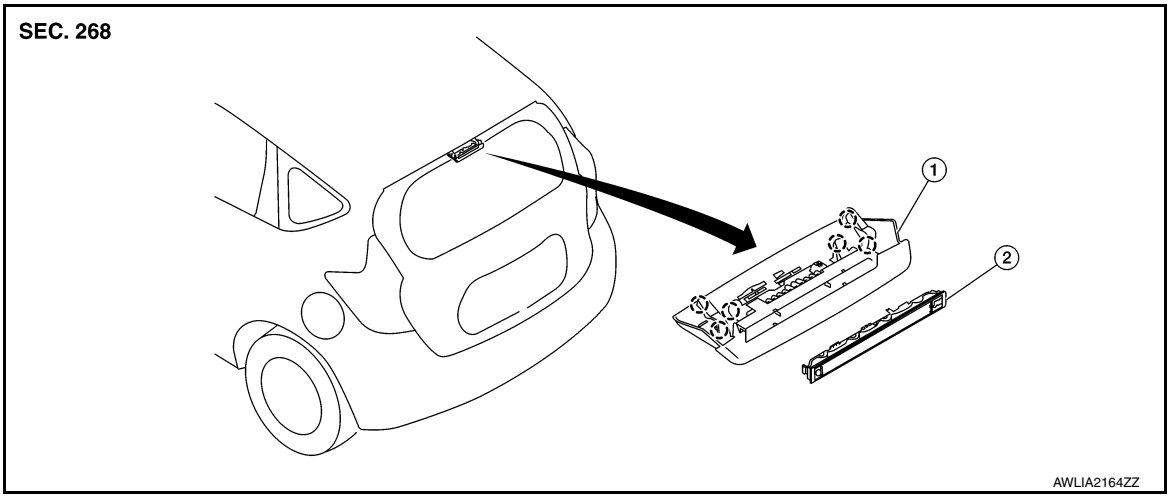
1. Remove rear combination lamp. Refer to EXL-109, "Removal and Installation".
2. Rotate back-up lamp bulb socket counterclockwise and remove.
3. Remove back-up lamp bulb from bulb socket.

Installation
Installation is in the reverse order of removal.
CAUTION:
After installing the bulb, install bulb socket securely for watertightness.

HIGH-MOUNTED STOP LAMP

Exploded View

INFOID:0000000012432847



1. High-mounted stop lamp
2. High-mounted stop lamp LED
Pawl

Removal and Installation

INFOID:0000000012432848

REMOVAL

1. Release high-mounted stop lamp pawls using a suitable tool.
2. Disconnect the harness connector from high-mounted stop lamp and remove.

INSTALLATION

Installation is in the reverse order of removal.

Bulb Replacement

INFOID:0000000012432849

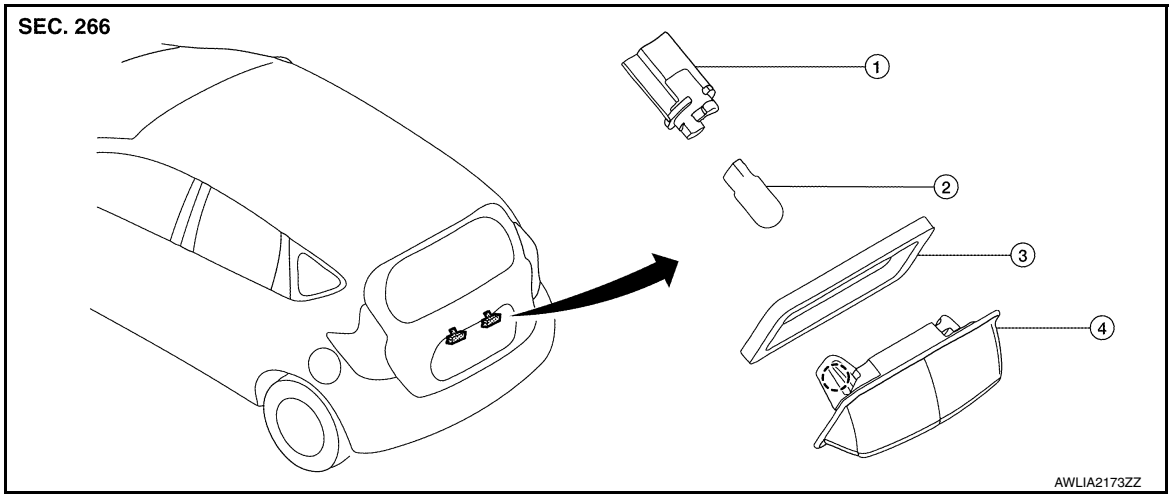
HIGH-MOUNTED STOP LAMP BULB

The high-mounted stop lamp bulb is a LED and is integrated into the high-mounted stop lamp and is serviced as an assembly. Refer to EXL-111, "Removal and Installation".

LICENSE PLATE LAMP

Exploded View

INFOID:0000000012432850



1. License plate lamp bulb socket
2. License plate lamp bulb
3. Seal
4. License plate lamp
- Pawl

Removal and Installation

INFOID:0000000012432851

REMOVAL

1. Remove back door outer finisher. Refer to EXT-48, "Removal and Installation".
2. Disconnect harness connector from license plate lamp.
3. Release license plate lamp pawl and remove license plate lamp.

INSTALLATION

Installation is in the reverse order of removal.

Bulb Replacement

INFOID:0000000012432852

WARNING:

Do not touch bulb with your hand while it is on or right after being turned off. Burning may result.

CAUTION:

- **Do not touch the glass surface of the bulb with bare hands or allow oil or grease to get on it to prevent damage to the bulb.**
- **Do not leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.**

REMOVAL

1. Remove license plate lamp. Refer to EXL-112, "Removal and Installation".
2. Rotate license plate lamp bulb socket counterclockwise and remove.
3. Remove license plate lamp bulb from bulb socket.

INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

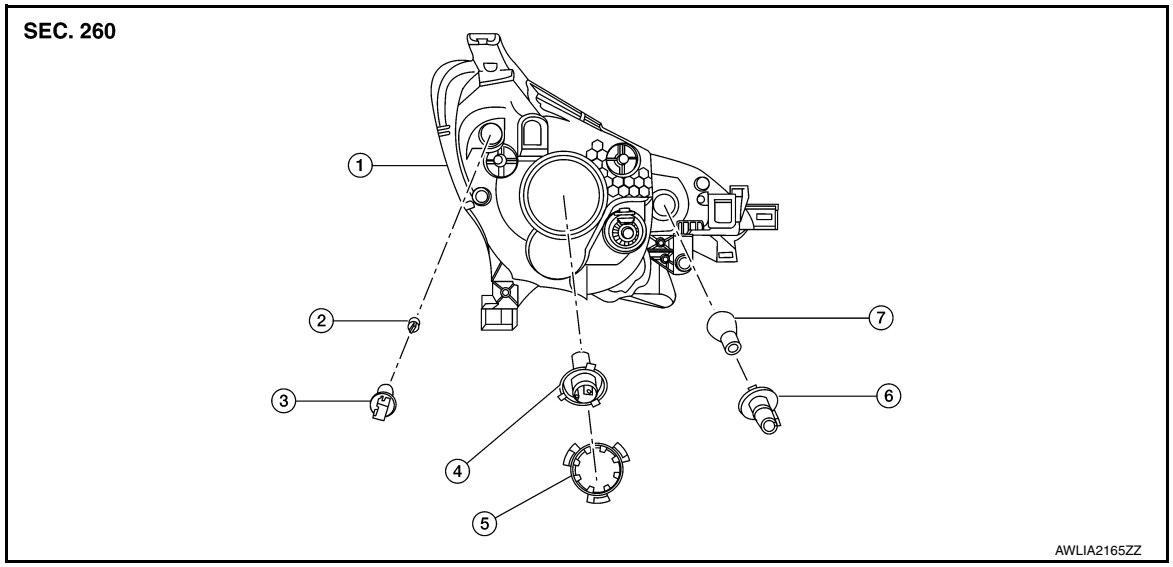
After installing the bulb, install the bulb socket securely for watertightness.

UNIT DISASSEMBLY AND ASSEMBLY

FRONT COMBINATION LAMP

Exploded View

INFOID:0000000012432853



1. Front combination lamp
2. Side marker lamp bulb
3. Side marker lamp socket
4. Headlamp bulb
5. Lock ring
6. Front turn signal/Parking lamp bulb socket
7. Front turn signal/Parking lamp bulb

Disassembly and Assembly

INFOID:0000000012432854

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.**
- **Do not leave the bulb out of the lamp reflector for a long time because dust, moisture, smoke, etc. may affect the performance of the lamp.**

DISASSEMBLY

1. Remove front combination lamp. Refer to EXL-102, "Removal and Installation".
2. Rotate lock ring counterclockwise and remove.
3. Remove headlamp bulb.
4. Rotate side marker bulb socket counterclockwise and remove.
5. Remove the side marker lamp bulb from the side marker bulb socket.
6. Rotate turn signal/parking lamp bulb socket counterclockwise and remove.
7. Remove turn signal/parking lamp bulb from turn signal/parking lamp bulb socket.

ASSEMBLY

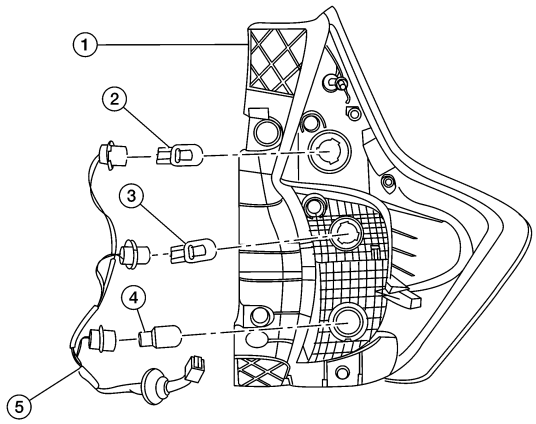
Assembly is in the reverse order of disassembly.
CAUTION:
- **After installing the headlamp bulb, be sure to install lock ring securely to ensure watertightness.**
- **After installing, be sure to install the bulb sockets securely to ensure watertightness.**

REAR COMBINATION LAMP

Exploded View

INFOID:0000000012432855

SEC. 265



1. Rear combination lamp
2. Stop/tail lamp bulb
3. Back-up lamp bulb
4. Rear turn signal lamp bulb
5. Harness connector

Disassembly and Assembly

INFOID:0000000012432856

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.**
- **Do not leave the bulb out of the lamp reflector for a long time because dust, moisture, smoke, etc. may affect the performance of the lamp.**

DISASSEMBLY

1. Remove rear combination lamp. Refer to EXL-109, "Removal and Installation".
2. Rotate rear turn signal lamp bulb socket counterclockwise and remove.
3. Remove rear turn signal lamp bulb from bulb socket.
4. Rotate back-up lamp bulb socket counterclockwise and remove.
5. Remove back-up lamp bulb from bulb socket.
6. Rotate stop/tail lamp bulb socket counterclockwise and remove.
7. Remove stop/tail lamp bulb from bulb socket.

ASSEMBLY

Assembly is in the reverse order of disassembly.
CAUTION:
After installing, be sure to install the bulb sockets securely to ensure watertightness.

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Bulb specification

INFOID:0000000012432857

Item		Wattage (W)*
Front combination	Headlamp (HI/LO)	65/55
	Front Turn signal/Parking lamp	28/8
	Side marker lamp	5
Fog lamp (if equipped)		55
Door mirror turn signal lamp (if equipped)		LED
Rear combination	Stop/Tail lamp	21/5
	Rear turn signal lamp	21
	Back-up lamp	21
License plate lamp		5
High-mounted stop lamp		LED

*: Always check with the Parts Department for the latest parts info.