SECTION EXL
EXTERIOR LIGHTING SYSTEM

CONTENTS

PRECAUTION

PRECAUTIONS

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

INFOID:0000000009951582

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

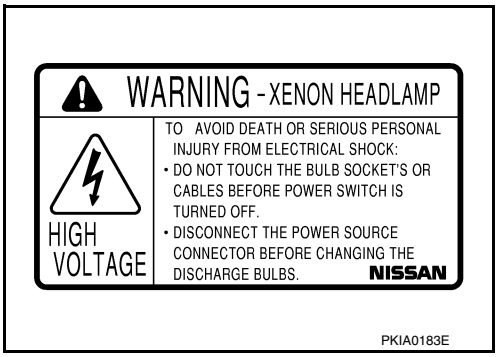
WARNING:

- **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.**

General precautions for service operations

INFOID:0000000009463538

- Do not work with wet hands.
- The xenon headlamp system includes a high voltage generating part. Be sure to disconnect battery negative cable (negative terminal) or power fuse before removing, installing, or touching the xenon headlamp (including lamp bulb).
- Turn the lighting switch OFF before disconnecting and connecting the connector.
- When turning the xenon headlamp on and while it is illuminated, do not touch the harness, bulb, and socket of the headlamp.
- When checking the headlamp on/off operation, check it on vehicle and with the power connected to the vehicle-side connector.



- Do not touch the headlamp bulb glass surface with bare hands or allow oil or grease to get on it. Do not touch the headlamp bulb just after the headlamp is turned off, because it is very hot.
- Install the xenon headlamp bulb socket correctly. If it is installed improperly, high-voltage leak or corona discharge may occur that can melt the bulb, connector or housing. Do not illuminate the xenon headlamp bulb out of the headlamp housing. Doing so can cause fire and harm your eyes.
- When the bulb has burned out, wrap it in a thick vinyl bag and discard. Do not break the bulb.
- Leaving the bulb removed from the headlamp housing for a long period of time can deteriorate the performance of the lens and reflector (dirt, clouding). Always prepare a new bulb and have it on hand when replacing the bulb.
- When adjusting the headlamp aiming, turn the aiming adjustment screw only in the tightening direction. If it is necessary to loosen the screw, first fully loosen the screw, and then turn it in the tightening direction.
- Do not use organic solvent (paint thinner or gasoline) to clean lamps and to remove old sealant.

Precaution for Work

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- 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.

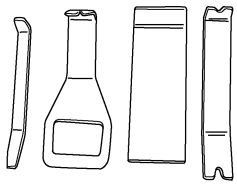
PREPARATION

PREPARATION

Special Service Tool

INFOID:0000000009463540

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

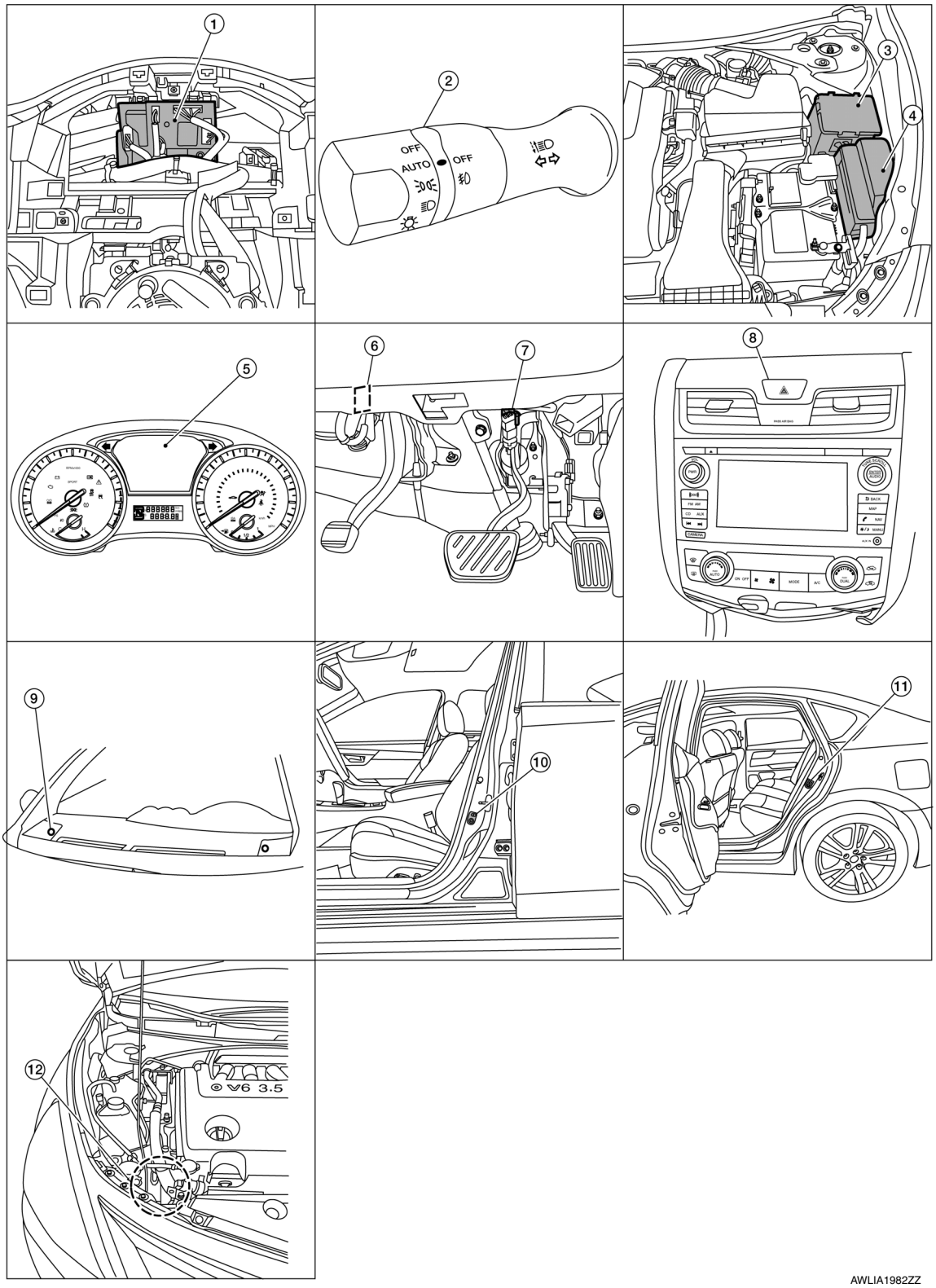
Tool number (TechMate No.) Tool name	Description
— (J-46534) Trim Tool Set  AWJIA0483ZZ	Removing trim components

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000009463541



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1. BCM (view with combination meter removed)
2. Combination switch (lighting and turn signal switch)
3. IPDM E/R, (Headlamp high relay, Headlamp low relay, Tail lamp relay and Front fog lamp relay (if equipped))
4. Fuse, fusible link and relay box (Stop lamp relay)
5. Combination meter
6. Parking brake switch
7. Stop lamp switch
8. Hazard switch
9. Optical sensor
10. Front door switch LH (RH similar)
11. Rear door switch LH (RH similar)
12. Daytime light relay (if equipped)

Component Description

INFOID:0000000009463542

Part	Description
BCM	Controls the exterior lighting system.
Combination switch (Lighting & turn signal switch)	Refer to BCS-8, "COMBINATION SWITCH READING SYSTEM : System Description".
IPDM E/R	Controls the integrated relays and supplies voltage to the load according to the request from the BCM via CAN communication.
Stop lamp switch	Transmits power to the stop lamp relay when the brake pedal is pressed to operate stop lamps.
Combination meter	Refer to MWI-9, "METER SYSTEM : System Description".
Daytime light relay (if equipped)	Sends power to the daytime lamp when operated by the IPDM E/R.
Stop lamp relay	Transmits power to the stop lamps when the brake pedal is pressed.
Front door switch LH/RH	Transmits the door open signal to the BCM.
Rear door switch LH/RH	
Optical sensor	Optical sensor converts the outside brightness (lux) to voltage and transmits the optical sensor signal to BCM to operate the auto light system.
Parking brake switch	Transmits the parking brake switch signal to the combination meter to operate the auto light system.
Hazard switch	Inputs the hazard switch signal to BCM.

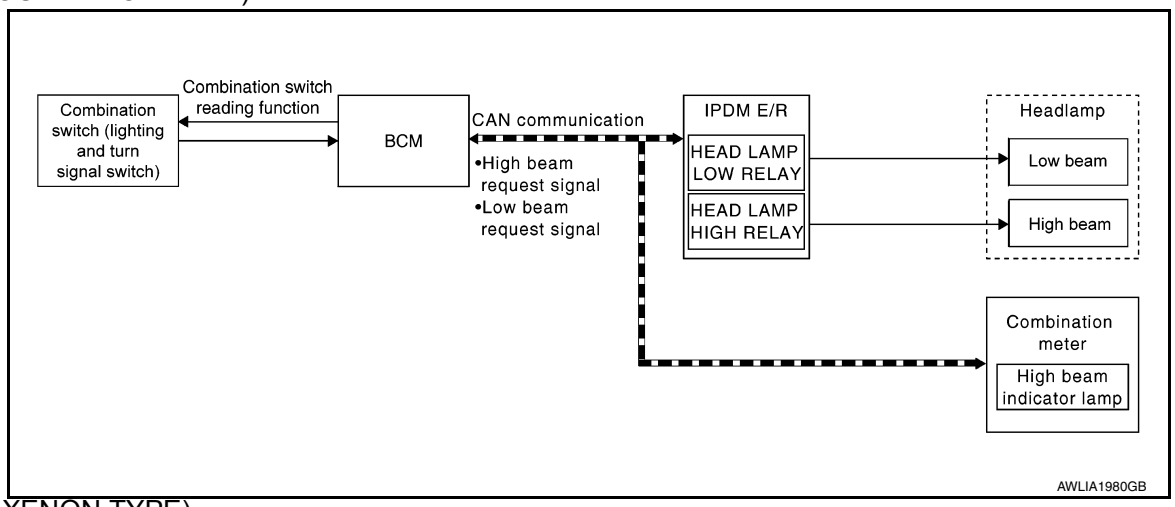
SYSTEM

HEADLAMP SYSTEM

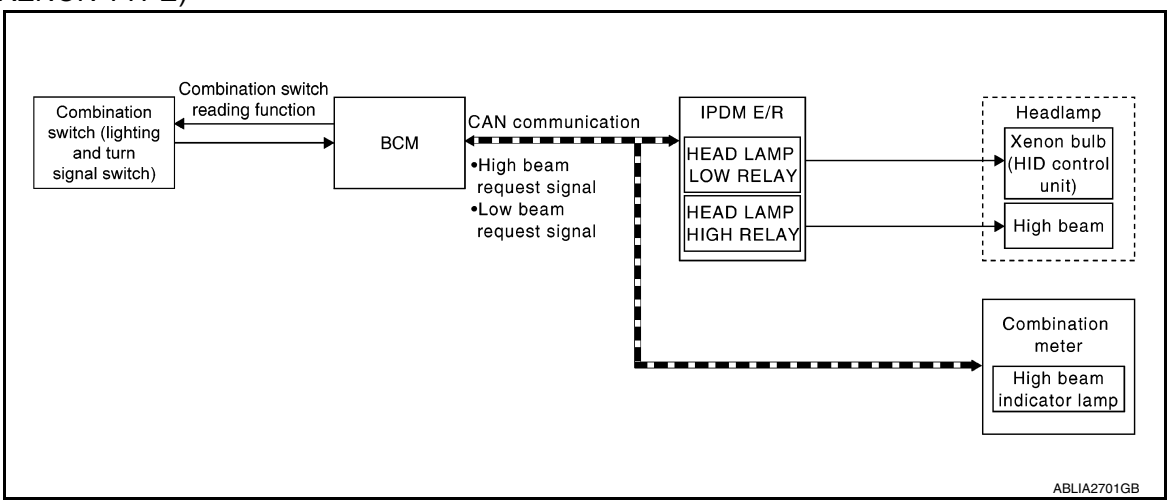
HEADLAMP SYSTEM : System Diagram

INFOID:0000000009463543

(WITHOUT XENON TYPE)



(WITH XENON TYPE)



HEADLAMP SYSTEM : System Description

INFOID:0000000009463544

XENON HEADLAMP

A Xenon type headlamp is adapted to the low beam headlamps. Xenon bulbs do not use a filament. Instead, they produce light when a high voltage current is passed between two tungsten electrodes through a mixture of xenon (an inert gas) and certain other metal halides. In addition to added lighting power, electronic control of the power supply gives the headlamps stable quality and tone color.

Following are some of the many advantages of the xenon type headlamp.

- The light produced by the headlamps is a white color comparable to sunlight that is easy on the eyes.
- Light output is nearly double that of halogen headlamps, affording increased area of illumination.
- The light features a high relative spectral distribution at wavelengths to which the human eye is most sensitive. This means that even in the rain, more light is reflected back from the road surface toward the vehicle, for added visibility.
- Power consumption is approximately 25 percent less than halogen headlamps, reducing battery load.

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.

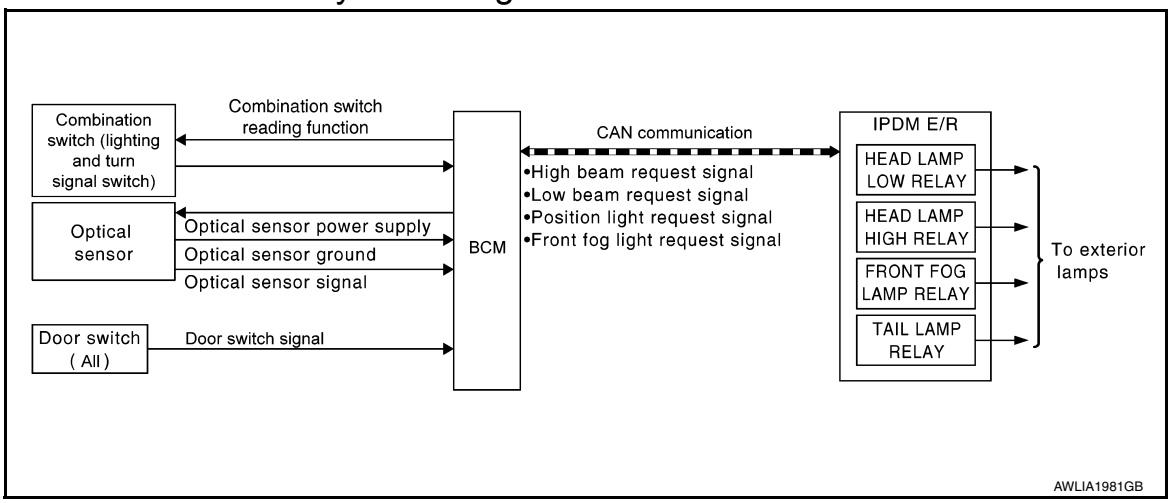
EXTERIOR LAMP BATTERY SAVER CONTROL

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 a period of time, unless the lighting switch position is changed. If the lighting switch position is changed, then the headlamps are turned off.

AUTO LIGHT SYSTEM

AUTO LIGHT SYSTEM : System Diagram

INFOID:0000000009463545



AUTO LIGHT SYSTEM : System Description

INFOID:0000000009463546

- BCM (Body Control Module) controls auto light operation according to signals from optical sensor, lighting switch and ignition switch.
- IPDM E/R (Intelligent Power Distribution Module Engine Room) operates parking, license plate, tail, front fog lamps and headlamps according to CAN communication signals from BCM.
- Optical sensor detects ambient brightness of 800 to 2,500 lux. And optical sensor converts light (lux) to voltage, then sends the optical sensor signal to BCM.

OUTLINE

The auto light control system has an optical sensor that detects outside brightness.
When the lighting switch is in AUTO position, it automatically turns ON/OFF the parking, license plate, tail, front fog lamps and headlamps in accordance with the ambient light. Sensitivity can be adjusted. For the details of the setting, Refer to BCS-19, "HEADLAMP : CONSULT Function (BCM - HEADLAMP)".

DAYTIME RUNNING LIGHT SYSTEM

DAYTIME RUNNING LIGHT SYSTEM : System Diagram

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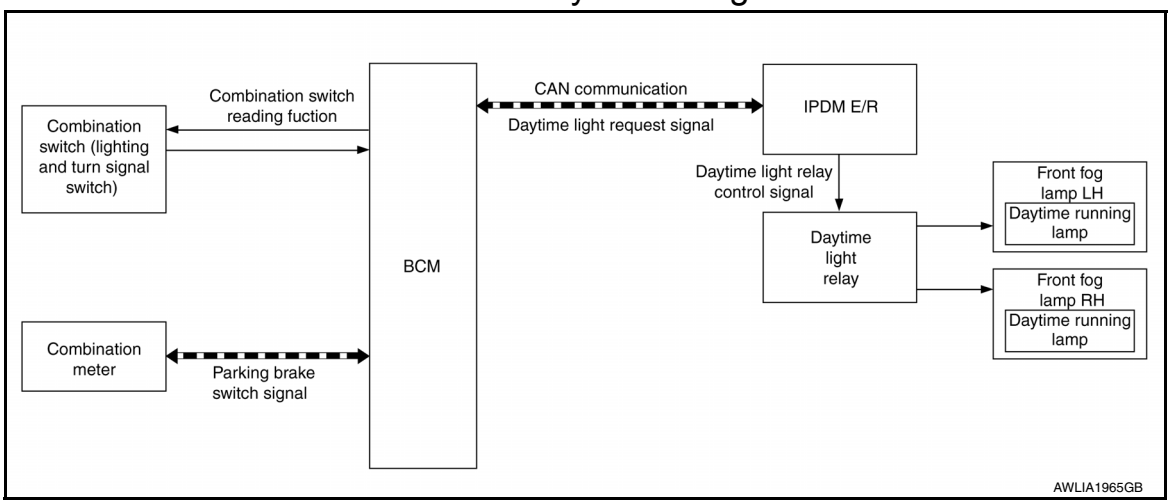


DAYTIME RUNNING LIGHT SYSTEM : System Description

INFOID:0000000009463548

System Description

The daytime light system is equipped with a daytime light control that activates the daytime lights within the front fog lamp assembly when the engine is operating. If the parking brake is applied, the daytime lights will turn OFF. The daytime lights will turn ON when the parking brake is released.

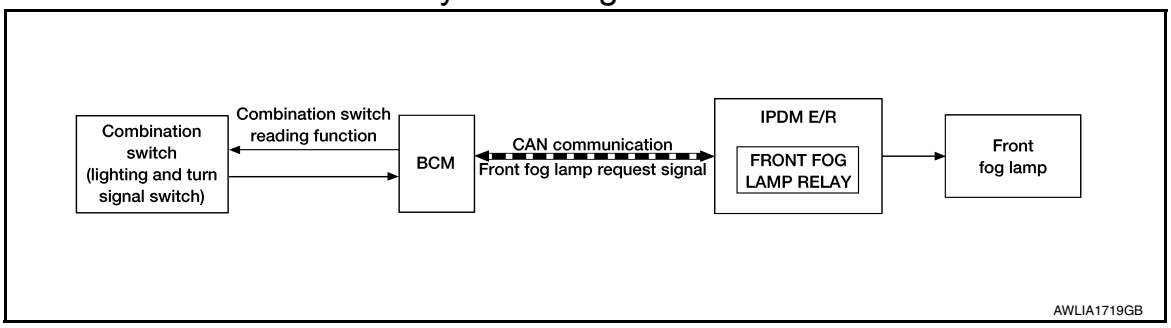
OPERATION

The BCM monitors inputs from the parking brake switch and the combination switch (lighting and turn signal switch) to determine when to operate the daytime light system. The BCM sends a daytime light request to the IPDM E/R via the CAN communication lines. The IPDM E/R grounds the daytime light relay which in turn, provides power to the daytime lights.

FRONT FOG LAMP SYSTEM

FRONT FOG LAMP SYSTEM : System Diagram

INFOID:0000000009463549



FRONT FOG LAMP SYSTEM : System Description

INFOID:0000000009463550

The front fog lamps are activated with the combination switch (lighting and turn signal switch). The lighting switch signal to the BCM is monitored with the BCM combination switch reading function. When the fog lamps are turned ON with the lighting switch, the BCM sends a front fog lamp request signal via CAN communication lines to the IPDM E/R. The IPDM E/R grounds the front fog lamp relay coil to activate the front fog lamps.

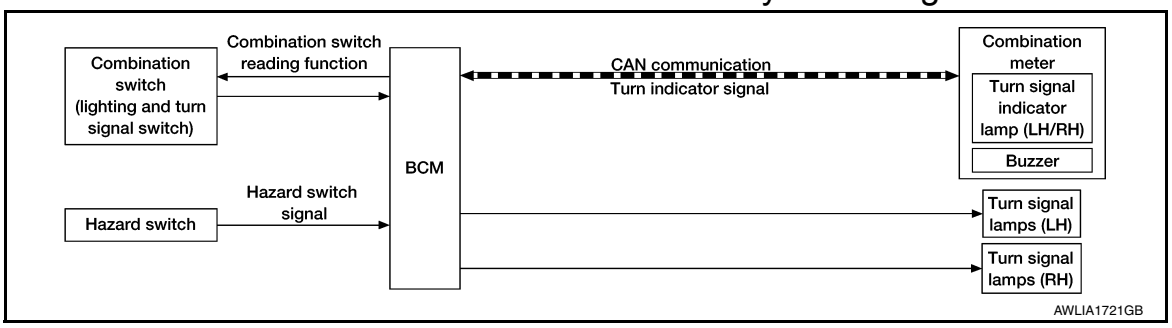
FRONT FOG LAMP OPERATION

When the lighting switch is in front fog lamp ON position and also in 1st or 2nd position or AUTO position (headlamp is ON), the BCM detects FR FOG ON and the HEAD LAMP 1, 2 ON or the AUTO LIGHT ON. The BCM sends a front fog lamp request ON signal via 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 LAMPS

TURN SIGNAL AND HAZARD WARNING LAMPS : System Diagram

INFOID:0000000009463551



TURN SIGNAL AND HAZARD WARNING LAMPS : System Description

INFOID:0000000009463552

TURN SIGNAL OPERATION

When the combination switch (lighting and turn signal switch) is in LH or RH turn position with the ignition switch in the ON position, the BCM receives input requesting the turn RH or turn LH lamps to illuminate. The BCM controls the turn signal power to the respective turn signal lamp. The BCM also sends a turn indicator signal ON request via the CAN communication lines to the combination meter. The combination meter then activates the appropriate turn signal indicator and audible buzzer.

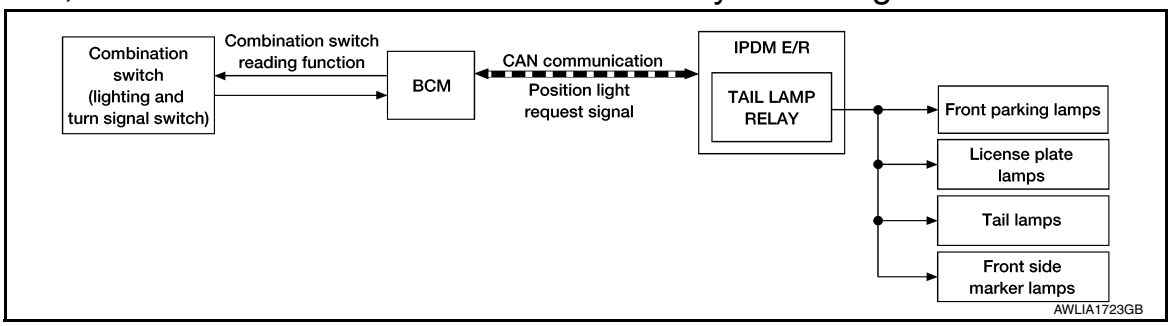
HAZARD LAMP OPERATION

When the hazard switch is in the ON position, the BCM receives input requesting the hazard lamps illuminate. The BCM controls the turn signal power to both the LH and RH turn signal lamps. The BCM sends a hazard indicator signal ON request via the CAN communication lines to the combination meter. The combination meter then activates both the LH and RH turn signal indicators and audible buzzer.

PARKING, LICENSE PLATE AND TAIL LAMPS

PARKING, LICENSE PLATE AND TAIL LAMPS : System Diagram

INFOID:0000000009463553



PARKING, LICENSE PLATE AND TAIL LAMPS : System Description

INFOID:0000000009463554

PARKING, LICENSE PLATE AND TAIL LAMPS OPERATION

When the lighting switch is in 1st or 2nd position, BCM detects the LIGHTING SWITCH 1st or 2nd POSITION ON. The BCM sends a parking light ON request via 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 1st or 2nd position and the ignition switch is turned from ON or ACC to OFF, the battery saver feature is activated.
Under this condition, the exterior lamps remain illuminated for a period of time unless the lighting switch position is changed. If the lighting switch position is changed, then the exterior lamps are turned off.

COMBINATION SWITCH READING SYSTEM

COMBINATION SWITCH READING SYSTEM : System Diagram

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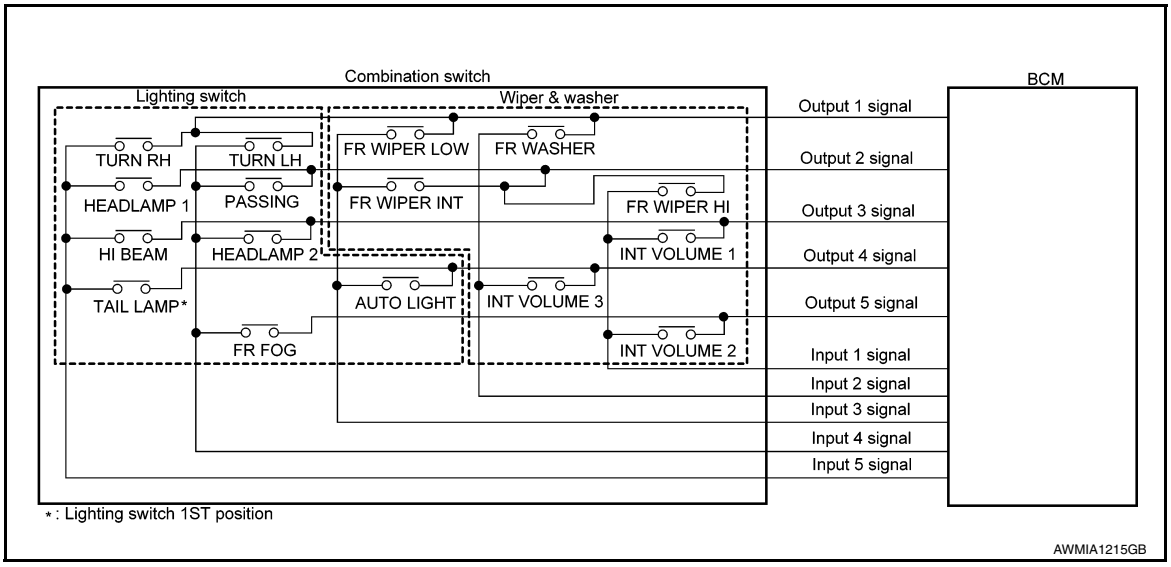

COMBINATION SWITCH READING SYSTEM : System Description

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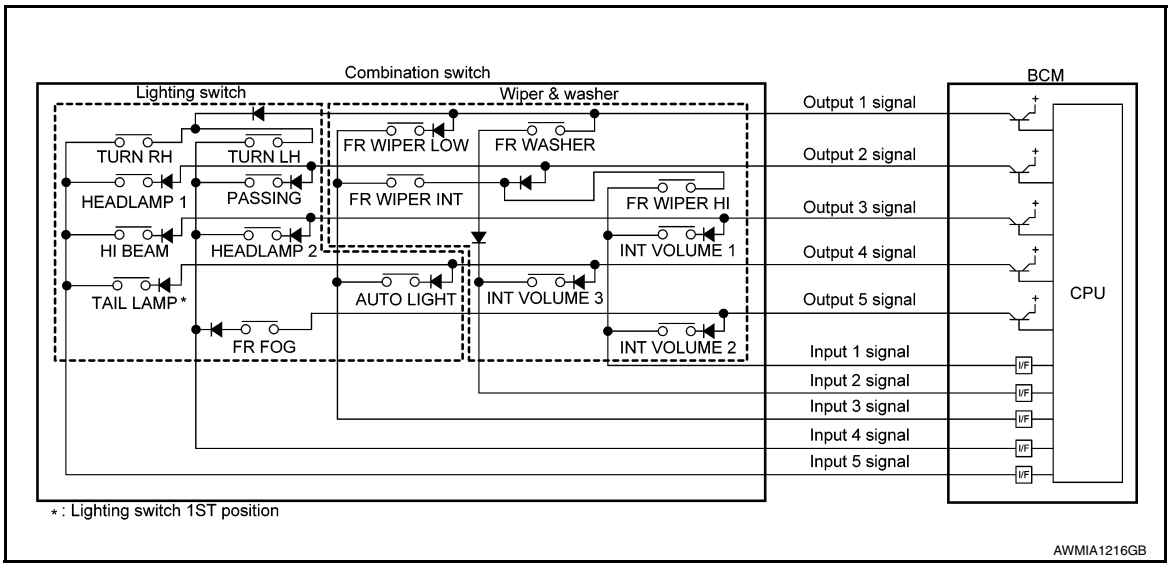
OUTLINE

- BCM reads the status of the combination switch (light, turn signal, wiper and washer) and recognizes the status of each switch.
- BCM has a combination of 5 output terminals (OUTPUT 1 - 5) and 5 input terminals (INPUT 1 - 5) and reads a maximum of 20 switch states.

COMBINATION SWITCH MATRIX

Combination switch circuit



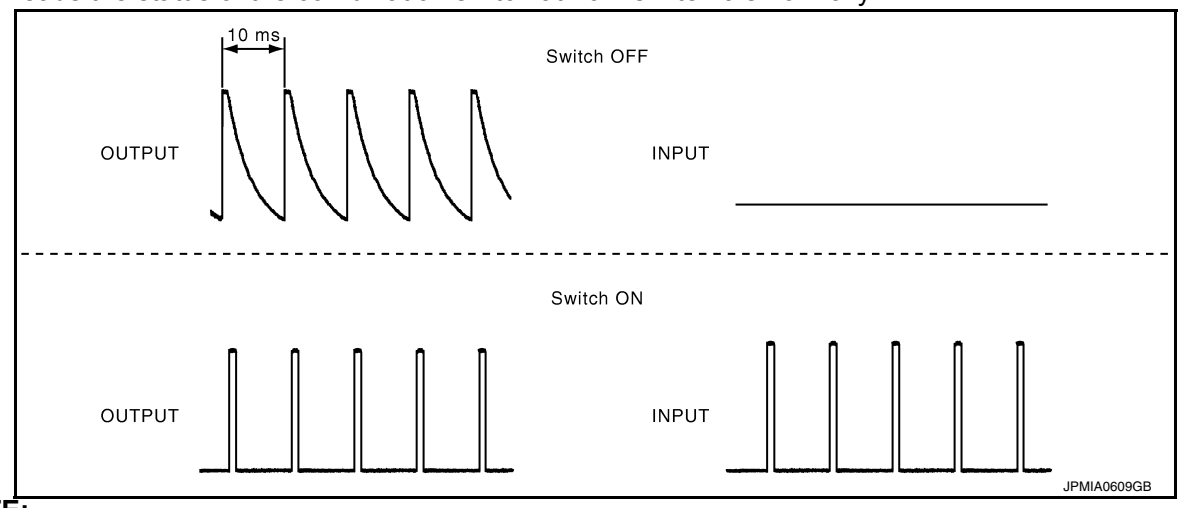
Combination switch INPUT-OUTPUT system list

System	INPUT 1	INPUT 2	INPUT 3	INPUT 4	INPUT 5
OUTPUT 1	—	FR WASHER	FR WIPER LOW	TURN LH	TURN RH
OUTPUT 2	FR WIPER HI	—	FR WIPER INT	PASSING	HEADLAMP 1
OUTPUT 3	INT VOLUME 1	—	—	HEADLAMP 2	HI BEAM
OUTPUT 4	—	INT VOLUME 3	AUTO LIGHT	—	TAIL LAMP
OUTPUT 5	INT VOLUME 2	—	—	FR FOG	—

COMBINATION SWITCH READING FUNCTION

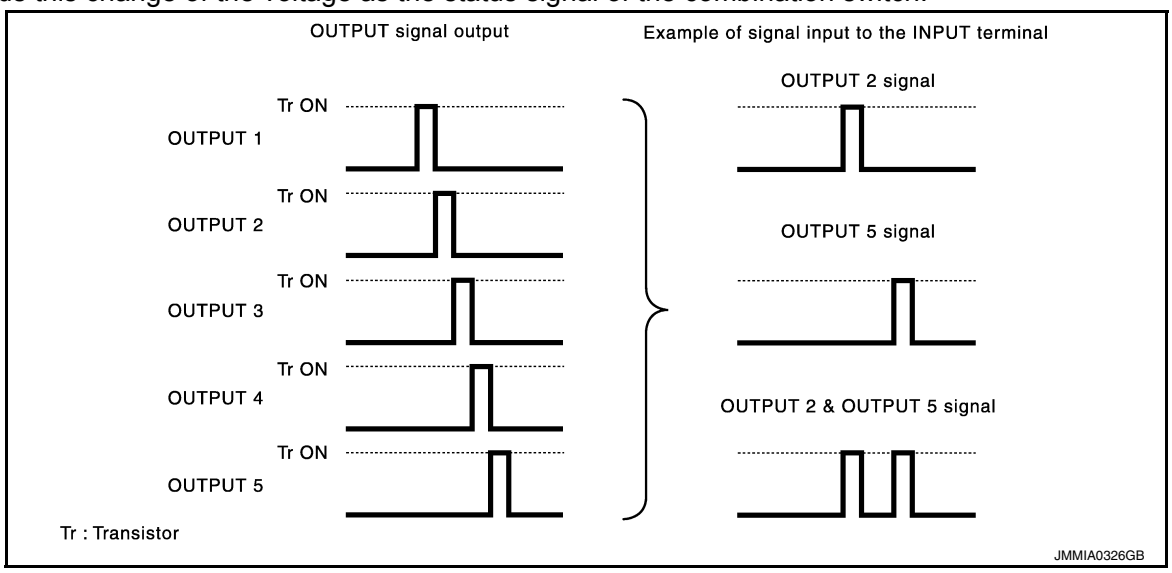
Description

- BCM reads the status of the combination switch at 10 ms intervals normally.



NOTE:
BCM reads the status of the combination switch at 60 ms intervals when BCM is controlled at low power consumption control mode.

- BCM operates as follows and judges the status of the combination switch.
- It operates the transistor on OUTPUT side in the following order: OUTPUT 1 → 2 → 3 → 4 → 5, and outputs voltage waveform.
- The voltage waveform of OUTPUT corresponding to the formed circuit is input into the interface on INPUT side if any (1 or more) switches are ON.
- It reads this change of the voltage as the status signal of the combination switch.

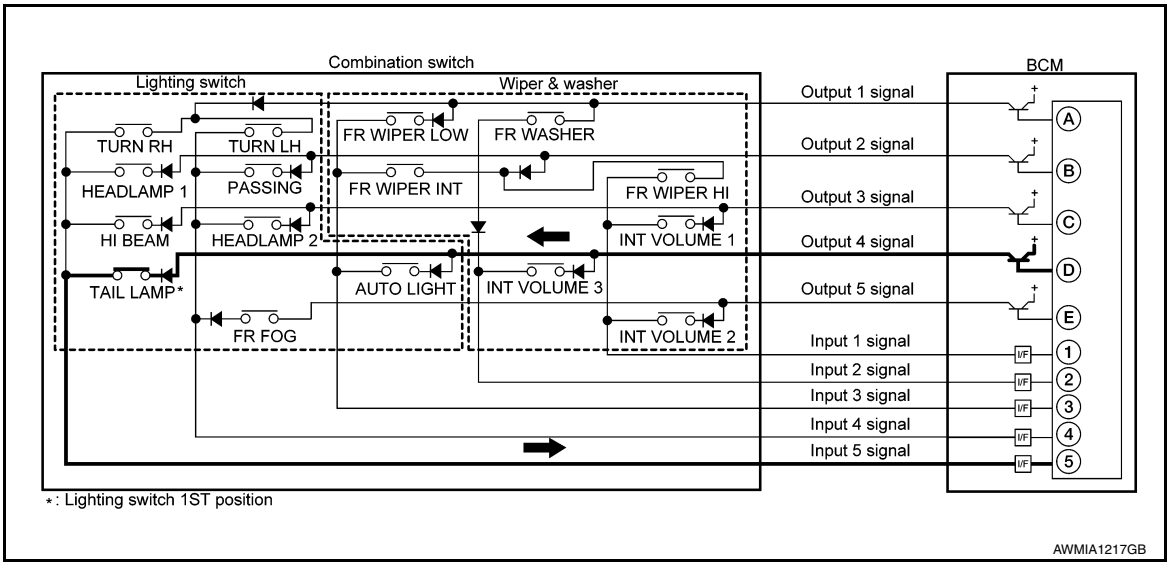


Operation Example

In the following operation example, the combination of the status signals of the combination switch is replaced as follows: INPUT 1 - 5 to “1 - 5” and OUTPUT 1 - 5 to “A - E”.

Example 1: When a switch (TAIL LAMP) is turned ON

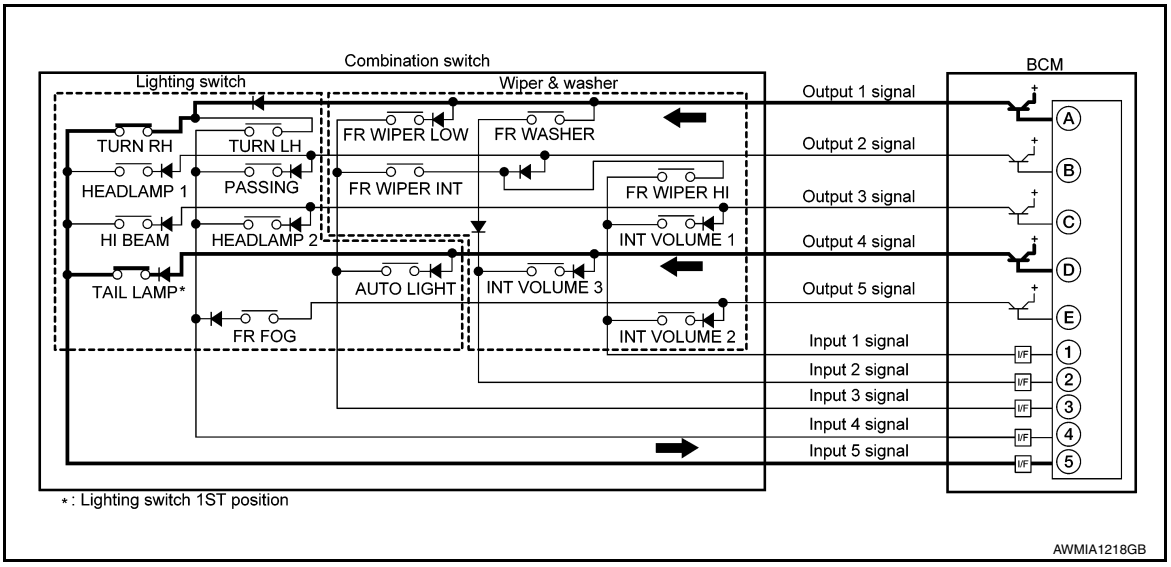
- The circuit between OUTPUT 4 and INPUT 5 is formed when the TAIL LAMP switch is turned ON.



- BCM detects the combination switch status signal “5D” when the signal of OUTPUT 4 is input to INPUT 5.
- BCM judges that the TAIL LAMP switch is ON when the signal “5D” is detected.

Example 2: When some switches (TURN RH, TAIL LAMP) are turned ON

- The circuits between OUTPUT 1 and INPUT 5 and between OUTPUT 4 and INPUT 5 are formed when the TURN RH switch and TAIL LAMP switch are turned ON.



- BCM detects the combination switch status signal “5AD” when the signals of OUTPUT 1 and OUTPUT 4 are input to INPUT 5.
- BCM judges that the TURN RH switch and TAIL LAMP switch are ON when the signal “5AD” is detected.

WIPER INTERMITTENT DIAL POSITION SETTING

BCM judges the wiper intermittent dial 1 - 7 by the status of INT VOLUME 1, 2, and 3 switches.

Wiper intermittent dial position	Switch status		
	INT VOLUME 1	INT VOLUME 2	INT VOLUME 3
1	ON	ON	ON
2	ON	ON	OFF
3	ON	OFF	OFF
4	OFF	OFF	OFF
5	OFF	OFF	ON

Wiper intermittent dial position	Switch status		
	INT VOLUME 1	INT VOLUME 2	INT VOLUME 3
6	OFF	ON	ON
7	OFF	ON	OFF

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

INFOID:0000000009956424

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

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

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

SYSTEM APPLICATION
BCM can perform the following functions.

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

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

HEADLAMP

HEADLAMP : CONSULT Function (BCM - HEADLAMP)

INFOID:0000000009956425

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

DATA MONITOR

Monitor Item [Unit]	Description
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]	
AUTO LIGHT 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 trunk switch.
OPTI SEN (DTCT) [V]	Indicates outside brightness voltage signal from optical sensor.
OPTI SEN (FILT) [V]	Indicates outside brightness voltage signal from optical sensor filtered by BCM.

ACTIVE TEST

Test Item	Description
FR FOG LAMP	This test is able to check front fog lamp operation [On/Off].
DAYTIME RUNNING LIGHT	This test is able to check daytime running 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
TWILIGHT ON	MODE2*	Autolamp function ON.
	MODE1	Autolamp function OFF.
WIPER LINK	MODE4	This mode is not used.
	MODE3*	Wiper link function operates in INT, LOW and HI.
	MODE2	Wiper link function operates in LOW and HI.
	MODE1	Wiper link function OFF.
CUSTOM A/LIGHT SETTING	MODE4	Less sensitive than normal setting (turns ON later).
	MODE3	More sensitive than MODE2.
	MODE2	More sensitive than normal setting (turns ON earlier).
	MODE1*	Normal setting.
ILL DELAY SET	MODE 8	Autolamp delay timer.
	MODE 7	
	MODE 6	
	MODE 4	
	MODE 5	
	MODE 3	
	MODE 2	
	MODE 1*	

* : Initial setting

FLASHER

FLASHER : CONSULT Function (BCM - FLASHER)

INFOID:0000000009956483

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

DATA MONITOR

Monitor Item [Unit]	Description
REQ SW -DR [On/Off]	Indicates condition of door request switch LH.
REQ SW -AS [On/Off]	Indicates condition of door request switch RH.
PUSH SW [On/Off]	Indicates condition of push-button ignition switch.
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 unock 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].

COMB SW

COMB SW : CONSULT Function (BCM - COMB SW)

INFOID:0000000009956484

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

DATA MONITOR

Monitor Item [Unit]	Description
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.
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.
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.
AUTO LIGHT SW [On/Off]	Indicates condition of auto light 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:0000000009956486

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

DATA MONITOR

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

Monitor Item [Unit]	Description
KEY CYL UN-SW [On/Off]	Indicates condition of unlock signal from door key cylinder switch.
TRNK/HAT MNTR [On/Off]	Indicates condition of trunk room lamp switch.
RKE-LOCK [On/Off]	Indicates condition of lock signal from Intelligent Key.
RKE-UNLOCK [On/Off]	Indicates condition of unlock signal from Intelligent Key.

ACTIVE TEST

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

DIAGNOSIS SYSTEM (IPDM E/R)

Diagnosis Description

INFOID:0000000009956487

AUTO ACTIVE TEST

Description

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

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

Operation Procedure

CAUTION:

Do not start the engine.

NOTE:

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

NOTE:

- If auto active test mode cannot be actuated, check door switch system. Refer to DLK-100, "Component Function Check".
- When auto active test mode has to be cancelled halfway through test, turn ignition switch OFF.

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

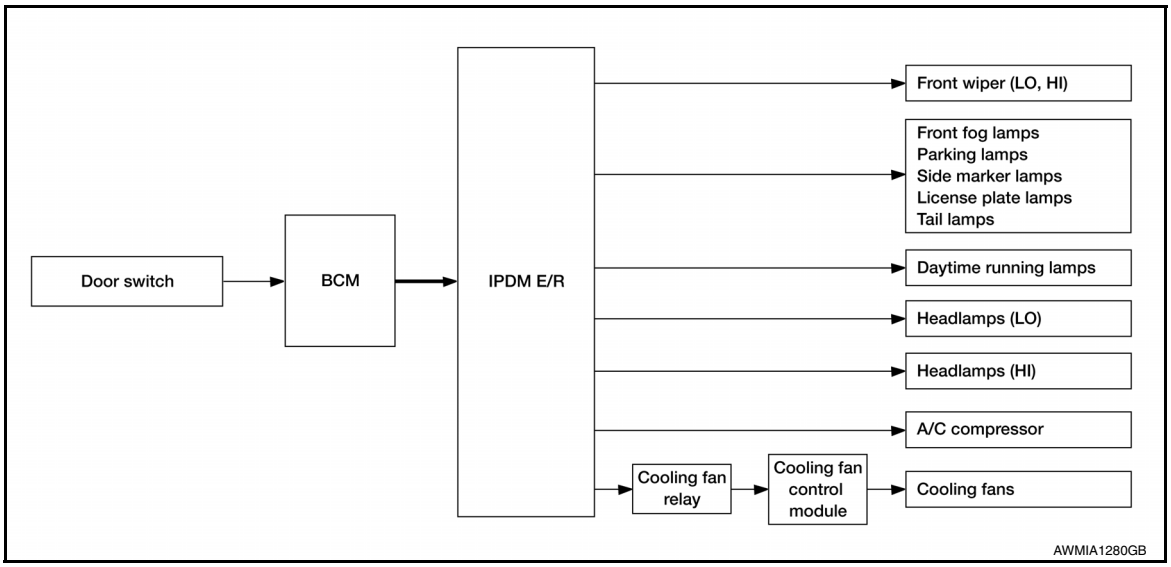
Inspection in Auto Active Test Mode

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

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

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

Concept of auto active test



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

Diagnosis chart in auto active test mode

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

CONSULT Function (IPDM E/R)

INFOID:0000000009956488

CAUTION:

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

APPLICATION ITEM

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

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

ECU IDENTIFICATION

The IPDM E/R part number is displayed.

SELF DIAGNOSTIC RESULT

Refer to PCS-20, "DTC Index".

DATA MONITOR

Monitor Item [Unit]	Main Signals	Description
MOTOR FAN REQ [%]	×	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 light request signal received from BCM on CAN communication line
HOOD SW [On/Off]		Indicates condition of hood switch
THFT HRN REQ [On/Off]		Indicates theft warning horn request signal received from BCM on CAN communication line

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

ACTIVE TEST

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

CAN DIAG SUPPORT MNTR

Refer to LAN-15, "CAN Diagnostic Support Monitor".

ECU DIAGNOSIS INFORMATION

BCM, IPDM E/R

List of ECU Reference

INFOID:0000000009463564

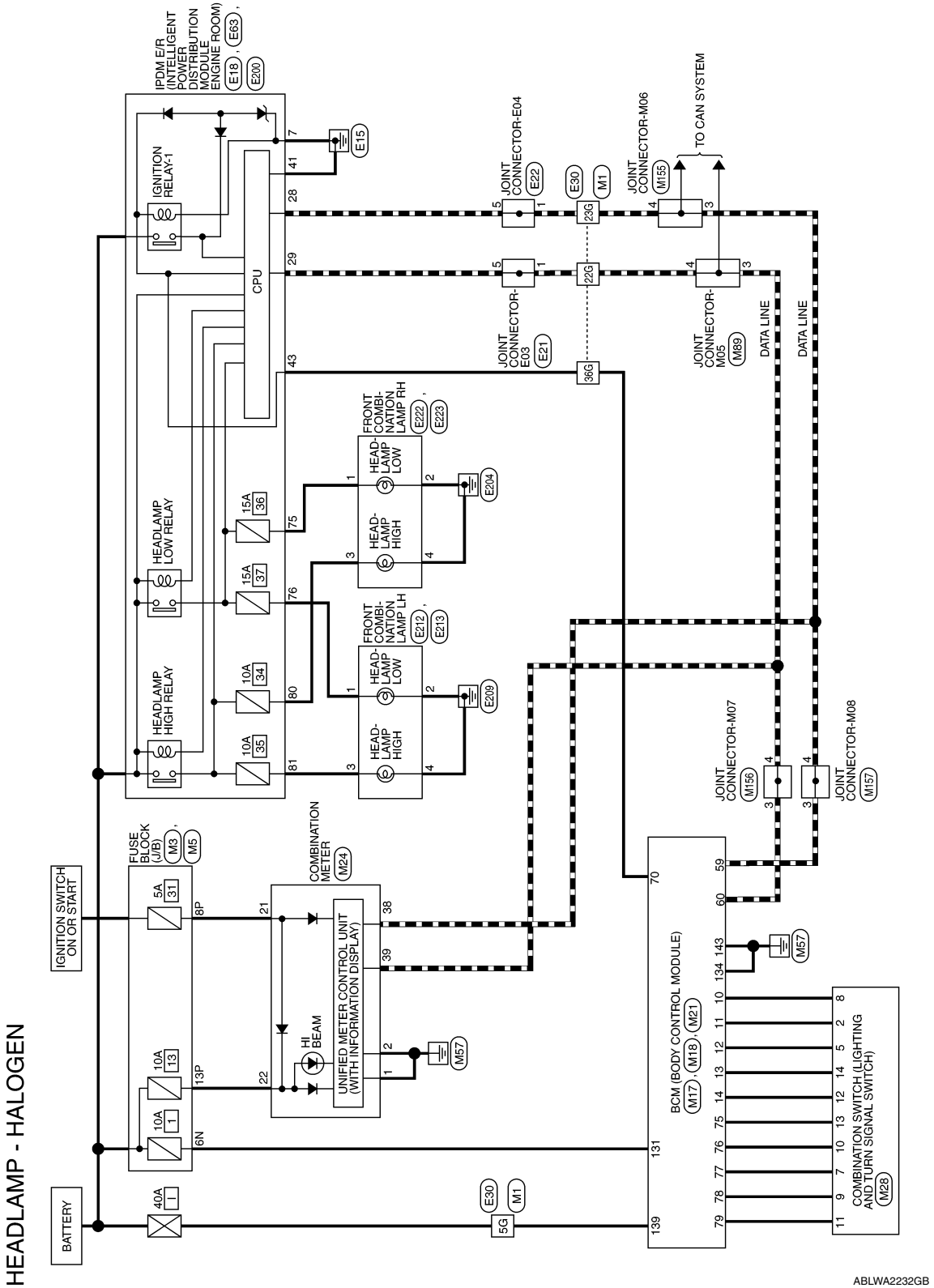
ECU	Reference
BCM	BCS-31, "Reference Value"
	BCS-50, "Fail Safe"
	BCS-50, "DTC Inspection Priority Chart"
	BCS-52, "DTC Index"
IPDM E/R	PCS-12, "Reference Value"
	PCS-19, "Fail Safe"
	PCS-20, "DTC Index"

WIRING DIAGRAM

HEADLAMP

Wiring Diagram - Halogen

INFOID:0000000009463565



ABLWA2232GB

HEADLAMP CONNECTORS - HALOGEN

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

H.S.

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

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

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

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

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

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

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

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

H.S.

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

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

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

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

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
8P	BR	–
13P	G	–

ABLIA3737GB

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

H.S.

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

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

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

H.S.

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

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

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	B	GND1
2	B	GND2
21	BR	IGN
22	G	BAT
38	P	CAN-L
39	L	CAN-H

Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE

H.S.

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

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

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

H.S.

4	3	2	1

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

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

ABLIA5136GB

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

H.S.

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

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

H.S.

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

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

H.S.

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

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

H.S.

Terminal No.	Color of Wire	Signal Name
7	B	GND (POWER)

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

H.S.

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

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

H.S.

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

ABLIA3739GB

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

H.S.

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

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

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

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

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

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

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

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

H.S.

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

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

Connector No.	E213
Connector Name	FRONT COMBINATION LAMP LH
Connector Color	BLACK

H.S.

4	3
2	1

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

Connector No.	E212
Connector Name	FRONT COMBINATION LAMP LH (WITHOUT XENON HEADLAMP SYSTEM)
Connector Color	BLACK

H.S.

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

Connector No.	E200
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

74		75	76
77	78	79	80	81

Terminal No.	Color of Wire	Signal Name
75	R	HEADLAMP LO RH
76	P	HEADLAMP LO LH
80	L	HEADLAMP HI RH
81	Y	HEADLAMP HI LH

ABLIA3740GB

Connector No.	E222
Connector Name	FRONT COMBINATION LAMP RH
Connector Color	BLACK

H.S.

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

Connector No.	E223
Connector Name	FRONT COMBINATION LAMP RH (WITHOUT XENON HEADLAMP SYSTEM)
Connector Color	BLACK

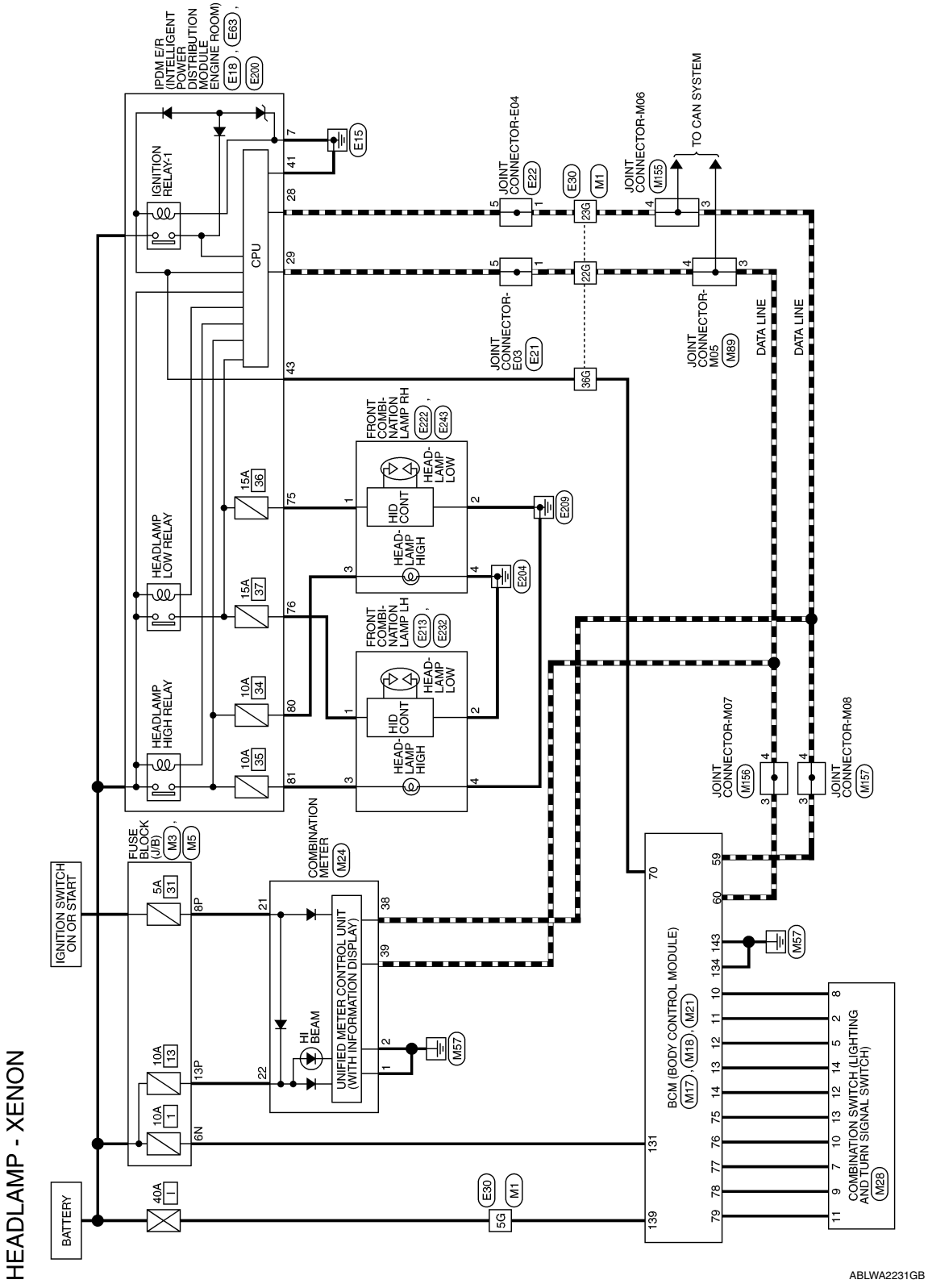
H.S.

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

ABLIA5137GB

Wiring Diagram - Xenon

INFOID:0000000009463566



HEADLAMP CONNECTORS - XENON

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

H.S.

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

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

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

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

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

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

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

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

H.S.

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

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

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

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

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
8P	BR	–
13P	G	–

ABLIA3743GB

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

H.S.

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

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

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

H.S.

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

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

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	B	GND1
2	B	GND2
21	BR	IGN
22	G	BAT
38	P	CAN-L
39	L	CAN-H

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

H.S.

4	3	2	1

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

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

Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE

H.S.

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

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

ABLIA5134GB

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

H.S.

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

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

H.S.

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

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

H.S.

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

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

H.S.

Terminal No.	Color of Wire	Signal Name
7	B	GND (POWER)

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

H.S.

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

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

H.S.

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

ABLIA3745GB

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

H.S.

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

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

H.S.

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

Connector No.	E222
Connector Name	FRONT COMBINATION LAMP RH
Connector Color	BLACK

H.S.

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

Connector No.	E213
Connector Name	FRONT COMBINATION LAMP LH
Connector Color	BLACK

H.S.

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

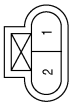
Connector No.	E200
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
75	R	HEADLAMP LO RH
76	P	HEADLAMP LO LH
80	L	HEADLAMP HI RH
81	Y	HEADLAMP HI LH

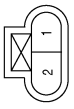
ABLIA3746GB

Connector No.	E232
Connector Name	FRONT COMBINATION LAMP LH (WITH XENON HEADLAMP SYSTEM)
Connector Color	GRAY



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

Connector No.	E243
Connector Name	FRONT COMBINATION LAMP RH (WITH XENON HEADLAMP SYSTEM)
Connector Color	GRAY



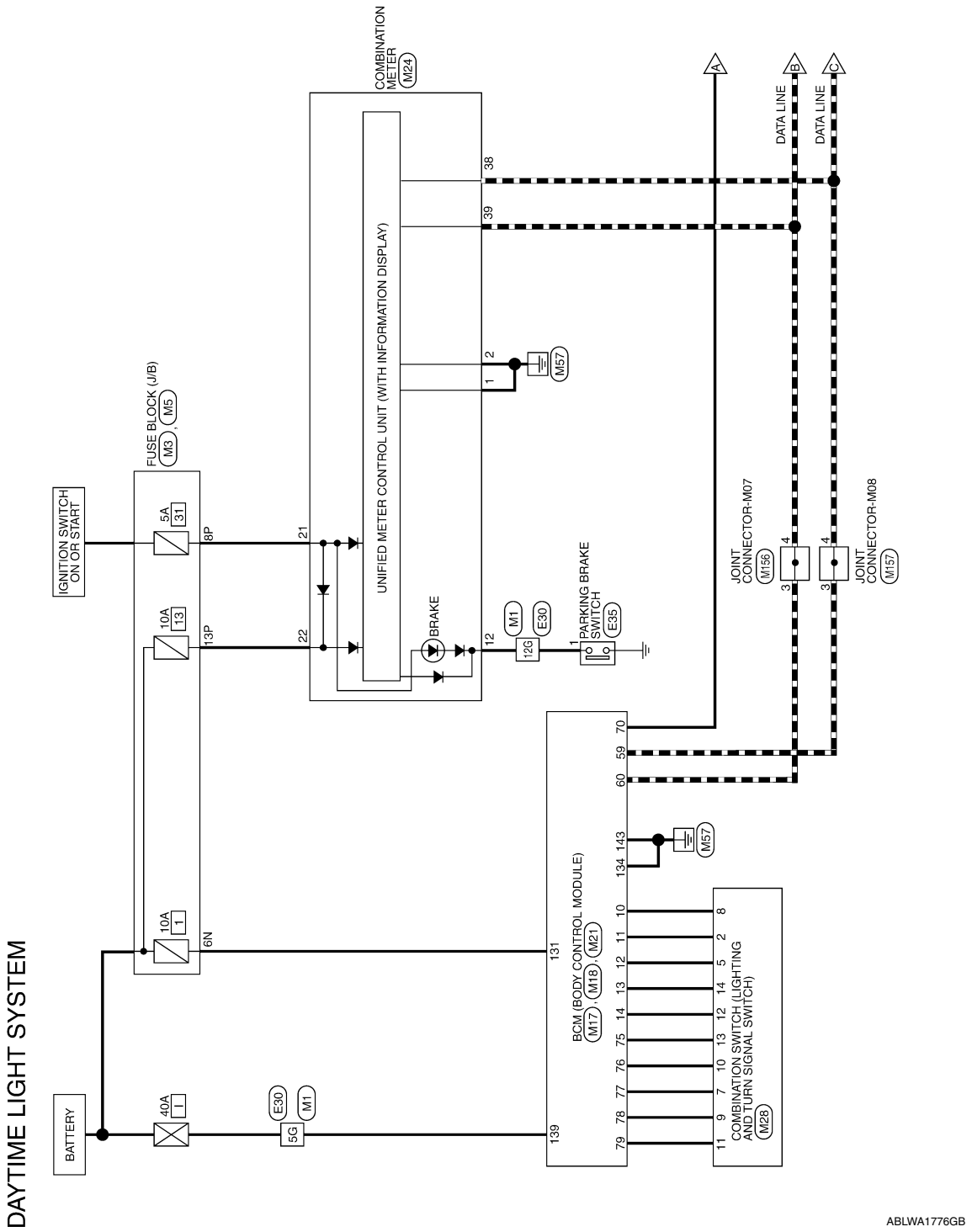
Terminal No.	Color of Wire	Signal Name
1	R	–
2	B	–

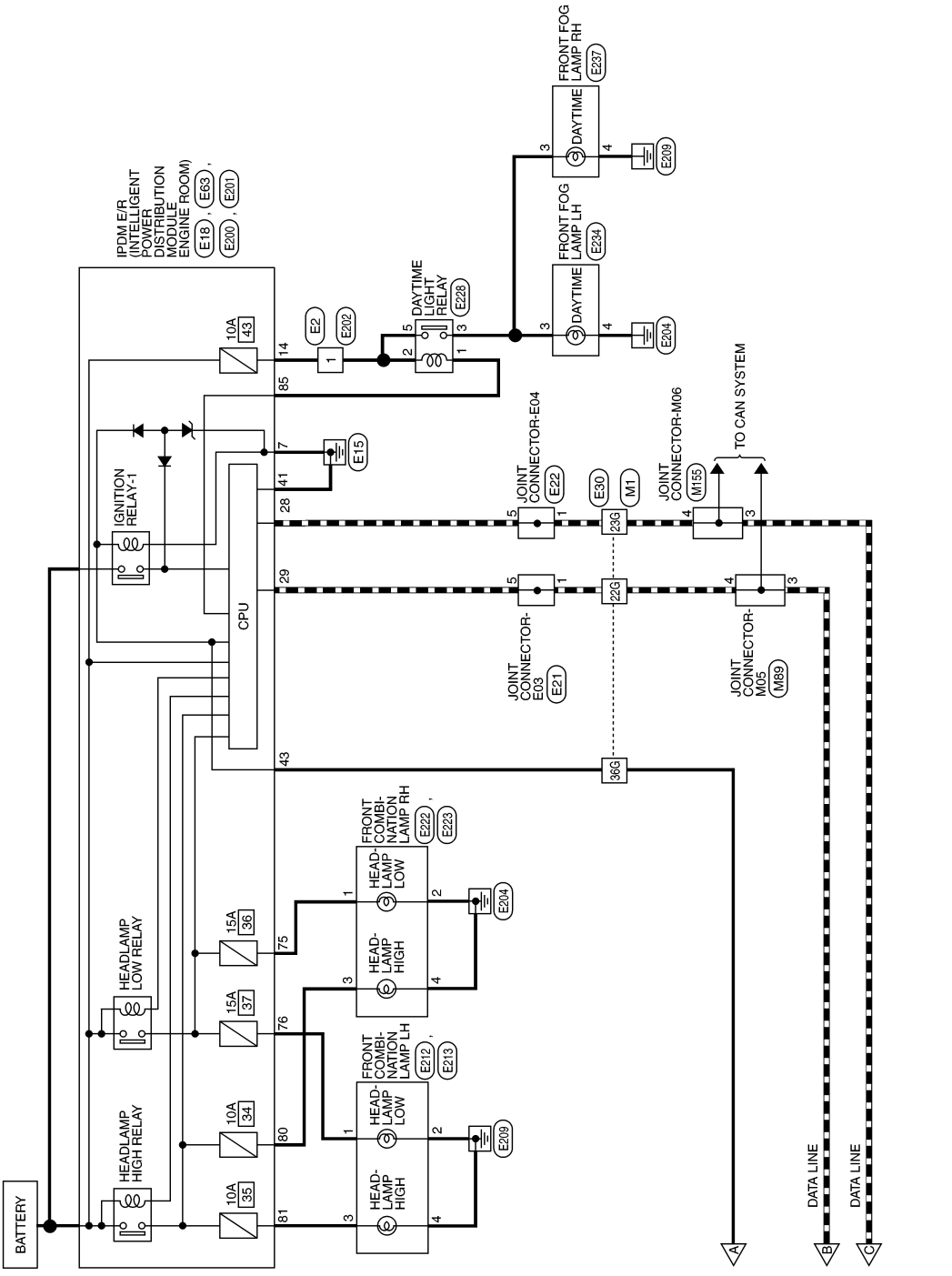
ABLIA5135GB

DAYTIME LIGHT SYSTEM

Wiring Diagram

INFOID:0000000009463567



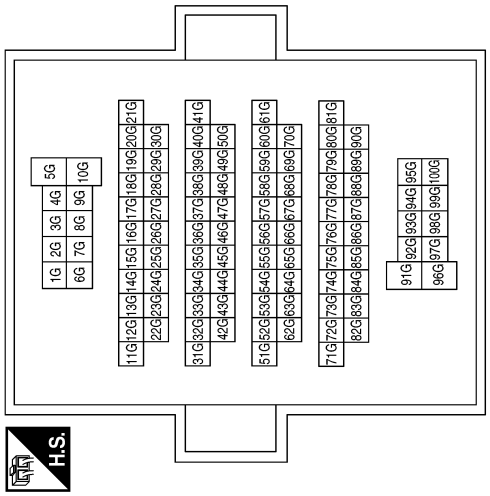


ABLWA2239GB

DAYTIME LIGHT SYSTEM CONNECTORS

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

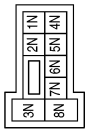
H.S.



Terminal No.	Color of Wire	Signal Name
5G	W	–
12G	G	–
22G	L	–
23G	P	–
36G	G	–

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

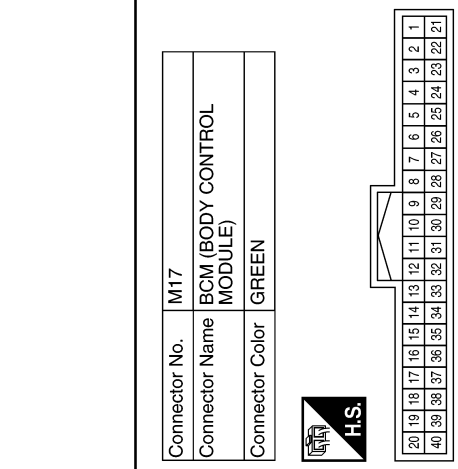
H.S.



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

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

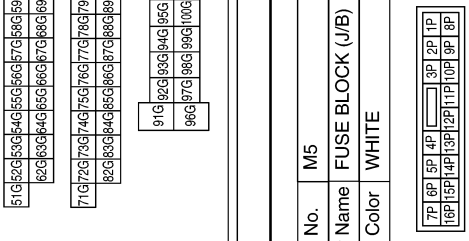
H.S.



Terminal No.	Color of Wire	Signal Name
10	W	COMBI SW IN 5
11	BG	COMBI SW IN 4
12	W	COMBI SW IN 3
13	G	COMBI SW IN 2
14	P	COMBI SW IN 1

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

H.S.



Terminal No.	Color of Wire	Signal Name
8P	BR	–
13P	G	–

ABLIA5154GB

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

H.S.

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

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

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

H.S.

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

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

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	B	GND1
2	B	GND2
12	G	PKB
21	BR	IGN
22	G	BAT
38	P	CAN-L
39	L	CAN-H

Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
2	BG	–
5	W	–
7	R	–
8	W	–
9	P	–
10	W	–
11	G	–
12	P	–
13	BG	–
14	G	–

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

H.S.

4	3	2	1

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

ABLIA5155GB

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

H.S.

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

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

H.S.

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

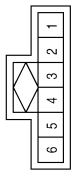
Connector No.	M155
Connector Name	JOINT CONNECTOR-M06
Connector Color	WHITE

H.S.

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

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

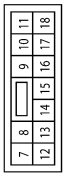
H.S.



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

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

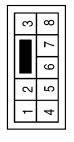
H.S.



Terminal No.	Color of Wire	Signal Name
7	B	GND (POWER)
14	Y	DTRL

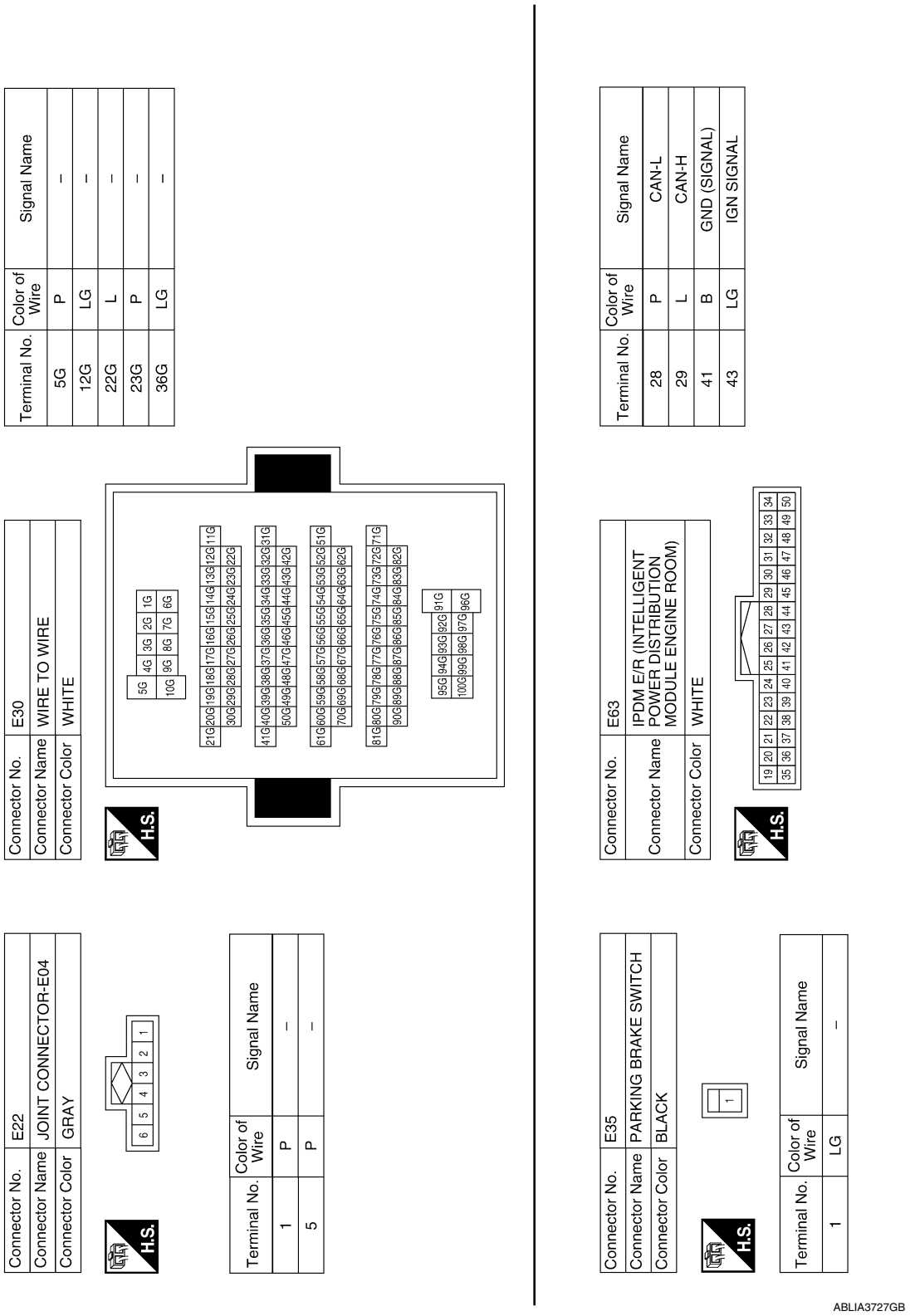
Connector No.	E2
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
1	Y	–

ABLIA3726GB


Connector No. E22
Connector Name JOINT CONNECTOR-E04
Connector Color GRAY
H.S.
6 5 4 3 2 1
Terminal No. Color of Wire Signal Name
1 P –
5 P –
Connector No. E30
Connector Name WIRE TO WIRE
Connector Color WHITE
H.S.
5G 4G 3G 2G 1G
10G 9G 8G 7G 6G
21G 20G 19G 18G 17G 16G 15G 14G 13G 12G 11G
30G 29G 28G 27G 26G 25G 24G 23G 22G
41G 40G 39G 38G 37G 36G 35G 34G 33G 32G 31G
50G 49G 48G 47G 46G 45G 44G 43G 42G
61G 60G 59G 58G 57G 56G 55G 54G 53G 52G 51G
70G 69G 68G 67G 66G 65G 64G 63G 62G
81G 80G 79G 78G 77G 76G 75G 74G 73G 72G 71G
90G 89G 88G 87G 86G 85G 84G 83G 82G
95G 94G 93G 92G 91G
100G 99G 98G 97G 96G
Terminal No. Color of Wire Signal Name
5G P –
12G LG –
22G L –
23G P –
36G LG –
Connector No. E63
Connector Name IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color WHITE
H.S.
19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34
35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50
Terminal No. Color of Wire Signal Name
28 P CAN-L
29 L CAN-H
41 B GND (SIGNAL)
43 LG IGN SIGNAL
Connector No. E35
Connector Name PARKING BRAKE SWITCH
Connector Color BLACK
H.S.
1
Terminal No. Color of Wire Signal Name
1 LG –
ABLIA3727GB

Connector No.	E200
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

74		75	76
77	78	79	80	81

Terminal No.	Color of Wire	Signal Name
75	R	HEADLAMP LO RH
76	P	HEADLAMP LO LH
80	L	HEADLAMP HI RH
81	Y	HEADLAMP HI LH

Connector No.	E201
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

82	83	84	85	86	87	88	89
90	91	92	93	94	95	96	97

Terminal No.	Color of Wire	Signal Name
85	V	DTRL RLY

Connector No.	E202
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

3		2	1
8	7	6	5	4

Terminal No.	Color of Wire	Signal Name
1	SB	–

Connector No.	E212
Connector Name	FRONT COMBINATION LAMP LH (WITHOUT XENON HEADLAMP SYSTEM)
Connector Color	BLACK

H.S.

2	1

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

Connector No.	E213
Connector Name	FRONT COMBINATION LAMP LH
Connector Color	BLACK

H.S.

4	3

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

Connector No.	E222
Connector Name	FRONT COMBINATION LAMP RH
Connector Color	BLACK

H.S.

4	3

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

ABLIA3728GB

Connector No.	E223
Connector Name	FRONT COMBINATION LAMP RH (WITHOUT XENON HEADLAMP SYSTEM)
Connector Color	BLACK

H.S.

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

Connector No.	E228
Connector Name	DAYTIME LIGHT RELAY
Connector Color	BLUE

H.S.

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

Connector No.	E234
Connector Name	FRONT FOG LAMP LH
Connector Color	BLACK

H.S.

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

Connector No.	E237
Connector Name	FRONT FOG LAMP RH
Connector Color	BLACK

H.S.

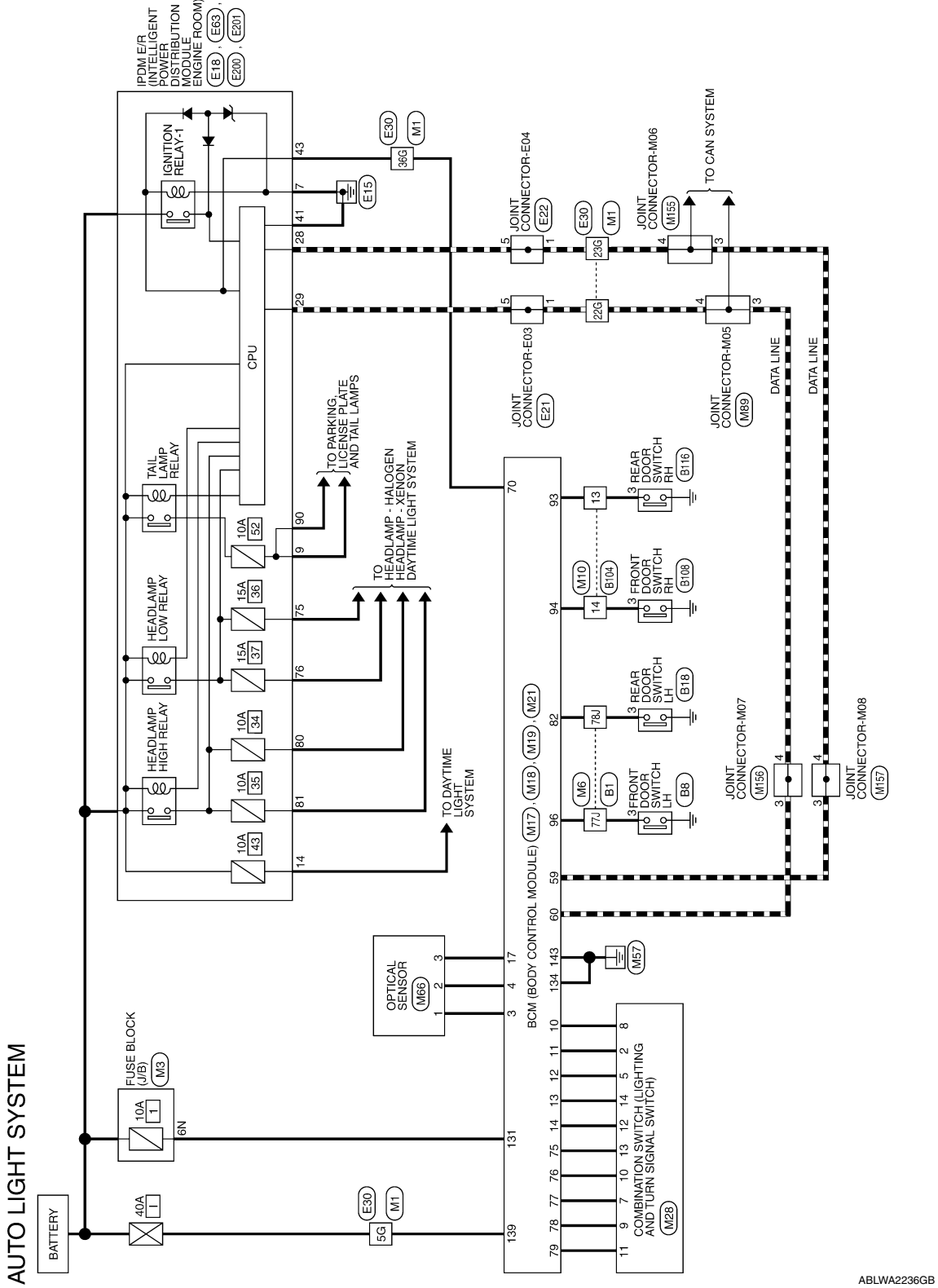
Terminal No.	Color of Wire	Signal Name
3	LG	–
4	B	–

ABLIA5156GB

AUTO LIGHT SYSTEM

Wiring Diagram

INFOID:0000000009463568



AUTO LIGHT SYSTEM CONNECTORS

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

H.S.

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

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

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

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

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

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

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

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

H.S.

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

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

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

H.S.

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

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

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

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

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

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

Terminal No.	Color of Wire	Signal Name
77J	BR	–
78J	Y	–

ABLIA3711GB

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

H.S.

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

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

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
3	BR	A/L POWER SUPPLY 5V
4	Y	A/L SIGNAL
10	W	COMBI SW IN 5
11	BG	COMBI SW IN 4
12	W	COMBI SW IN 3
13	G	COMBI SW IN 2
14	P	COMBI SW IN 1
17	B	GND RF A/L

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

H.S.

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

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

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
82	Y	RL DOOR SW
93	V	RR DOOR SW
94	SB	AS DOOR SW
96	BR	DR DOOR SW

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

H.S.

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

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

ABLIA5149GB

Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
2	BG	–
5	W	–
7	R	–
8	W	–
9	P	–
10	W	–
11	G	–
12	P	–
13	BG	–
14	G	–

Connector No.	M66
Connector Name	OPTICAL SENSOR
Connector Color	WHITE

H.S.

1	2	3

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

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

H.S.

4	3	2	1

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

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

H.S.

4	3	2	1

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

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

H.S.

4	3	2	1

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

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

H.S.

4	3	2	1

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

ABLIA5150GB

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
7	B	GND (POWER)
9	SB	TAIL RH
14	Y	DTRL

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

H.S.

6	5	4	3	2	1

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

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

H.S.

6	5	4	3	2	1

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

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

H.S.

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

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

H.S.

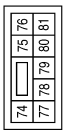
19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50

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

ABLIA3714GB

Connector No.	E200
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

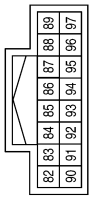
H.S.



Terminal No.	Color of Wire	Signal Name
75	R	HEADLAMP LO RH
76	P	HEADLAMP LO LH
80	L	HEADLAMP HI RH
81	Y	HEADLAMP HI LH

Connector No.	E201
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

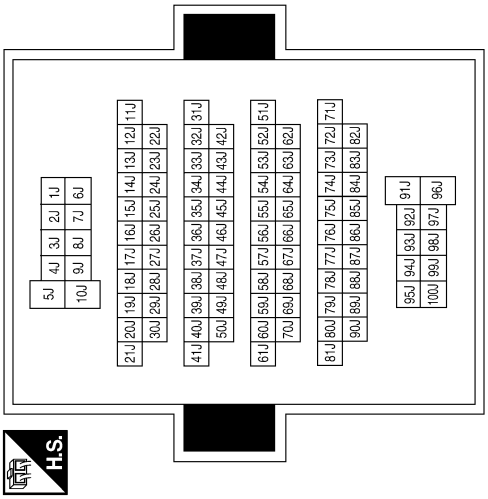
H.S.



Terminal No.	Color of Wire	Signal Name
90	LG	CLEARANCE

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

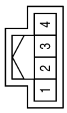
H.S.



Terminal No.	Color of Wire	Signal Name
77J	L	–
78J	LG	–

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

H.S.



Terminal No.	Color of Wire	Signal Name
3	L	–

ABLIA3715GB

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

H.S.

Terminal No.	Color of Wire	Signal Name
3	LG	–

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

H.S.

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

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

H.S.

Terminal No.	Color of Wire	Signal Name
3	L	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
3	V	–

ABLIA3716GB

FRONT FOG LAMP

Wiring Diagram

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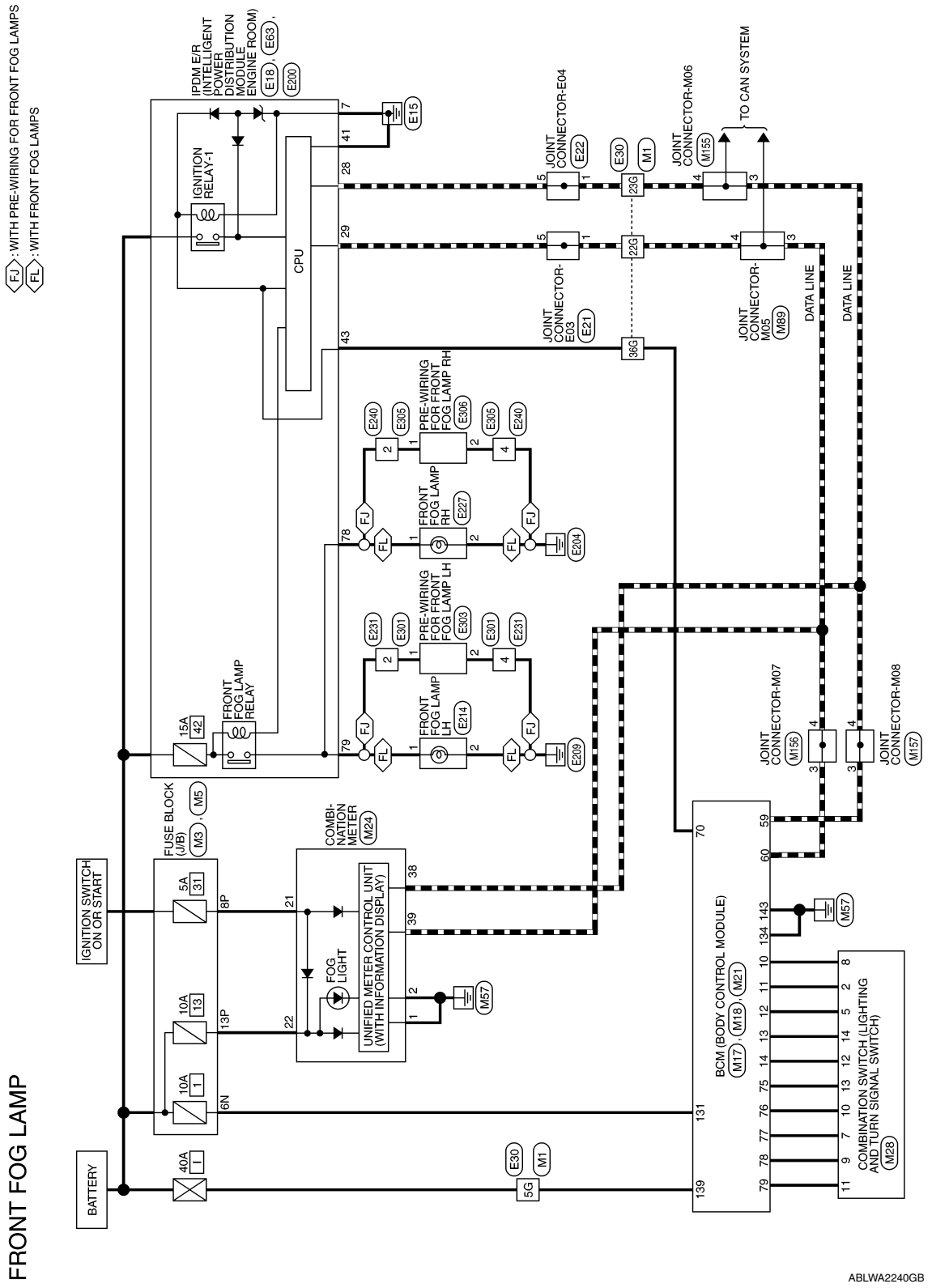


ABLWA2240GB

FRONT FOG LAMP CONNECTORS

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

H.S.

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

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

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

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

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

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

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

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

H.S.

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

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

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
10	W	COMBI SW IN 5
11	BG	COMBI SW IN 4
12	W	COMBI SW IN 3
13	G	COMBI SW IN 2
14	P	COMBI SW IN 1

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
8P	BR	–
13P	G	–

ABLIA5157GB

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

H.S.

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

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

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

H.S.

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

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

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	B	GND1
2	B	GND2
21	BR	IGN
22	G	BAT
38	P	CAN-L
39	L	CAN-H

Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
2	BG	–
5	W	–
7	R	–
8	W	–
9	P	–
10	W	–
11	G	–
12	P	–
13	BG	–
14	G	–

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

H.S.

4	3	2	1

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

ABLIA5158GB

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

H.S.

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

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

H.S.

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

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

H.S.

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

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

H.S.

Terminal No.	Color of Wire	Signal Name
7	B	GND (POWER)

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

H.S.

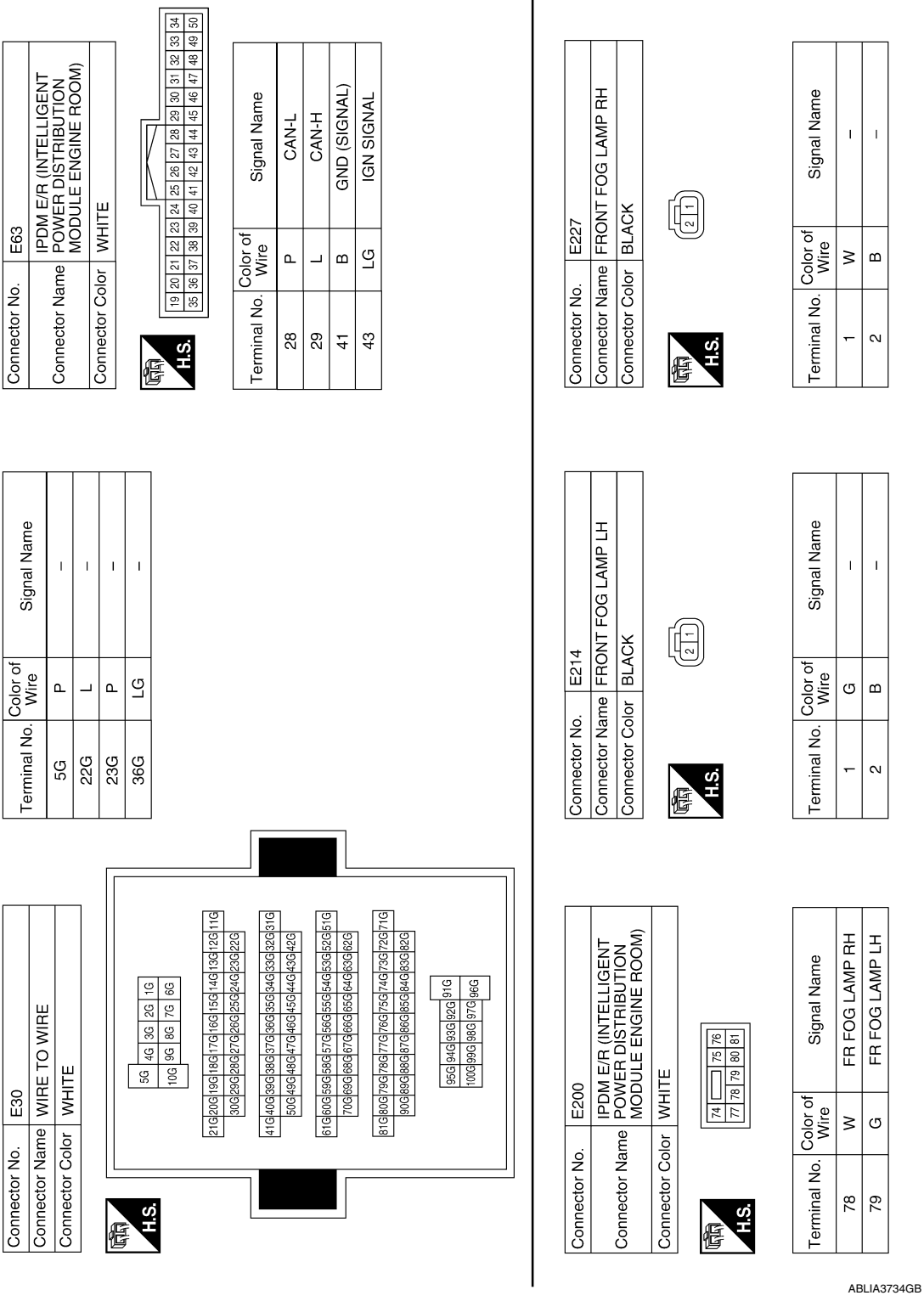
Terminal No.	Color of Wire	Signal Name
1	L	–
5	L	–

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

H.S.

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

ABLIA3733GB



ABLIA3734GB

Connector No.	E231
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

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

Connector No.	E240
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

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

Connector No.	E301
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

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

Connector No.	E303
Connector Name	PRE-WIRING FOR FRONT FOG LAMP LH
Connector Color	BLACK

H.S.

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

Connector No.	E305
Connector Name	WIRE TO WIRE
Connector Color	GRAY

H.S.

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

Connector No.	E306
Connector Name	PRE-WIRING FOR FRONT FOG LAMP RH
Connector Color	BLACK

H.S.

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

ABLIA3735GB

TURN SIGNAL AND HAZARD WARNING LAMPS

Wiring Diagram

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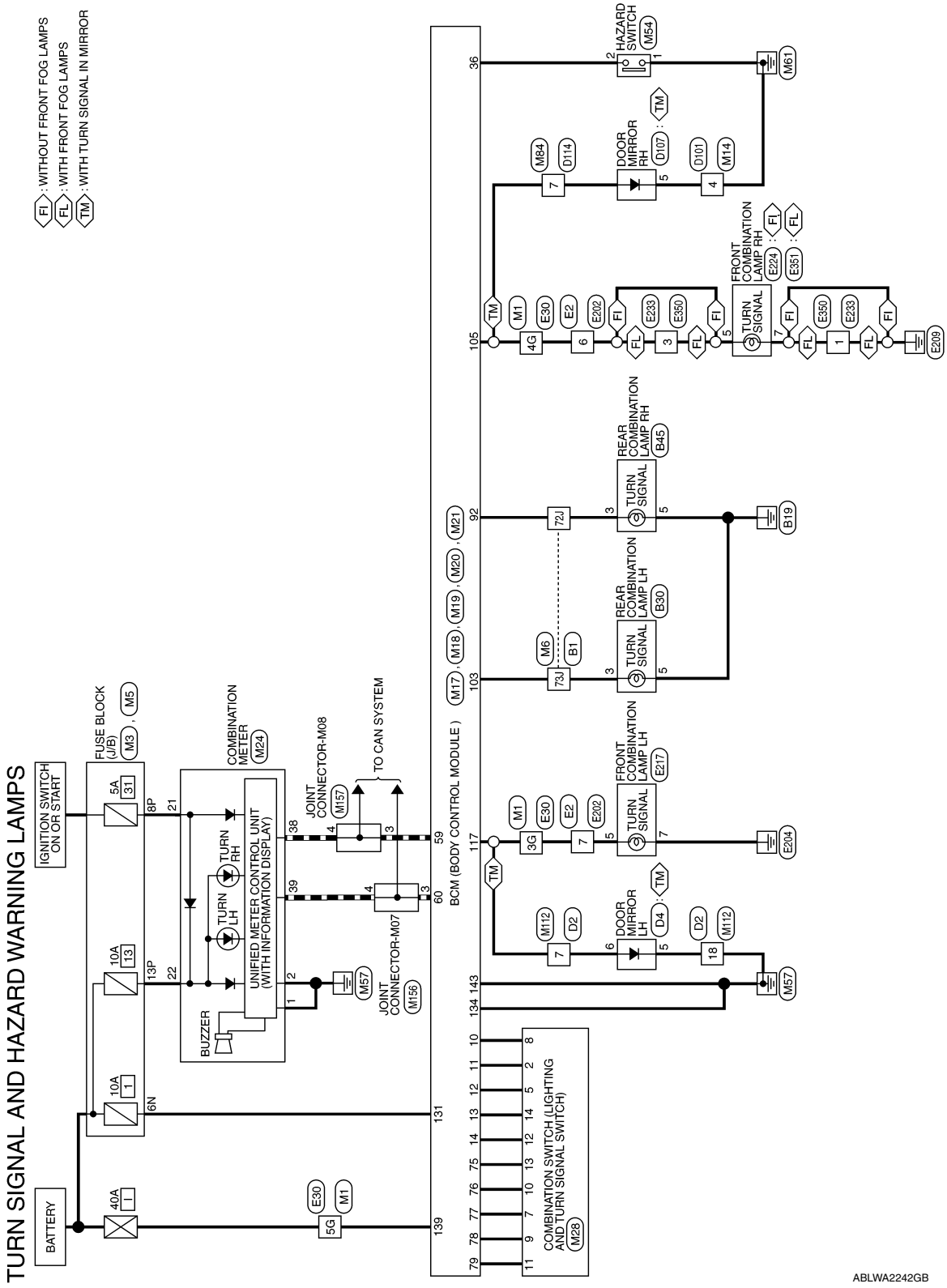


TURN SIGNAL AND HAZARD WARNING LAMPS CONNECTORS

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

H.S.

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

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

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

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

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

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

Terminal No.	Color of Wire	Signal Name
3G	SB	–
4G	BR	–
5G	W	–

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

H.S.

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

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

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
8P	BR	–
13P	G	–

ABLIA5164GB

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

H.S.

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

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

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

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

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

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

Terminal No.	Color of Wire	Signal Name
72J	LG	–
73J	Y	–

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

H.S.

1	2	3
4	5	6	7	8

Terminal No.	Color of Wire	Signal Name
4	GR	–

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
10	W	COMBI SW IN 5
11	BG	COMBI SW IN 4
12	W	COMBI SW IN 3

Terminal No.	Color of Wire	Signal Name
13	G	COMBI SW IN 2
14	P	COMBI SW IN 1
36	Y	HAZARD SW

ABLIA5206GB

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
59	P	CAN-L
60	L	CAN-H
75	BG	COMBI SW OUT 5
76	W	COMBI SW OUT 4
77	R	COMBI SW OUT 3
78	P	COMBI SW OUT 2
79	G	COMBI SW OUT 1

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
92	LG	RR FLASHER
103	Y	RL FLASHER

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
105	BR	FR FLASHER
117	SB	FL FLASHER

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

H.S.

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

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

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	B	GND1
2	B	GND2
21	BR	IGN
22	G	BAT
38	P	CAN-L
39	L	CAN-H

ABLIA4743GB

Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
2	BG	–
5	W	–
7	R	–
8	W	–
9	P	–
10	W	–
11	G	–
12	P	–
13	BG	–
14	G	–

Connector No.	M54
Connector Name	HAZARD SWITCH
Connector Color	WHITE

H.S.

3	1	2	4

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

Connector No.	M84
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
7	LG	–

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
7	SB	–
18	B	–

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

H.S.

4	3	2	1

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

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

H.S.

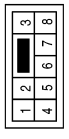
4	3	2	1

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

ABLIA5165GB

Connector No.	E2
Connector Name	WIRE TO WIRE
Connector Color	WHITE

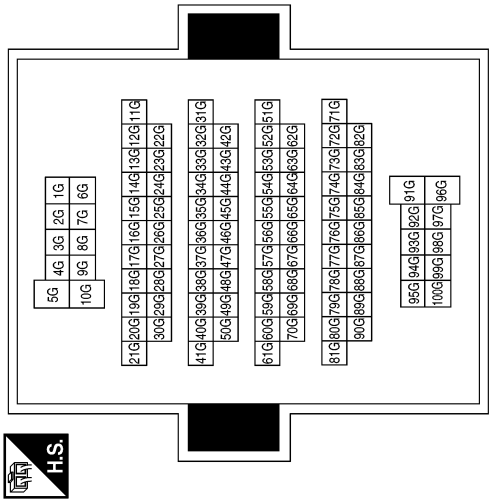
H.S.



Terminal No.	Color of Wire	Signal Name
6	G	–
7	W	–

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

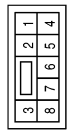
H.S.



Terminal No.	Color of Wire	Signal Name
3G	W	–
4G	G	–
5G	P	–

Connector No.	E202
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
6	P	–
7	W	–

Connector No.	E217
Connector Name	FRONT COMBINATION LAMP LH
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
5	W	–
7	B	–

Connector No.	E224
Connector Name	FRONT COMBINATION LAMP RH (WITHOUT FRONT FOG LAMPS)
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
5	P	–
7	B	–

ABLIA5166GB

Connector No.	E233
Connector Name	WIRE TO WIRE
Connector Color	BLACK

H.S.

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

Connector No.	E350
Connector Name	WIRE TO WIRE
Connector Color	BLACK

H.S.

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

Connector No.	E351
Connector Name	FRONT COMBINATION LAMP RH (WITH FRONT FOG LAMPS)
Connector Color	GRAY

H.S.

Terminal No.	Color of Wire	Signal Name
5	G	–
7	B	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
72J	BR	–
73J	Y	–

Connector No.	B30
Connector Name	REAR COMBINATION LAMP LH
Connector Color	WHITE

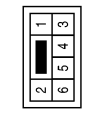
H.S.

Terminal No.	Color of Wire	Signal Name
3	Y	–
5	GR	–

ABLIA5167GB

Connector No.	B45
Connector Name	REAR COMBINATION LAMP RH
Connector Color	WHITE

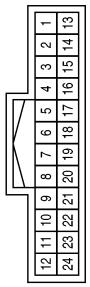
H.S.



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

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

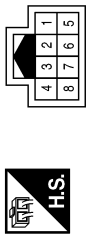
H.S.



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

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

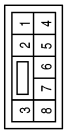
H.S.



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

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

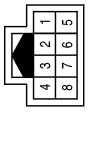
H.S.



Terminal No.	Color of Wire	Signal Name
4	B	–

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

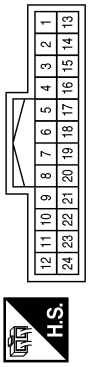
H.S.



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

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

H.S.



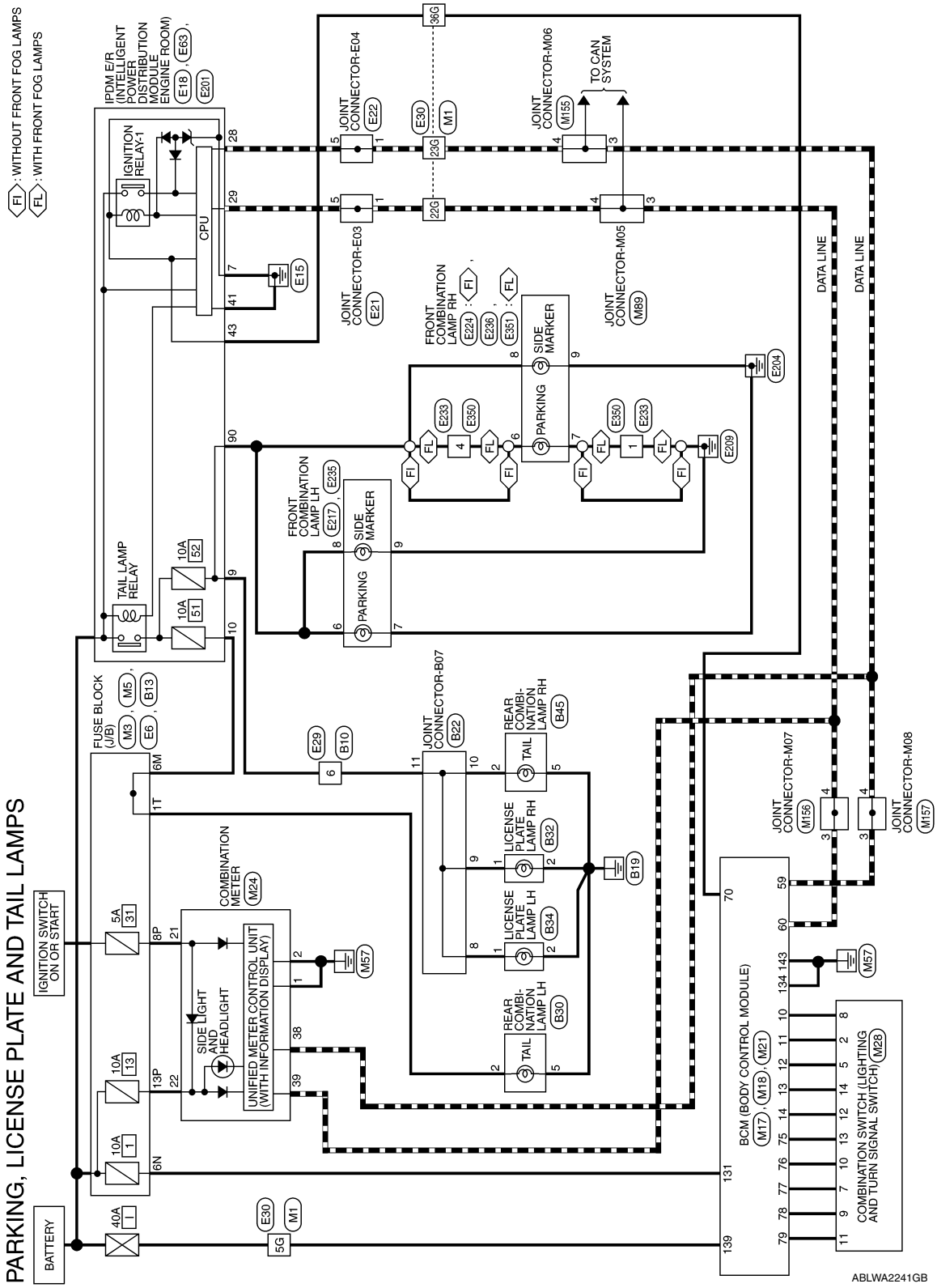
Terminal No.	Color of Wire	Signal Name
7	LG	–

ABLIA5207GB

PARKING, LICENSE PLATE AND TAIL LAMPS

Wiring Diagram

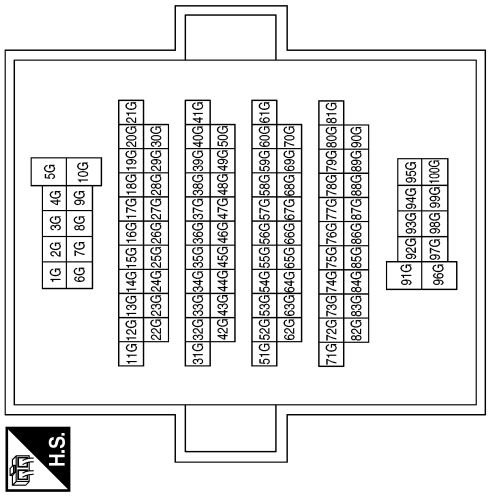
INFOID:0000000009463571



PARKING, LICENSE PLATE AND TAIL LAMPS CONNECTORS

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

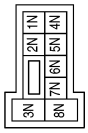
H.S.



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

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

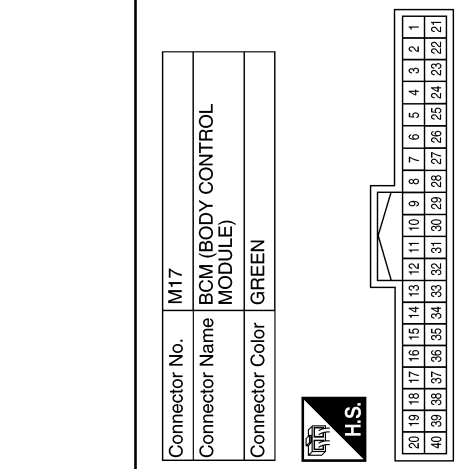
H.S.



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

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

H.S.



Terminal No.	Color of Wire	Signal Name
10	W	COMBI SW IN 5
11	BG	COMBI SW IN 4
12	W	COMBI SW IN 3
13	G	COMBI SW IN 2
14	P	COMBI SW IN 1

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

H.S.

Terminal No.	Color of Wire	Signal Name
8P	BR	–
13P	G	–

ABLIA5159GB

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

H.S.

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

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

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

H.S.

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

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

Connector No.	M24
Connector Name	COMBINATION METER
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	B	GND1
2	B	GND2
21	BR	IGN
22	G	BAT
38	P	CAN-L
39	L	CAN-H

Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE

H.S.

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

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

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

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

H.S.

4	3	2	1

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

ABLIA5160GB

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

H.S.

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

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

H.S.

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

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

H.S.

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

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

H.S.

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

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

H.S.

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

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

H.S.

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

ABLIA5161GB

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

H.S.

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

Connector No.	E29
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
6	SB	–

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

H.S.

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

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

H.S.

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

ABLIA5162GB

Connector No.	E201
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

82	83	84	85	86	87	88	89
90	91	92	93	94	95	96	97

Terminal No.	Color of Wire	Signal Name
90	LG	CLEARANCE

Connector No.	E217
Connector Name	FRONT COMBINATION LAMP LH
Connector Color	GRAY

H.S.

7	5
6	

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

Connector No.	E224
Connector Name	FRONT COMBINATION LAMP RH (WITHOUT FRONT FOG LAMPS)
Connector Color	GRAY

H.S.

7	5
6	

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

Connector No.	E233
Connector Name	WIRE TO WIRE
Connector Color	BLACK

H.S.

6	5	4	3	2	1

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

Connector No.	E235
Connector Name	FRONT COMBINATION LAMP LH
Connector Color	GRAY

H.S.

9	8

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

Connector No.	E236
Connector Name	FRONT COMBINATION LAMP RH
Connector Color	GRAY

H.S.

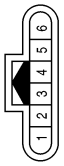
9	8

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

ABLIA3753GB

Connector No.	E350
Connector Name	WIRE TO WIRE
Connector Color	BLACK

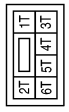
H.S.



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

Connector No.	B13
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
1T	V	–

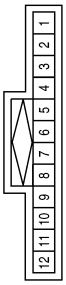
Connector No.	E351
Connector Name	FRONT COMBINATION LAMP RH (WITH FRONT FOG LAMPS)
Connector Color	GRAY

H.S.

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

Connector No.	B22
Connector Name	JOINT CONNECTOR-B07
Connector Color	BLUE

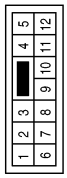
H.S.



Terminal No.	Color of Wire	Signal Name
8	SB	–
9	SB	–
10	SB	–
11	SB	–

Connector No.	B10
Connector Name	WIRE TO WIRE
Connector Color	WHITE

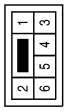
H.S.



Terminal No.	Color of Wire	Signal Name
6	SB	–

Connector No.	B30
Connector Name	REAR COMBINATION LAMP LH
Connector Color	WHITE

H.S.

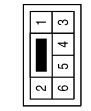


Terminal No.	Color of Wire	Signal Name
2	V	–
5	GR	–

ABLIA5163GB

Connector No.	B45
Connector Name	REAR COMBINATION LAMP RH
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
2	SB	–
5	B	–

Connector No.	B34
Connector Name	LICENSE PLATE LAMP LH
Connector Color	BROWN

H.S.

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

Connector No.	B32
Connector Name	LICENSE PLATE LAMP RH
Connector Color	BROWN

H.S.

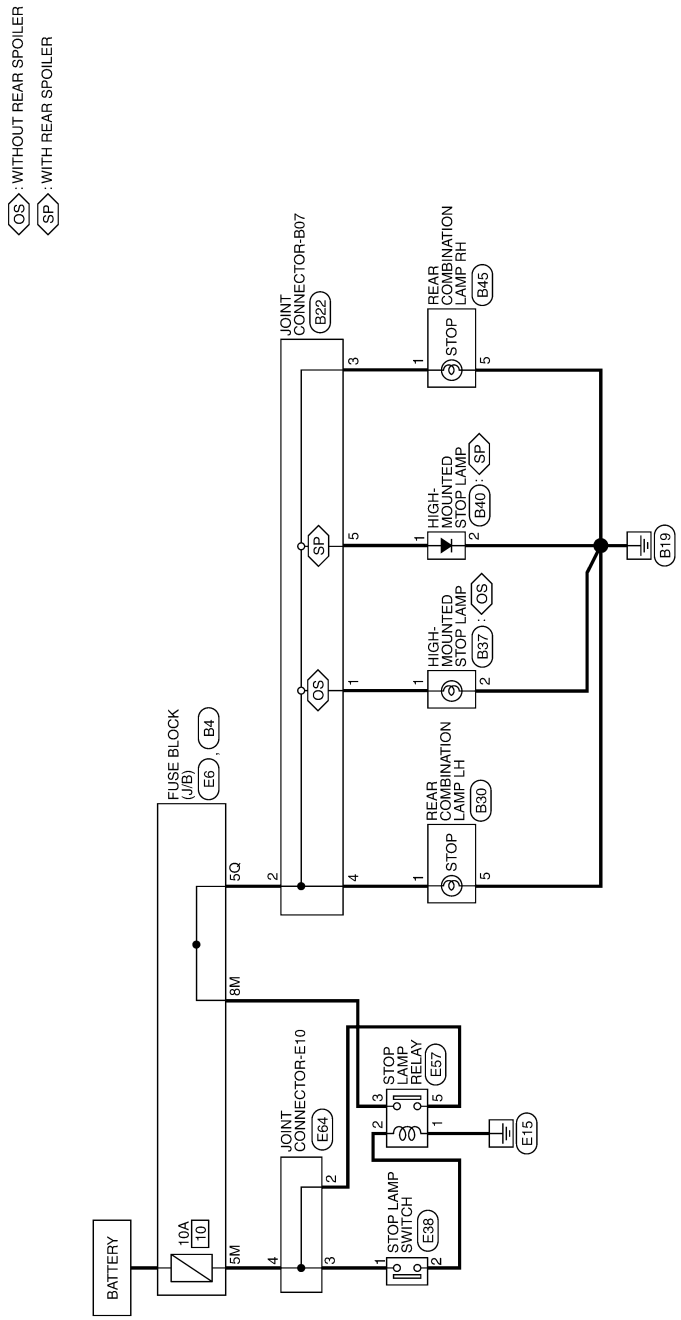
Terminal No.	Color of Wire	Signal Name
1	SB	–
2	GR	–

ABLIA3755GB

STOP LAMP

Wiring Diagram

INFOID:0000000009463572



STOP LAMP

ABLWA1782GB

STOP LAMP CONNECTORS

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

H.S.

Terminal No.	Color of Wire	Signal Name
5M	G	–
8M	W	–

Connector No.	E38
Connector Name	STOP LAMP SWITCH
Connector Color	WHITE

H.S.

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

Connector No.	E57
Connector Name	STOP LAMP RELAY
Connector Color	BLUE

H.S.

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

Connector No.	E64
Connector Name	JOINT CONNECTOR-E10
Connector Color	WHITE

H.S.

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

Connector No.	B4
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

H.S.

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

Connector No.	B22
Connector Name	JOINT CONNECTOR-B07
Connector Color	BLUE

H.S.

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

ABLIA3757GB

Connector No.	B30
Connector Name	REAR COMBINATION LAMP LH
Connector Color	WHITE

H.S.

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

Connector No.	B37
Connector Name	HIGH-MOUNTED STOP LAMP (WITHOUT REAR SPOILER)
Connector Color	BLACK

H.S.

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

Connector No.	B40
Connector Name	HIGH-MOUNTED STOP LAMP (WITH REAR SPOILER)
Connector Color	BROWN

H.S.

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

Connector No.	B45
Connector Name	REAR COMBINATION LAMP RH
Connector Color	WHITE

H.S.

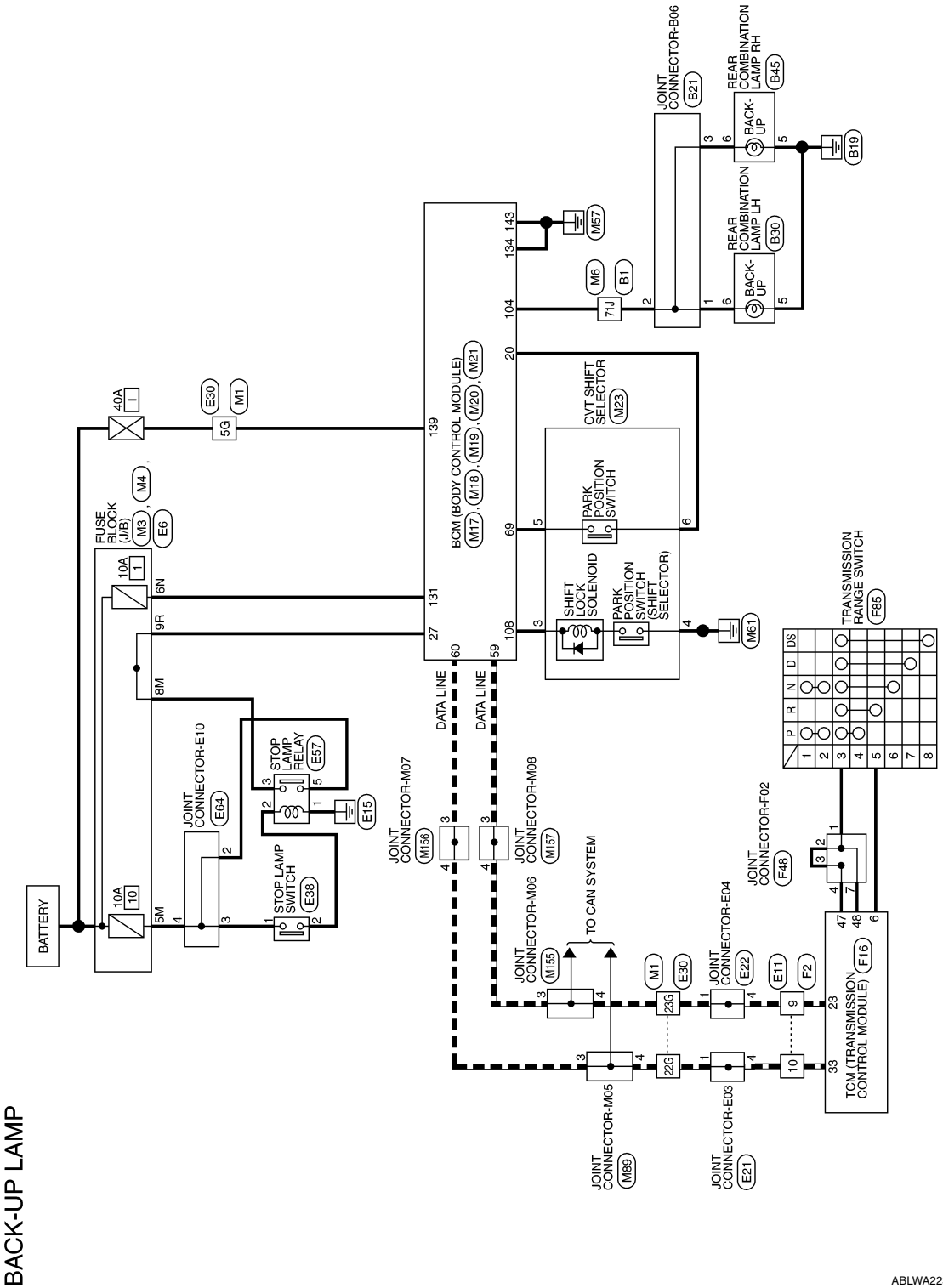
Terminal No.	Color of Wire	Signal Name
1	L	–
5	B	–

ABLIA3758GB

BACK-UP LAMP

Wiring Diagram

INFOID:0000000009463573

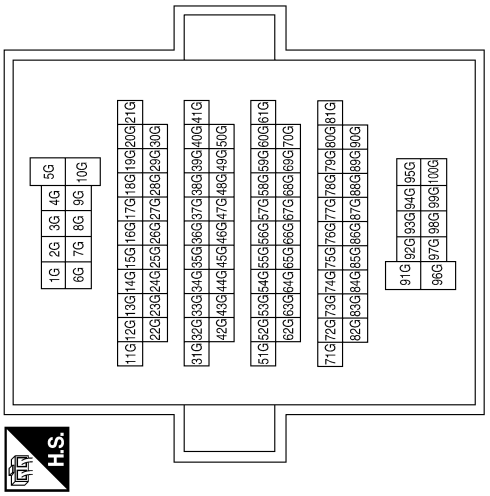


ABLWA2237GB

BACK-UP LAMP CONNECTORS

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

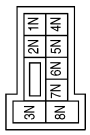
H.S.



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

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

H.S.



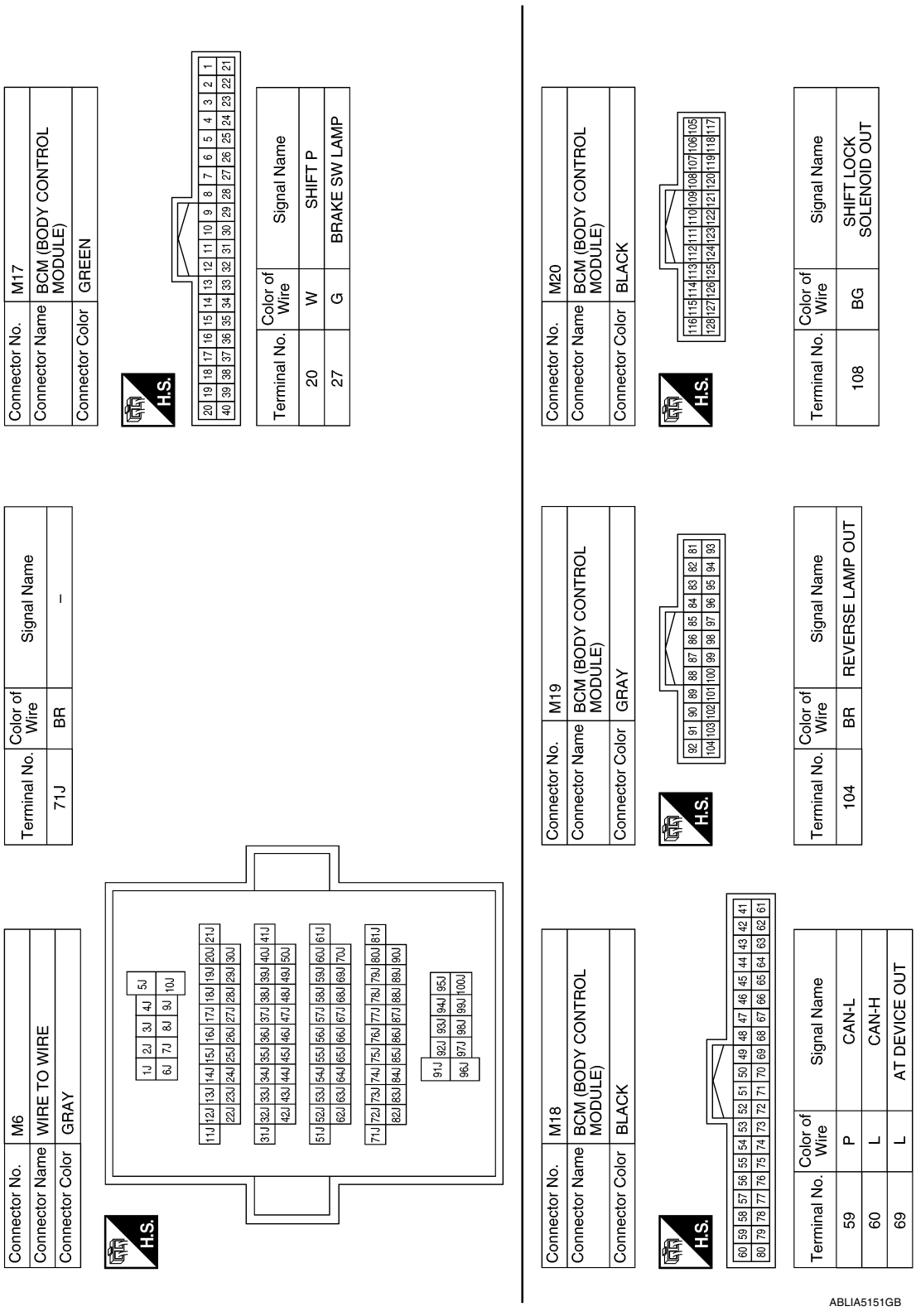
Terminal No.	Color of Wire	Signal Name
6N	W	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
9R	G	–

ABLIA3717GB


Connector No. M17
Connector Name BCM (BODY CONTROL MODULE)
Connector Color GREEN
H.S.
20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21
Terminal No. Color of Wire Signal Name
20 W SHIFT P
27 G BRAKE SW LAMP
Connector No. M20
Connector Name BCM (BODY CONTROL MODULE)
Connector Color BLACK
H.S.
116 115 114 113 112 111 110 109 108 107 106 105
128 127 126 125 124 123 122 121 120 119 118 117
Terminal No. Color of Wire Signal Name
108 BG SHIFT LOCK SOLENOID OUT
Connector No. M6
Connector Name WIRE TO WIRE
Connector Color GRAY
H.S.
1J 2J 3J 4J 5J
6J 7J 8J 9J 10J
11J 12J 13J 14J 15J 16J 17J 18J 19J 20J 21J
22J 23J 24J 25J 26J 27J 28J 29J 30J
31J 32J 33J 34J 35J 36J 37J 38J 39J 40J 41J
42J 43J 44J 45J 46J 47J 48J 49J 50J
51J 52J 53J 54J 55J 56J 57J 58J 59J 60J 61J
62J 63J 64J 65J 66J 67J 68J 69J 70J
71J 72J 73J 74J 75J 76J 77J 78J 79J 80J 81J
82J 83J 84J 85J 86J 87J 88J 89J 90J
91J 92J 93J 94J 95J
96J 97J 98J 99J 100J
Terminal No. Color of Wire Signal Name
71J BR –
Connector No. M19
Connector Name BCM (BODY CONTROL MODULE)
Connector Color GRAY
H.S.
92 91 90 89 88 87 86 85 84 83 82 81
104 103 102 101 100 99 98 97 96 95 94 93
Terminal No. Color of Wire Signal Name
104 BR REVERSE LAMP OUT
Connector No. M18
Connector Name BCM (BODY CONTROL MODULE)
Connector Color BLACK
H.S.
60 59 58 57 56 55 54 53 52 51 50 49 48 47 46 45 44 43 42 41
80 79 78 77 76 75 74 73 72 71 70 69 68 67 66 65 64 63 62 61
Terminal No. Color of Wire Signal Name
59 P CAN-L
60 L CAN-H
69 L AT DEVICE OUT
ABLIA5151GB

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

H.S.

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

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

Connector No.	M23
Connector Name	CVT SHIFT SELECTOR
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
3	BG	–
4	B	–
5	L	–
6	W	–

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

H.S.

4	3	2	1

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

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

H.S.

4	3	2	1

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

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

H.S.

4	3	2	1

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

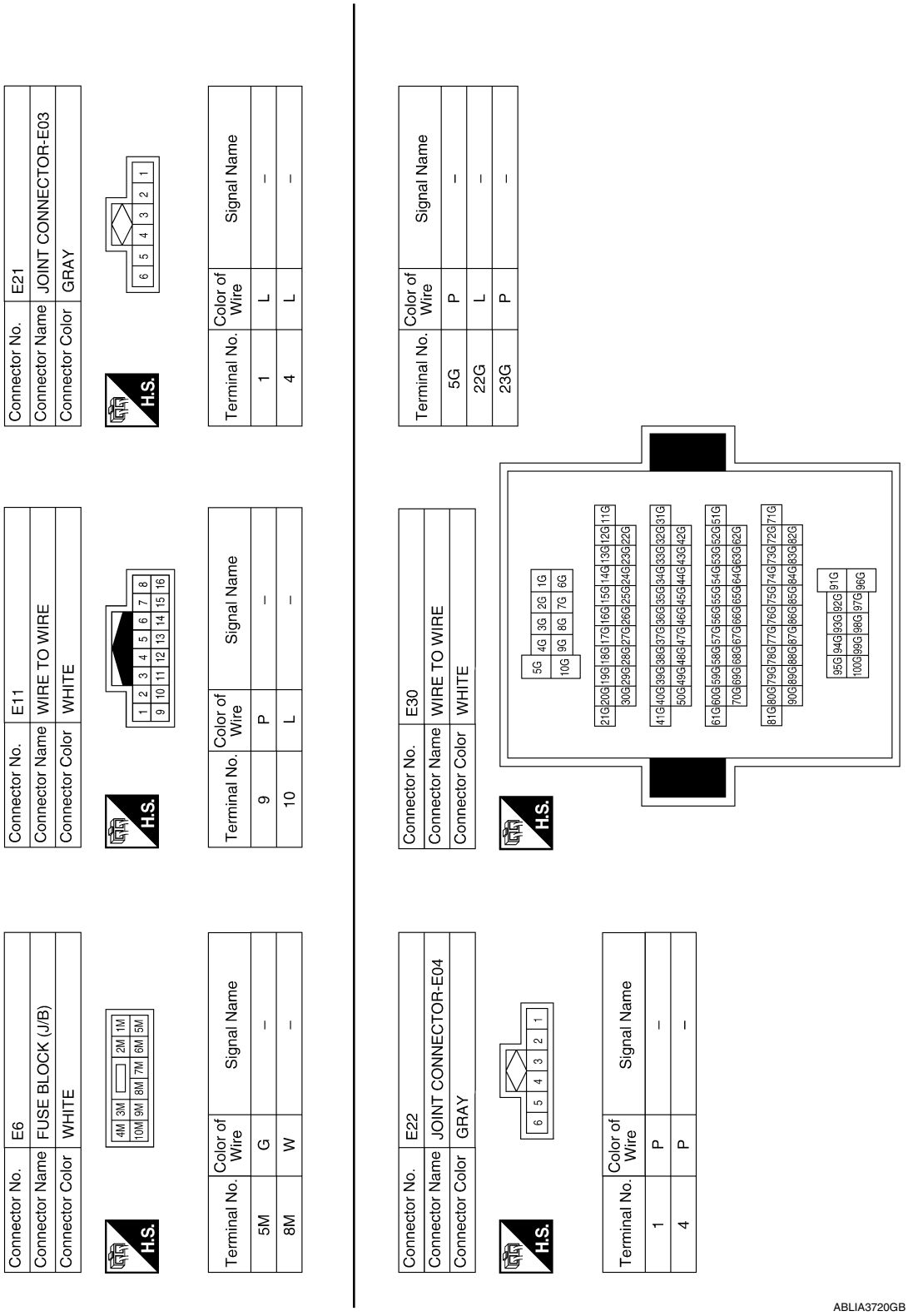
Connector No.	M157
Connector Name	JOINT CONNECTOR-M08
Connector Color	WHITE

H.S.

4	3	2	1

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

ABLIA3719GB


Connector No. E6
Connector Name FUSE BLOCK (J/B)
Connector Color WHITE
H.S.
4M 3M 2M 1M
10M 9M 8M 7M 6M 5M
Terminal No. Color of Wire Signal Name
5M G –
8M W –
Connector No. E11
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 P –
10 L –
Connector No. E21
Connector Name JOINT CONNECTOR-E03
Connector Color GRAY
H.S.
6 5 4 3 2 1
Terminal No. Color of Wire Signal Name
1 L –
4 L –
Connector No. E22
Connector Name JOINT CONNECTOR-E04
Connector Color GRAY
H.S.
6 5 4 3 2 1
Terminal No. Color of Wire Signal Name
1 P –
4 P –
Connector No. E30
Connector Name WIRE TO WIRE
Connector Color WHITE
H.S.
5G 4G 3G 2G 1G
10G 9G 8G 7G 6G
21G 20G 19G 18G 17G 16G 15G 14G 13G 12G 11G
30G 29G 28G 27G 26G 25G 24G 23G 22G
41G 40G 39G 38G 37G 36G 35G 34G 33G 32G 31G
50G 49G 48G 47G 46G 45G 44G 43G 42G
61G 60G 59G 58G 57G 56G 55G 54G 53G 52G 51G
70G 69G 68G 67G 66G 65G 64G 63G 62G
81G 80G 79G 78G 77G 76G 75G 74G 73G 72G 71G
90G 89G 88G 87G 86G 85G 84G 83G 82G
95G 94G 93G 92G 91G
100G 99G 98G 97G 96G
Terminal No. Color of Wire Signal Name
5G P –
22G L –
23G P –
ABLIA3720GB

Connector No.	E38
Connector Name	STOP LAMP SWITCH
Connector Color	WHITE

H.S.

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

Connector No.	E57
Connector Name	STOP LAMP RELAY
Connector Color	BLUE

H.S.

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

Connector No.	E64
Connector Name	JOINT CONNECTOR-E10
Connector Color	WHITE

H.S.

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

Connector No.	F2
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Connector No.	F16
Connector Name	TCM (TRANSMISSION CONTROL MODULE)
Connector Color	BLACK

H.S.

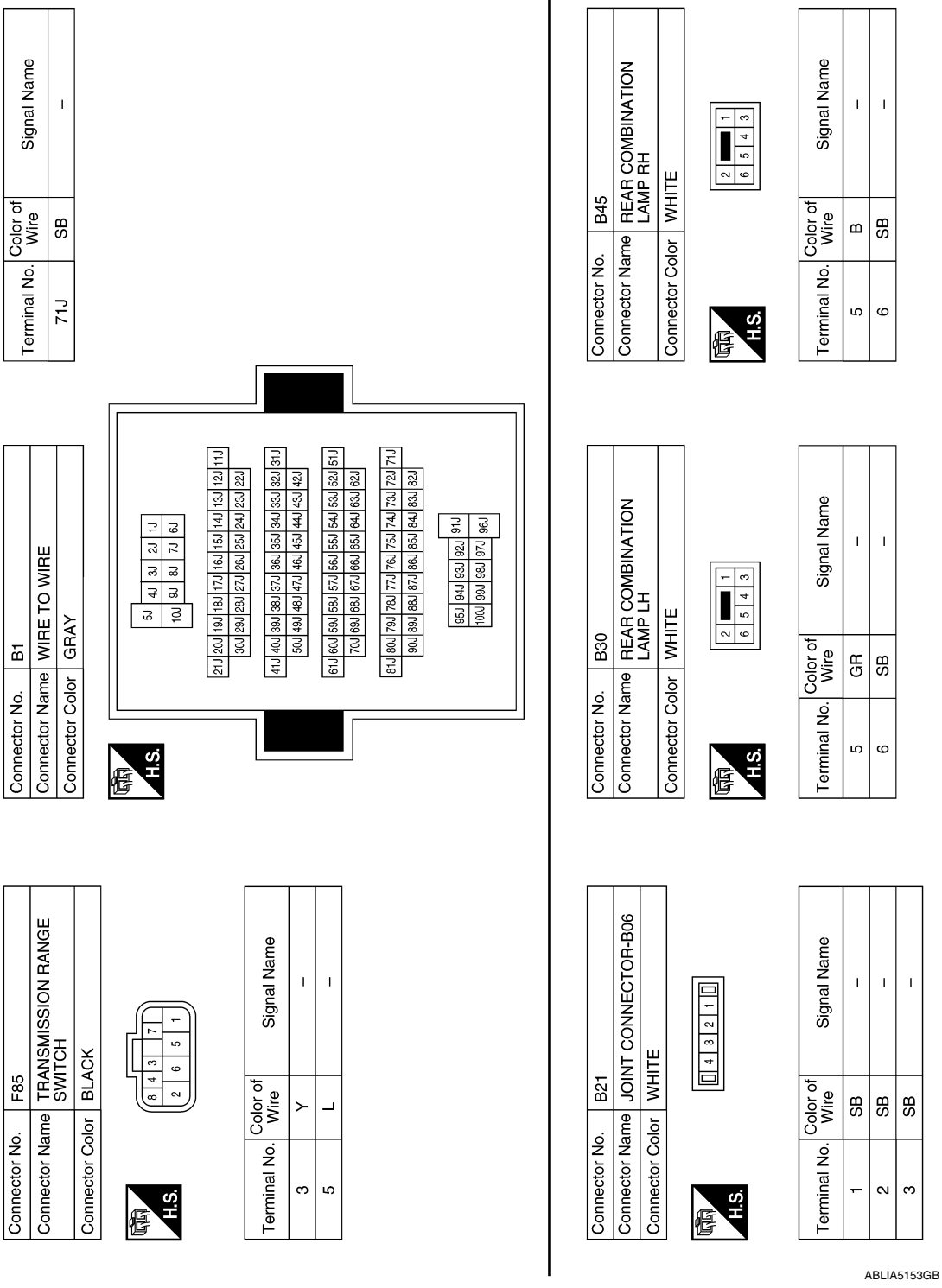
Terminal No.	Color of Wire	Signal Name
6	L	R RANGE SW
23	P	CAN-L
33	L	CAN-H
47	Y	VIGN
48	Y	VIGN

Connector No.	F48
Connector Name	JOINT CONNECTOR-F02
Connector Color	BLACK

H.S.

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

ABLIA5152GB



ABLIA5153GB

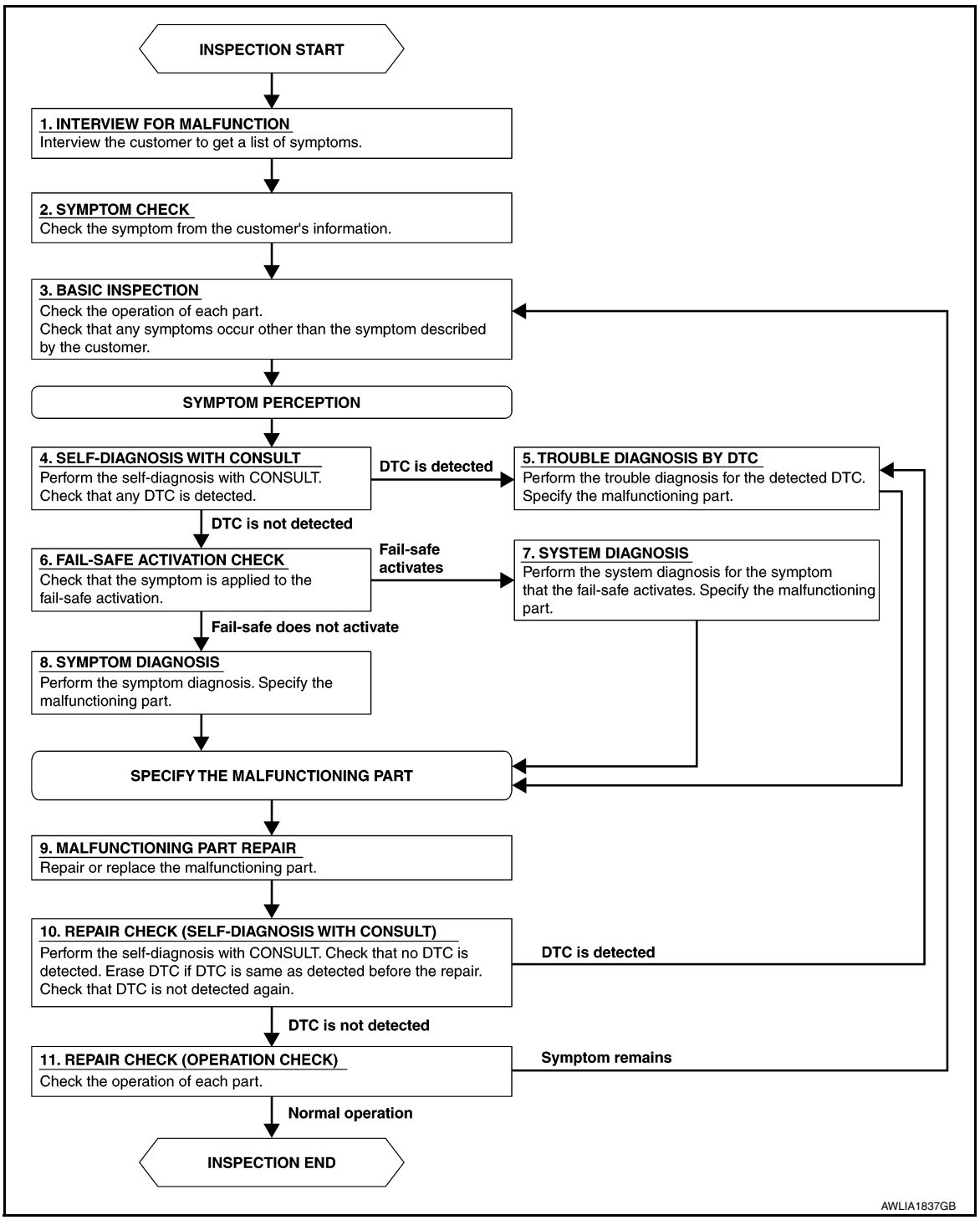
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:0000000009463574

OVERALL SEQUENCE



DETAILED FLOW

1.INTERVIEW FOR MALFUNCTION

Find out what the customer's concerns are.

>> GO TO 2

2.SYMPTOM CHECK

Verify the symptom from the customer's information.

>> GO TO 3

3.BASIC INSPECTION

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

>> GO TO 4

4.SELF-DIAGNOSIS WITH CONSULT

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

Is any DTC detected?

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

5.TROUBLE DIAGNOSIS BY DTC

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

>> GO TO 9

6.FAIL-SAFE ACTIVATION CHECK

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

Does the fail-safe activate?

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

7.SYSTEM DIAGNOSIS

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

>> GO TO 9

8.SYMPTOM DIAGNOSIS

Perform the symptom diagnosis. Specify the malfunctioning part.

>> GO TO 9

9.MALFUNCTION PART REPAIR

Repair or replace the malfunctioning part.

>> GO TO 10

10.REPAIR CHECK (SELF-DIAGNOSIS WITH CONSULT)

Perform the self diagnosis with CONSULT. 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 MODULE)

BCM (BODY CONTROL MODULE) : Diagnosis Procedure

INFOID:0000000009956493

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

1. CHECK FUSE AND FUSIBLE LINK

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

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

Is the fuse or fusible link blown?

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

2. CHECK POWER SUPPLY CIRCUIT

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

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

Is the inspection result normal?

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

3. CHECK GROUND CIRCUIT

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

BCM		Ground	Continuity
Connector	Terminal		
M21	134	—	Yes
	143		

Is the inspection result normal?

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

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)

IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) : Diagnosis Procedure

INFOID:0000000009956494

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

1. CHECK FUSIBLE LINKS

Check that the following fusible links are not blown.

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

Is the fusible link blown?

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

2. CHECK POWER SUPPLY CIRCUIT

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

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

Is the inspection result normal?

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

3. CHECK GROUND CIRCUIT

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

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

Is the inspection result normal?

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

HEADLAMP (HI) CIRCUIT

Description

INFOID:0000000009463577

The IPDM E/R (intelligent power distribution module engine room) controls the headlamp high relay based on inputs from the BCM over 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 lamps to the headlamp high beam.

Component Function Check

INFOID:0000000009463578

1.CHECK HEADLAMP (HI) OPERATION

WITHOUT CONSULT
1. Start IPDM E/R auto active test. Refer to PCS-8, "Diagnosis Description".
2. Check that the headlamp switches to the high beam.
   NOTE:
   HI/LO is repeated 1 second each when using the IPDM E/R auto active test.

CONSULT
1. Select EXTERNAL LAMP 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

Is the inspection result normal?

YES >> Headlamp (HI) circuit is normal.
NO >> Refer to EXL-91, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000009463579

Regarding Wiring Diagram information, refer to EXL-27, "Wiring Diagram - Halogen" or EXL-33, "Wiring Diagram - Xenon".

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

2.CHECK HEADLAMP (HI) OUTPUT VOLTAGE

CONSULT ACTIVE TEST
1. Turn the ignition switch OFF.
2. Disconnect the front combination lamp harness connector E213 or E222 in question.
3. Turn the ignition switch ON.
4. Select EXTERNAL LAMP of IPDM E/R active test item.
5. With EXTERNAL LAMP ON, check the voltage between the combination lamp connector and ground.

(+)			(−)	Voltage
Connector		Terminal		
RH	E222	3	Ground	Battery voltage
LH	E213			

Is the inspection result normal?

YES >> GO TO 4.
NO >> GO TO 3.

3. CHECK HEADLAMP (HI) CIRCUIT FOR OPEN

1. Turn the ignition switch OFF.
2. Disconnect IPDM E/R connector E200.
3. Check continuity between the IPDM E/R harness connector E200 and the front combination lamp harness connector.

IPDM E/R			Front combination lamp		Continuity
Connector		Terminal	Connector	Terminal	
RH	E200	80	E222	3	Yes
LH		81	E213		

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-32, "Removal and Installation".
NO >> Repair or replace the harness or connector.

4. CHECK FRONT COMBINATION LAMP (HI) GROUND CIRCUIT

Check continuity between the front combination lamp harness connector terminal 4 and ground.

Connector		Terminal	—	Continuity
RH	E222	4	Ground	Yes
LH	E213			

Is the inspection result normal?

YES >> Inspect the headlamp bulb.
NO >> Repair or replace the harness or connector.

HEADLAMP (LO) CIRCUIT
HEADLAMP (HALOGEN)

HEADLAMP (HALOGEN) : Description

INFOID:0000000009463580

The IPDM E/R (intelligent power distribution module engine room) controls the headlamp low relay based on inputs from the BCM over the CAN communication lines. When the headlamp low relay is energized, power flows through fuses 36 and 37, located in the IPDM E/R. Power then flows to the front combination lamps to the headlamp low beam.

HEADLAMP (HALOGEN) : Component Function Check

INFOID:0000000009463581

1.CHECK HEADLAMP (LO) OPERATION

WITHOUT CONSULT
1. Start IPDM E/R auto active test. Refer to PCS-8, "Diagnosis Description".
2. Check that the headlamp is turned ON.
   NOTE:
   HI/LO is repeated 1 second each when using the IPDM E/R auto active test.

CONSULT
1. Select EXTERNAL LAMP 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 inspection result normal?

YES >> Headlamp (LO) is normal.
NO >> Refer to EXL-93, "HEADLAMP (HALOGEN) : Diagnosis Procedure".

HEADLAMP (HALOGEN) : Diagnosis Procedure

INFOID:0000000009463582

Regarding Wiring Diagram information, refer to EXL-27, "Wiring Diagram - Halogen".

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 (RH)	IPDM E/R	36	15A
Headlamp LO (LH)	IPDM E/R	37	15A

Is the fuse blown?

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

2.CHECK HEADLAMP (LO) OUTPUT VOLTAGE

CONSULT
1. Turn the ignition switch OFF.
2. Disconnect the front combination lamp harness connector E212 or E223 in question.
3. Turn the ignition switch ON.
4. Select EXTERNAL LAMP of IPDM E/R active test item.
5. With EXTERNAL LAMP ON, check the voltage between the combination lamp connector E212 or E223 terminal 1 and ground.

(+)		(–)	Voltage
Connector		Terminal	
RH	E223	1	Ground	Battery voltage
LH	E212			

Is the inspection result normal?

YES >> GO TO 4.
NO >> GO TO 3.

3.CHECK HEADLAMP (LO) CIRCUIT FOR OPEN

1. Turn the ignition switch OFF.
2. Disconnect IPDM E/R connector E200.
3. Check continuity between the IPDM E/R harness connector E200 and the front combination lamp harness connector E223 or E212.

IPDM E/R			Front combination lamp		Continuity
Connector		Terminal	Connector	Terminal	
RH	E200	75	E223	1	Yes
LH		76	E212		

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-32, "Removal and Installation".
NO >> Repair or replace the harness or connector.

4.CHECK FRONT COMBINATION LAMP (LO) GROUND CIRCUIT

Check continuity between the front combination lamp harness connector E223 or E212 terminal 2 and ground.

Connector		Terminal	—	Continuity
RH	E223	2	Ground	Yes
LH	E212			

Is the inspection result normal?

YES >> Inspect the headlamp bulb.
NO >> Repair or replace the harness or connector.

HEADLAMP (XENON)

HEADLAMP (XENON) : Description

INFOID:0000000009463583

The IPDM E/R (intelligent power distribution module engine room) controls the headlamp low relay based on inputs from the BCM over the CAN communication lines. When the headlamp low relay is energized, power flows through fuses 36 and 37, located in the IPDM E/R. Power then flows to the front combination lamps to the headlamp low beam.

HEADLAMP (XENON) : Component Function Check

INFOID:0000000009463584

1.CHECK HEADLAMP (LO) OPERATION

WITHOUT CONSULT
1. Start IPDM E/R auto active test. Refer to PCS-8, "Diagnosis Description".
2. Check that the headlamp is turned ON.
   NOTE:
   HI/LO is repeated 1 second each when using the IPDM E/R auto active test.

CONSULT
1. Select EXTERNAL LAMP 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 inspection result normal?

YES >> Headlamp (LO) is normal.
NO >> Refer to EXL-95, "HEADLAMP (XENON) : Diagnosis Procedure".

HEADLAMP (XENON) : Diagnosis Procedure

INFOID:0000000009463585

Regarding Wiring Diagram information, refer to EXL-33, "Wiring Diagram - Xenon".

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 (RH)	IPDM E/R	36	15A
Headlamp LO (LH)	IPDM E/R	37	15A

Is the fuse blown?

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

2.CHECK HEADLAMP (LO) OUTPUT VOLTAGE

CONSULT
1. Turn the ignition switch OFF.
2. Disconnect the front combination lamp harness connector E232 or E243 in question.
3. Turn the ignition switch ON.
4. Select EXTERNAL LAMP of IPDM E/R active test item.
5. With EXTERNAL LAMP ON, check the voltage between the combination lamp connector E243 or E232 terminal 1 and ground.

(+)			(–)	Voltage
Connector		Terminal		
RH	E243	1	Ground	Battery voltage
LH	E232			

Is the inspection result normal?

YES >> GO TO 4.
NO >> GO TO 3.

3.CHECK HEADLAMP (LO) CIRCUIT FOR OPEN

1. Turn the ignition switch OFF.
2. Disconnect IPDM E/R connector E200.
3. Check continuity between the IPDM E/R harness connector E200 and the front combination lamp harness connector E243 or E232.

IPDM E/R			Front combination lamp		Continuity
Connector		Terminal	Connector	Terminal	
RH	E200	75	E243	1	Yes
LH		76	E232		

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-32, "Removal and Installation".

NO >> Repair or replace the harness or connector.

4. CHECK FRONT COMBINATION LAMP (LO) GROUND CIRCUIT

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

Connector		Terminal	—	Continuity
RH	E243	2	Ground	Yes
LH	E232			

Is the inspection result normal?

YES >> Perform xenon headlamp diagnosis. Refer to EXL-97, "Diagnosis Procedure".
NO >> Repair or replace the harness or connector.

XENON HEADLAMP

Description

INFOID:0000000009463586

OPERATION

Refer to EXL-9, "HEADLAMP SYSTEM : System Description".

PRECAUTIONS FOR TROUBLE DIAGNOSIS

- Installation or removal of the connector must be done with the lighting switch OFF.
- When the lamp is illuminated (when the lighting switch is ON), do not touch the harness, HID control unit, inside of the lamp, or the lamp metal parts.
- To check illumination, temporarily install lamp in the vehicle. Be sure to connect power at the vehicle-side connector.
- If the malfunction can be traced directly to the electrical system, first check for items such as blown fuses and fusible links, broken wires or loose connectors, pulled-out terminals, and improper connections.
- Do not work with wet hands.
- Using a tester for HID control unit circuit trouble diagnosis is prohibited.
- Disassembling the HID control unit or harnesses (bulb socket harness, ballast harness) is prohibited.
- Immediately after illumination, the light intensity and color will fluctuate, this is normal.
- When the bulb has reached the end of its lifetime, the brightness may drop significantly, it may flash repeatedly, or the light may turn a reddish color.

Diagnosis Procedure

INFOID:0000000009463587

1.CHECK XENON BULB

Install a known good bulb to the applicable headlamp. Check that the headlamp operates.

Is the inspection result normal?

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

2.CHECK HID CONTROL UNIT

Install a known good HID control unit to the applicable headlamp. Check that the headlamp operates.

Is the inspection result normal?

YES >> Replace HID control unit.
NO >> Inspection End.

DAYTIME LIGHT RELAY CIRCUIT

Description

INFOID:0000000009463588

The BCM sends a daytime light request to the IPDM E/R via the CAN communication lines. The power flows through fuse 43 located in IPDM E/R to the daytime light relay coil. When the IPDM E/R operates the daytime light relay, power is sent to the daytime lamps.

Diagnosis Procedure

INFOID:0000000009463589

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

1.CHECK DAYTIME LIGHT RELAY VOLTAGE SUPPLY

1. Turn the ignition switch OFF.
2. Remove the daytime light relay.
3. Check the voltage between the daytime light relay harness connector E228 and ground.

Daytime light relay		(–)	Voltage
Connector	Terminal		
E228	2	Ground	Battery voltage
	5		

Is the inspection result normal?

YES >> GO TO 3.
NO >> GO TO 2.

2.CHECK DAYTIME LIGHT RELAY CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect IPDM E/R harness connector E18.
3. Check continuity between the IPDM E/R harness connector E18 and the daytime light relay harness connector E228.

Daytime light relay		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
E228	2	E18	14	Yes
	5			

4. Check continuity between the IPDM E/R harness connector E18 and ground.

Connector	Terminal	—	Continuity
E18	14	Ground	No

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-32, "Removal and Installation".
NO >> Repair or replace the harness or connector.

3.CHECK DAYTIME LIGHT RELAY CONTROL CIRCUIT

1. Turn the ignition switch OFF.
2. Check continuity between the IPDM E/R harness connector E201 and the daytime light relay harness connector E228.

Daytime light relay		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
E228	1	E201	85	Yes

3. Check continuity between the daytime light relay harness connector and ground.

Connector	Terminal	—	Continuity
E228	1	Ground	No

Is the inspection result normal?

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

4. CHECK DAYTIME LIGHT RELAY

Check the daytime light relay. Refer to EXL-99, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 5.
NO >> Replace relay.

5. CHECK DAYTIME LIGHT CIRCUIT (OPEN OR SHORT TO GROUND)

1. Turn the ignition switch OFF.
2. Check continuity between the daytime light relay harness connector E228 and the front fog lamp harness connector.

Daytime light relay		Front fog lamp			Continuity
Connector	Terminal		Connector	Terminal	
E228	3	LH	E234	3	Yes
		RH	E237		

3. Check continuity between the daytime light relay harness connector E228 and ground.

Daytime light relay		(–)	Continuity
Connector	Terminal		
E228	3	Ground	No

Is the inspection result normal?

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

6. CHECK DAYTIME LIGHT GROUND CIRCUIT FOR OPEN

1. Turn the ignition switch OFF.
2. Disconnect front fog lamp connector E234 or E237 in question.
3. Check continuity between the front fog lamp connector E234 or E237 and ground.

Connector	Terminal	—	Continuity
LH E234	4	Ground	Yes
RH E237			

Is the inspection result normal?

YES >> Inspect daytime light bulb.
NO >> Repair or replace the harness or connector.

Component Inspection

INFOID:0000000009463590

1. CHECK DAYTIME LIGHT RELAY

1. Turn ignition switch OFF.
2. Remove daytime light relay.
3. Check the continuity between daytime light 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 daytime light relay.

FRONT FOG LAMP CIRCUIT

Description

INFOID:0000000009463591

The IPDM E/R (intelligent power distribution module engine room) controls the front fog lamp relay based on inputs from the BCM over the CAN communication lines. When the front fog lamp relay is energized, power flows from the front fog lamp relay in the IPDM E/R to the front fog lamps.

Component Function Check

INFOID:0000000009463592

1.CHECK FRONT FOG LAMP OPERATION

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

WITH CONSULT
1. Select EXTERNAL LAMP 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 inspection result normal?

YES >> Front fog lamp circuit is normal.
NO >> Refer to EXL-101, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000009463593

Regarding Wiring Diagram information, refer to EXL-54, "Wiring Diagram".

1.CHECK FRONT FOG LAMP FUSE

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

Unit	Location	Fuse No.	Capacity
Front fog lamp	IPDM E/R	42	15A

Is the fuse blown?

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

2.CHECK FRONT FOG LAMP OUTPUT VOLTAGE

CONSULT
1. Turn the ignition switch OFF.
2. Disconnect the front fog lamp harness connector E214 or E227 in question.
3. Turn the ignition switch ON.
4. Turn the front fog lamps ON.
5. Check the voltage between the front fog lamp harness connector E214 or E227 terminal 1 and ground.

(+)			(−)	Voltage
Connector		Terminal		
LH	E214	1	Ground	Battery voltage
RH	E227			

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 3.

3. CHECK FRONT FOG LAMP OPEN CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect IPDM E/R connector E200.
3. Check continuity between the IPDM E/R harness connector and the front fog lamp harness connector.

IPDM E/R			Front fog lamp		Continuity
Connector		Terminal	Connector	Terminal	
RH	E200	78	E227	1	Yes
LH		79	E214		

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-32, "Removal and Installation".
NO >> Repair or replace the harness or connector.

4. CHECK FRONT FOG LAMP GROUND CIRCUIT

Check continuity between the front fog lamp harness connector terminal 2 and ground.

Connector		Terminal	—	Continuity
RH	E227	2	Ground	Yes
LH	E214			

Is the inspection result normal?

YES >> Inspect the fog lamp bulb.
NO >> Repair or replace the harness or connector.

PARKING LAMP CIRCUIT

Description

INFOID:0000000009463594

The IPDM E/R (intelligent power distribution module engine room) controls the tail lamp relay based on inputs from the BCM over the CAN communication lines. When the tail lamp relay is energized, power flows through fuses 51 and 52, located in the IPDM E/R. Power then flows to the front and rear combination lamps, license plate lamps.

Component Function Check

INFOID:0000000009463595

1.CHECK PARKING LAMP OPERATION

WITHOUT CONSULT
1. Activate IPDM E/R auto active test. Refer to PCS-8, "Diagnosis Description".
2. Check that the parking lamp is turned ON.

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

TAIL : Parking lamp ON
OFF : Parking lamp OFF

Is the inspection result normal?

YES >> Parking lamp circuit is normal.
NO >> Refer to EXL-103, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000009463596

Regarding Wiring Diagram information, refer to EXL-68, "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	51	10A
		52	10A

Is the fuse blown?

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

2.CHECK TAIL LAMP RELAY OUTPUT (VOLTAGE)

1. Disconnect the front or rear combination lamp connector or license plate lamp connector in question.
2. Turn the ignition switch ON.
3. Turn the parking lamps ON.
4. With the parking lamps ON, check voltage between the front combination lamp front (parking) connector and ground.

(+)			(−)	Voltage (Approx.)
Connector		Terminal		
LH	E217	6	Ground	Battery voltage
RH	E224 (without front fog lamps)			
	E351 (with front fog lamps)			

5. With the parking lamps ON, check voltage between the front combination lamp (side marker) connector and ground.

(+)			(−)	Voltage (Approx.)
Connector		Terminal		
LH	E235	8	Ground	Battery voltage
RH	E236			

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

(+)			(−)	Voltage (Approx.)
Connector		Terminal		
LH	B30	2	Ground	Battery voltage
RH	B45			

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

(+)			(−)	Voltage (Approx.)
Connector		Terminal		
LH	B34	1	Ground	Battery voltage
RH	B32			

Are the inspection results normal?

YES >> GO TO 4.
NO >> GO TO 3.

3. CHECK PARKING 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 (parking) harness connector.

IPDM E/R			Front combination lamp (parking)		Continuity
Connector		Terminal	Connector	Terminal	
LH	E201	90	E217	6	Yes
RH			E224 (without front fog lamps)		
			E351 (with front fog lamps)		

4. Check continuity between the IPDM E/R harness connector and the front combination lamp (side marker) harness connector.

	IPDM E/R		Front combination lamp (side marker)		Continuity
Connector		Terminal	Connector	Terminal	
LH	E201	90	E235	8	Yes
RH			E236		

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

IPDM E/R		Rear combination lamp		Continuity
Connector	Terminal	Connector	Terminal	

LH	E18	10	B30	2	Yes
RH		9	B45		

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

IPDM E/R			License plate lamp		Continuity
Connector		Terminal	Connector	Terminal	
LH	E18	9	B34	1	Yes
RH			B32		

Are the inspection results normal?

YES >> Replace IPDM E/R. Refer to PCS-32, "Removal and Installation".
NO >> Repair or replace the harness or connector.

4. CHECK PARKING LAMP GROUND CIRCUITS

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

(+)			(–)	Continuity
Connector		Terminal		
LH	E217	7	Ground	Yes
RH	E224 (without front fog lamps)			
	E351 (with front fog lamps)			

2. Check continuity between the front combination lamp (side marker) harness connector and ground.

(+)			(–)	Continuity
Connector		Terminal		
LH	E235	9	Ground	Yes
RH	E236			

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

(+)			(–)	Continuity
Connector		Terminal		
LH	B30	5	Ground	Yes
RH	B45			

4. Check continuity between the license plate lamp harness connector and ground.

(+)			(–)	Continuity
Connector		Terminal		
LH	B34	2	Ground	Yes
RH	B32			

Are the inspection results normal?

YES >> Inspect the parking lamp bulb.
NO >> Repair or replace the harness or connector.

TURN SIGNAL LAMP CIRCUIT

Description

INFOID:0000000009463597

The BCM monitors inputs from the combination 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:0000000009463598

1.CHECK TURN SIGNAL LAMP

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

LH : Turn signal lamps (LH) ON
RH : Turn signal lamps (RH) ON
OFF : The turn signal lamps OFF

Does the turn signal lamp blink?

YES >> Turn signal lamp circuit is normal.
NO >> Refer to EXL-106, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000009463599

Regarding Wiring Diagram information, refer to EXL-60, "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.

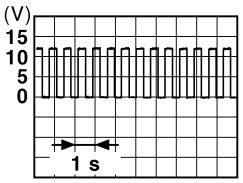
Is the bulb OK?

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

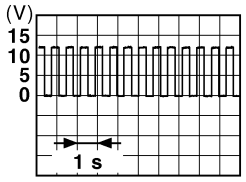
2.CHECK TURN SIGNAL LAMP OUTPUT VOLTAGE

1. Turn the ignition switch OFF.
2. Disconnect the front or rear combination lamp harness connector or the door mirror harness connector (if equipped with turn signal in mirror) in question.
3. Turn the ignition switch ON.
4. Operate the turn signal switch.
5. While the turn signal is operating, check the voltage between the front combination lamp harness connector and ground.

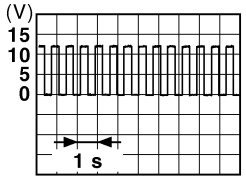
(+)		(−)	Voltage (Approx.)
Connector	Terminal		

RH	E224 (without front fog lamps) E351 (with front fog lamps)	5	Ground	 PKID0926E
LH	E217			

6. While the turn signal is operating, check the voltage between the rear combination lamp harness connector and ground.

(+)			(–)	Voltage (Approx.)
Connector		Terminal		
RH	B45	3	Ground	 PKID0926E
LH	B30			

7. While the turn signal is operating, check the voltage between the door mirror harness connector and ground.

(+)			(–)	Voltage (Approx.)
Connector		Terminal		
RH	D107	6	Ground	 PKID0926E
LH	D4			

Is the inspection result 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 harness connector M19 or M20 in question.
3. Check continuity between the BCM harness connector M20 and the front combination lamp harness connector.

BCM			Front combination lamp		Continuity
Connector		Terminal	Connector	Terminal	
LH	M20	117	E217	5	Yes
RH		105	E224 (without front fog lamps)		
			E351 (with front fog lamps)		

4. Check continuity between the BCM harness connector M19 and the rear combination lamp harness connector.

BCM			Rear combination lamp		Continuity
Connector		Terminal	Connector	Terminal	
LH	M19	103	B30	3	Yes
RH		92	B45		

5. Check continuity between the BCM harness connector M20 and the door mirror harness connector in question.

BCM			Door mirror		Continuity
Connector		Terminal	Connector	Terminal	
LH	M20	117	D4	6	Yes
RH		105	D107		

Is the inspection results normal?

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

4. CHECK TURN SIGNAL LAMP SHORT CIRCUIT

1. Check continuity between the BCM harness connector M19 or M20 and ground.

BCM		Ground	Continuity
Connector	Terminal		
M19	92		No
	103		
M20	105		
	117		

Are the inspection results normal?

YES >> Replace BCM. Refer to BCS-80, "Removal and Installation".
NO >> Repair or replace the harness or connectors.

5. CHECK TURN SIGNAL LAMP GROUND CIRCUIT

1. Check continuity between the front combination lamp harness connector or the rear combination lamp harness connector or the door mirror harness connector in question and ground.

Front combination lamp			(–)	Continuity
Connector		Terminal		
LH	E217	7	Ground	Yes
RH	E224 (without front fog lamps)			
	E351 (with front fog lamps)			

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

Rear combination lamp			(–)	Continuity
Connector		Terminal		
LH	B30	5	Ground	Yes
RH	B45			

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

Door mirror		(–)	Continuity
Connector	Terminal		

LH	D4	5	Ground	Yes
RH	D107			

Are the inspection results normal?

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

OPTICAL SENSOR

Description

INFOID:0000000009463600

The optical sensor measures ambient light and transmits the optical sensor signal to the BCM.

Component Function Check

INFOID:0000000009463601

1.CHECK OPTICAL SENSOR SIGNAL BY CONSULT

CONSULT
1. Turn the ignition switch ON.
2. Select OPTI SEN of BCM (HEAD LAMP) DATA MONITOR item.
3. Turn the lighting switch to AUTO.

Monitor item	Condition	Voltage
OPTI SEN (DTCT)	When outside of vehicle is bright	3.1V or more *
	When outside of vehicle is dark	0.6V or less

*: Illuminates the optical sensor. The value may be less than the standard value if brightness is weak.

Is the inspection result normal?

YES >> Optical sensor is normal.
NO >> Refer to EXL-110, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000009463602

Regarding Wiring Diagram information, refer to EXL-47, "Wiring Diagram".

1.CHECK OPTICAL SENSOR POWER SUPPLY INPUT

1. Turn the ignition switch OFF.
2. Disconnect the optical sensor harness connector M66.
3. Turn the ignition switch ON.
4. Turn the lighting switch to AUTO.
5. Check the voltage between the optical sensor harness connector M66 and ground.

(+)		(–)	Voltage (Approx.)
Connector	Terminal		
M66	1	Ground	5 V

Is the inspection result normal?

YES >> GO TO 2.
NO >> GO TO 3.

2.CHECK OPTICAL SENSOR GROUND CIRCUIT

1. Turn the ignition switch OFF.
2. Check continuity between the optical sensor harness connector M15 and ground.

(+)		(–)	Continuity
Connector	Terminal		
M66	3	Ground	Yes

Is the inspection result normal?

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

3.CHECK OPTICAL SENSOR POWER SUPPLY FOR OPEN CIRCUIT

1. Turn the ignition switch OFF.
2. Disconnect the BCM harness connector M17.

3. Check continuity between optical sensor harness connector M66 and BCM harness connector M17.

Optical sensor		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M66	1	M17	3	Yes

4. Check continuity between optical sensor harness connector M66 terminal 1 and ground.

(+)		(−)	Continuity
Connector	Terminal		
M66	1	Ground	No

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-80, "Removal and Installation".
NO >> Repair or replace the harness or connectors.

4. CHECK OPTICAL SENSOR SIGNAL OPEN CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect optical sensor connector and BCM connector.
3. Check continuity between optical sensor harness connector and BCM harness connector.

Optical sensor		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M66	2	M17	4	Yes

4. Check continuity between optical sensor harness connector and ground.

Connector	Terminal	(−)	Continuity
M66	2	Ground	No

Is the inspection result normal?

YES >> Replace the optical sensor. Refer to EXL-141, "Removal and Installation".
NO >> Repair or replace harness or connectors.

5. CHECK OPTICAL SENSOR GROUND FOR OPEN CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect the BCM harness connector M17.
3. Check continuity between optical sensor harness connector M66 terminal 3 and BCM harness connector M17 terminal 17.

Optical sensor		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M66	3	M17	17	Yes

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-80, "Removal and Installation".
NO >> Repair or replace harness or connector.

HAZARD SWITCH

Component Function Check

INFOID:0000000009463603

1.CHECK HAZARD SWITCH SIGNAL BY CONSULT

CONSULT DATA MONITOR
1. Turn ignition switch ON.
2. Select HAZARD SW of BCM (FLASHER) Data Monitor item.
3. While operating the hazard switch, check the monitor status.

Monitor item	Condition		Monitor status
HAZARD SW	Hazard switch	ON	On
		OFF	Off

Is the inspection result normal?

YES >> Hazard switch circuit is normal.
NO >> Refer to EXL-112, "Diagnosis Procedure".

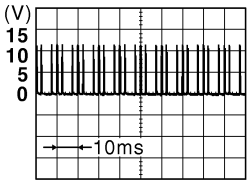
Diagnosis Procedure

INFOID:0000000009463604

Regarding Wiring Diagram information, refer to EXL-60, "Wiring Diagram".

1.CHECK HAZARD SWITCH SIGNAL INPUT

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

(+)		(−)	Voltage (Approx.)
Hazard switch			
Connector	Terminal		
M54	2	Ground	

JPMIA0154GB

Is the inspection result normal?

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

2.CHECK HAZARD SWITCH SIGNAL OPEN CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect BCM connector M17.
3. Check continuity between hazard harness connector and BCM harness connector.

Hazard switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M54	2	M17	36	Yes

Is the inspection result normal?

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

3.CHECK HAZARD SWITCH SIGNAL SHORT CIRCUIT

Check continuity between hazard switch harness connector and ground.

Hazard switch		Ground	Continuity
Connector	Terminal		
M54	2		No

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-80, "Removal and Installation".
NO >> Repair or replace harness or connector.

4.CHECK HAZARD SWITCH GROUND OPEN CIRCUIT

Check continuity between hazard switch harness connector and ground.

Hazard switch		Ground	Continuity
Connector	Terminal		
M54	1		Yes

Is the inspection result normal?

YES >> Replace hazard switch. Refer to EXL-140, "Removal and Installation".
NO >> Repair or replace harness or connector.

SYMPTOM DIAGNOSIS

EXTERIOR LIGHTING SYSTEM SYMPTOMS

Symptom Table

INFOID:0000000009463605

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	• Bulb • Fuse • Harness between IPDM E/R and the front combination lamp • Harness between the front combination lamp and ground • IPDM E/R	Headlamp (HI) circuit Refer to EXL-91.
	Both sides	—	**Symptom diagnosis** "BOTH SIDE HEADLAMPS DO NOT SWITCH TO HIGH BEAM" Refer to EXL-117.
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.	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-79.
		High beam request signal • BCM • IPDM E/R	IPDM E/R Data monitor "HL HI REQ"
Headlamp does not turn ON.	One side	• Fuse • Bulb • Harness between IPDM E/R and the front combination lamp • Harness between the front combination lamp and ground • IPDM E/R	Headlamp (LO) circuit Halogen, refer to EXL-93. Xenon, refer to EXL-95
	Both sides	—	**Symptom diagnosis** "BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON" Refer to EXL-119.
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-8.
	The ignition switch is turned OFF (After activating the battery saver).	IPDM E/R	—

Symptom		Possible cause	Inspection item
Headlamp is not turned ON/OFF with the lighting switch AUTO.		• Combination switch (lighting and turn signal switch) • Harness between the combination switch (lighting and turn signal switch) and BCM • BCM • IPDM E/R	Combination switch (lighting and turn signal switch) Refer to BCS-79.
		• Optical sensor • Harness between the optical sensor and BCM • BCM	Optical sensor Refer to EXL-110.
Daytime light system does not activate.		—	**Symptom diagnosis** "DAYTIME LIGHT SYSTEM INOPERATIVE" Refer to EXL-118.
Front fog lamp is not turned ON.	One side	• Front fog lamp bulb • Harness between IPDM E/R and the front fog lamp • Harness between the front fog lamp and ground • IPDM E/R	Front fog lamp circuit Refer to EXL-101.
	Both side	—	**Symptom diagnosis** "BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON" Refer to EXL-121.
Parking lamp is not turned ON.	One side	• Fuse • Parking lamp bulb • Harness between IPDM E/R and the front/rear combination lamp • Harness between the front/rear combination lamp and ground • IPDM E/R	Parking lamp circuit Refer to EXL-103.
	Both sides	—	**Symptom diagnosis** "PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON" Refer to EXL-120.
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 • Door mirror (if equipped with turn signals in the door mirrors)	Turn signal lamp circuit Refer to EXL-106.
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-58.
• Hazard warning lamp does not activate. • Hazard warning lamp continues activating. (Turn signal is normal)		• Hazard switch • Harness between the hazard switch and BCM • BCM	Hazard switch Refer to EXL-112.

NORMAL OPERATING CONDITION

Description

INFOID:0000000009463606

XENON HEADLAMP

- The brightness and color of the light may vary slightly immediately after turning the headlamp ON. This condition will remain until the xenon bulb becomes stable. This is normal.
- Illumination time lag may occur between right and left. This is normal.

AUTO LIGHT SYSTEM

The auto light system may not turn the headlamp ON/OFF immediately after passing a dark area or a bright area (short tunnel, sky bridge, shadowed area etc.). This is normal.

BOTH SIDE HEADLAMPS DO NOT SWITCH TO HIGH BEAM

Description

INFOID:0000000009463607

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

Diagnosis Procedure

INFOID:0000000009463608

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

Check the combination switch (lighting and turn signal switch). Refer to BCS-79, "Symptom Table".

Is the inspection results 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 lighting switch, check the monitor status.

Monitor item	Condition		Monitor status
HL HI REQ	Lighting switch (2nd)	HI or PASS	ON
		Except for HI or PASS	OFF

Is the inspection results normal?

YES >> GO TO 3
NO >> Replace BCM. Refer to BCS-80, "Removal and Installation".

3.HEADLAMP (HI) CIRCUIT INSPECTION

Check the headlamp (HI) circuit. Refer to EXL-91, "Diagnosis Procedure".

Is the inspection results normal?

YES >> Replace IPDM E/R. Refer to PCS-32, "Removal and Installation".
NO >> Repair or replace the malfunctioning part.

DAYTIME LIGHT SYSTEM INOPERATIVE

Description

INFOID:0000000009463609

The daytime light system is inoperative even though the combination switch (lighting and turn signal switch) and parking brake switch are in the normal setting, also whenever engine is operating.

Diagnosis Procedure

INFOID:0000000009463610

1.CHECK DAYTIME LIGHT OPERATION

1. Perform BCM(HEADLAMP) DAYTIME RUNNING LIGHT active test. Refer to BCS-19, "HEADLAMP : CONSULT Function (BCM - HEADLAMP)".
2. Check that the daytime lights turn on.

Is the inspection results normal?

YES >> Replace BCM. Refer to BCS-80, "Removal and Installation".
NO >> GO TO 2.

2.CHECK DAYTIME LIGHT RELAY FUSE

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

Unit	Fuse No.	Capacity
Daytime light	43	10 A

Is the fuse blown?

YES >> Replace the blown fuse after repairing the affected circuit.
NO >> GO TO 3.

3.CHECK DAYTIME LIGHT BULBS

Check the daytime light bulbs are not open.

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace the bulbs.

4.PERFORM DAYTIME LIGHT CIRCUIT INSPECTION

Check the daytime light circuit. Refer to EXL-98, "Diagnosis Procedure".

Is the inspection results normal?

YES >> Replace IPDM E/R. Refer to PCS-32, "Removal and Installation".
NO >> Repair or replace the malfunctioning part.

BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

Description

INFOID:0000000009463611

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

Diagnosis Procedure

INFOID:0000000009463612

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

Check the combination switch (lighting and turn signal switch). Refer to BCS-79, "Symptom Table".

Is the inspection result 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 lighting switch, check the monitor status.

Monitor item	Condition		Monitor status
HL LO REQ	Lighting switch	2nd	ON
		OFF	OFF

Is the inspection result normal?

YES >> GO TO 3
NO >> Replace BCM. Refer to BCS-80, "Removal and Installation".

3.HEADLAMP (LO) CIRCUIT INSPECTION

Check the headlamp (LO) circuit. Refer to EXL-93, "HEADLAMP (HALOGEN) : Diagnosis Procedure".

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-32, "Removal and Installation".
NO >> Repair or replace the malfunctioning part.

PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON

Description

INFOID:0000000009463613

The parking, license plate and tail lamps do not turn ON in with any lighting switch setting.

Diagnosis Procedure

INFOID:0000000009463614

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

Check the combination switch (lighting and turn signal switch). Refer to BCS-79, "Symptom Table".

Is the inspection results 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 lighting switch, check the monitor status.

Monitor item	Condition		Monitor status
TAIL & CLR REQ	Lighting switch	1st	ON
		OFF	OFF

Is the inspection results normal?

YES >> GO TO 3
NO >> Replace BCM. Refer to BCS-80, "Removal and Installation".

3.PARK LAMP CIRCUIT INSPECTION

Check the parking lamp circuit. Refer to EXL-103, "Diagnosis Procedure".

Is the inspection results normal?

YES >> Replace IPDM E/R. Refer to PCS-32, "Removal and Installation".
NO >> Repair or replace the malfunctioning part.

BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

Description

INFOID:0000000009463615

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

Diagnosis Procedure

INFOID:0000000009463616

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

Check the combination switch (lighting and turn signal switch). Refer to BCS-79, "Symptom Table".

Is the inspection result 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. While operating the front fog lamp switch, check the monitor status.

Monitor item	Condition		Monitor status
FR FOG REQ	Front fog lamp switch (Lighting switch 3rd)	ON	ON
		OFF	OFF

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace BCM. Refer to BCS-80, "Removal and Installation".

3.FRONT FOG LAMP CIRCUIT INSPECTION

Check the front fog lamp circuit. Refer to EXL-101, "Diagnosis Procedure".

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-32, "Removal and Installation".
NO >> Repair or replace the malfunctioning part.

PERIODIC MAINTENANCE

HEADLAMP

Aiming Adjustment

INFOID:0000000009463617

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:

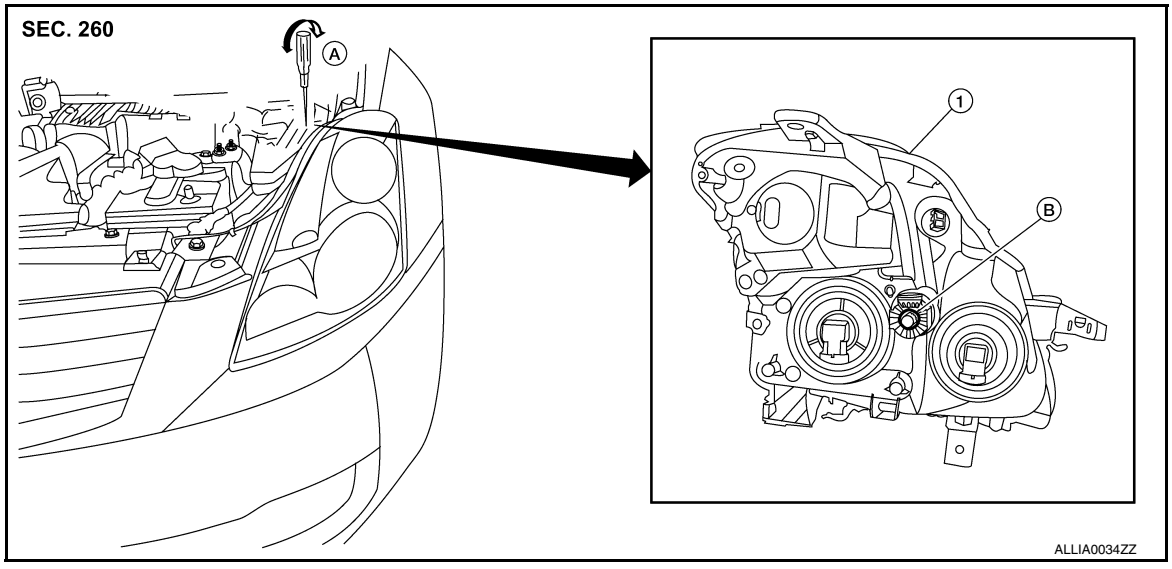
Do not use organic solvent (thinner, gasoline etc.)

- 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.
- 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.

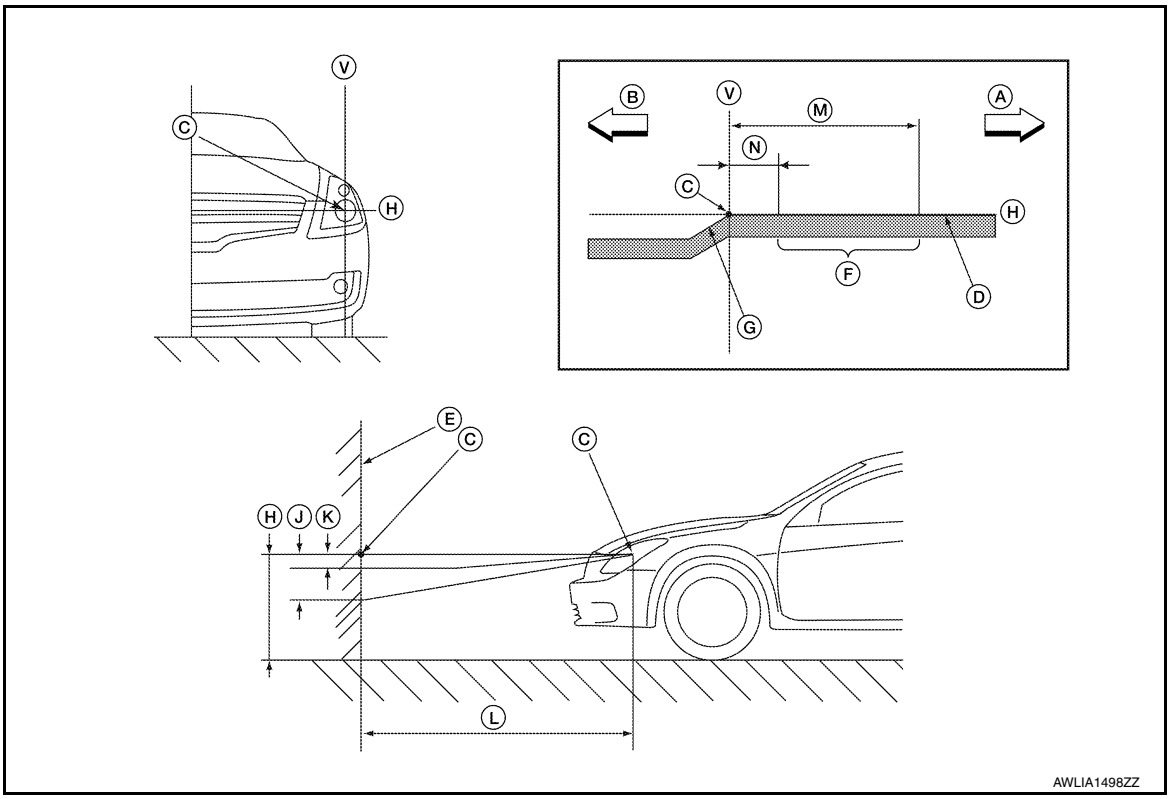


1. Front combination lamp
A. Suitable tool (for aiming adjustment)
B. Adjusting screw

Aiming Adjustment procedure

1. Position the screen.
   NOTE:
   - Stop the vehicle facing the screen.
   - Place the screen on a plain road vertically.
2. Face the screen with the vehicle. Maintain 10 m (33 ft) between the headlamp bulb center and the screen.
3. Start the engine. Turn the headlamp (LO) ON.

CAUTION:
Do not cover the lens surface with tape, etc. The lens is made of resin.
NOTE:
- Aim each headlamp individually and ensure other headlamp beam pattern is blocked from screen.
- For horizontal aiming, adjust headlamp until beam pattern is at horizontal center point.



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 head lamp	J. 53.2 mm (2.09 in)
K. -13.3 mm (-0.52 in)	L. 10 m (33 ft)	M. 399 mm (15.71 in)
N. 133 mm (5.24 in)	V. Vertical center line of headlamp	

- Basic illuminating area for adjustment should be within the range shown on the aiming chart. Adjust headlamps accordingly.

FRONT FOG LAMP

Aiming Adjustment

INFOID:0000000009463618

PREPARATION BEFORE ADJUSTING

The fog lamp is a semi-sealed beam type which uses a replaceable halogen bulb. 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 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.
- Aim each headlamp individually and ensure other headlamp beam pattern is blocked from screen.

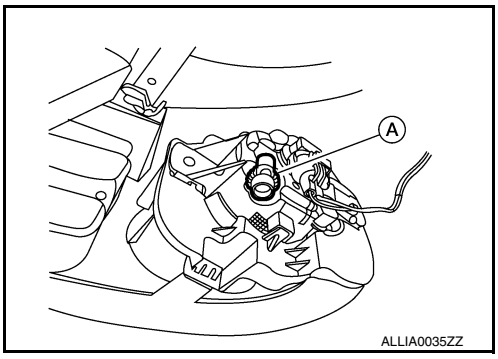
NOTE:

- 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:

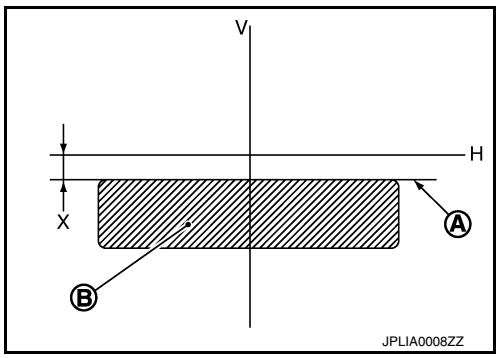
- The vehicle front body has been repaired.
- The front combination lamp has been removed or replaced.
- Any outfitting has been installed.
- The vehicle’s standard load condition has been substantially increased.

Aiming Adjustment Procedure

1. Place the screen.
   NOTE:
   - Stop the vehicle facing the wall.
   - Place the board on a plain road vertically.
2. Face the vehicle with the screen. Maintain 7.62 m (25.0 ft) between the front fog lamp center and the screen.
3. Start the engine. Turn the front fog lamp ON.
   NOTE:
   Shut off the headlamp light with the board to prevent from illuminating the adjustment screen.
   CAUTION:
   Do not cover the lens surface with a tape etc. The lens is made of resin.
4. Adjust aiming in the vertical direction by turning the adjusting screw (A).



5. 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 100 mm (4 in).



A : Cutoff line
B : High illuminance area
H : Horizontal center line of front fog lamp
V : Vertical center line of front fog lamp
X : Cutoff line height

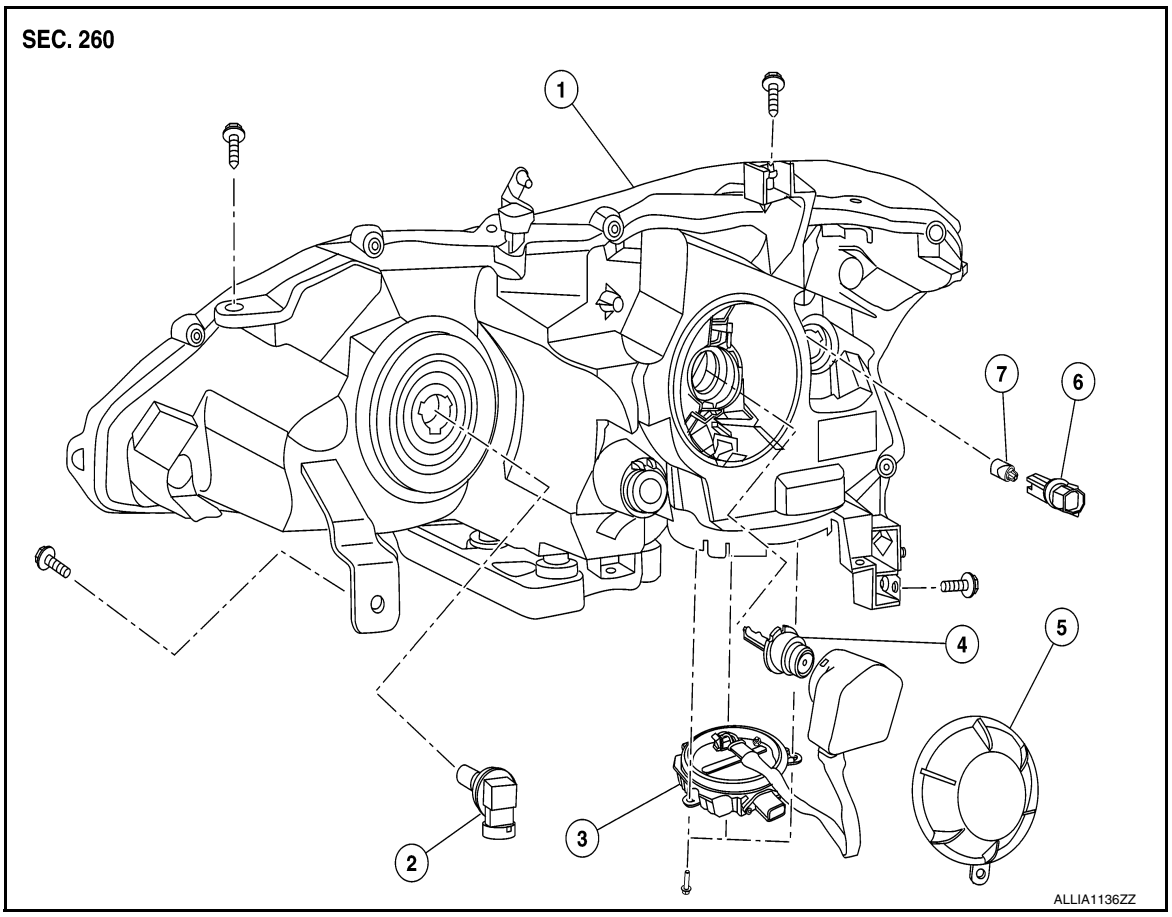
REMOVAL AND INSTALLATION

FRONT COMBINATION LAMP

Exploded View - Xenon

INFOID:0000000009463619

COMBINATION LAMP - XENON



1. Front combination lamp
2. Halogen lamp bulb (high beam)
3. Ballast
4. Xenon lamp bulb
5. Plastic cover
6. Side marker bulb socket
7. Side marker lamp bulb

Removal and Installation - Xenon

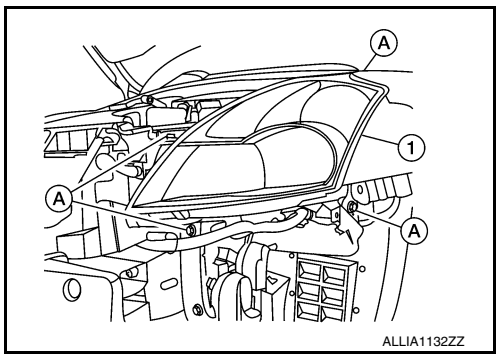
INFOID:0000000009463620

FRONT COMBINATION LAMP - XENON

Removal

1. Disconnect the battery negative terminal. Refer to PG-73, "Removal and Installation (Battery)".
2. Remove the front bumper fascia. Refer to EXT-17, "Removal and Installation".
3. Ensure the lighting switch is OFF.

4. Remove the front combination lamp bolts (A).
5. Pull the front combination lamp (1) forward.
6. Disconnect the harness connectors from the front combination lamp (1).



Installation
Installation is in the reverse order of removal.
NOTE:
After installation perform headlamp aiming adjustment. Refer to EXL-122, "Aiming Adjustment".

Bulb Replacement - Xenon

INFOID:0000000009463621

WARNING:
Do not touch bulb by hand 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.**

HEADLAMP HIGH BEAM

Removal
1. Position the front fender protector aside. Refer to EXT-26, "FENDER PROTECTOR : Removal and Installation".
2. Rotate the headlamp high beam socket counterclockwise and remove from front combination lamp.

Installation
Installation is in the reverse order of removal.
CAUTION:
After installing, be sure to install the bulb socket securely to ensure watertightness.

HEADLAMP LOW BEAM XENON

CAUTION:
- **Disconnect the battery negative terminal or remove the fuse.**
- **HID control unit and xenon bulb socket cannot be disassembled.**

Removal
1. Disconnect the battery negative terminal (xenon only). Refer to PG-73, "Removal and Installation (Battery)".
2. Position the front fender protector aside. Refer to EXT-26, "FENDER PROTECTOR : Removal and Installation".
3. Rotate the plastic cover counterclockwise and remove from the front combination lamp.
4. Rotate the xenon bulb socket counterclockwise and remove from xenon bulb.
5. Remove the retaining spring and the xenon bulb from the front combination lamp.
   CAUTION:
   Do not break the xenon bulb ceramic tube when replacing the bulb.

Installation
Installation is in the reverse order of removal.
CAUTION:
After installing the headlamp bulb, be sure to install the plastic cover securely to ensure watertightness.

SIDE MARKER LAMP

Removal

1. Position the front fender protector aside. Refer to EXT-26, "FENDER PROTECTOR : Removal and Installation".
2. Rotate the side marker lamp bulb socket counterclockwise and remove.
3. Remove the side marker bulb from the front combination lamp.

Installation

Installation is in the reverse order of removal.

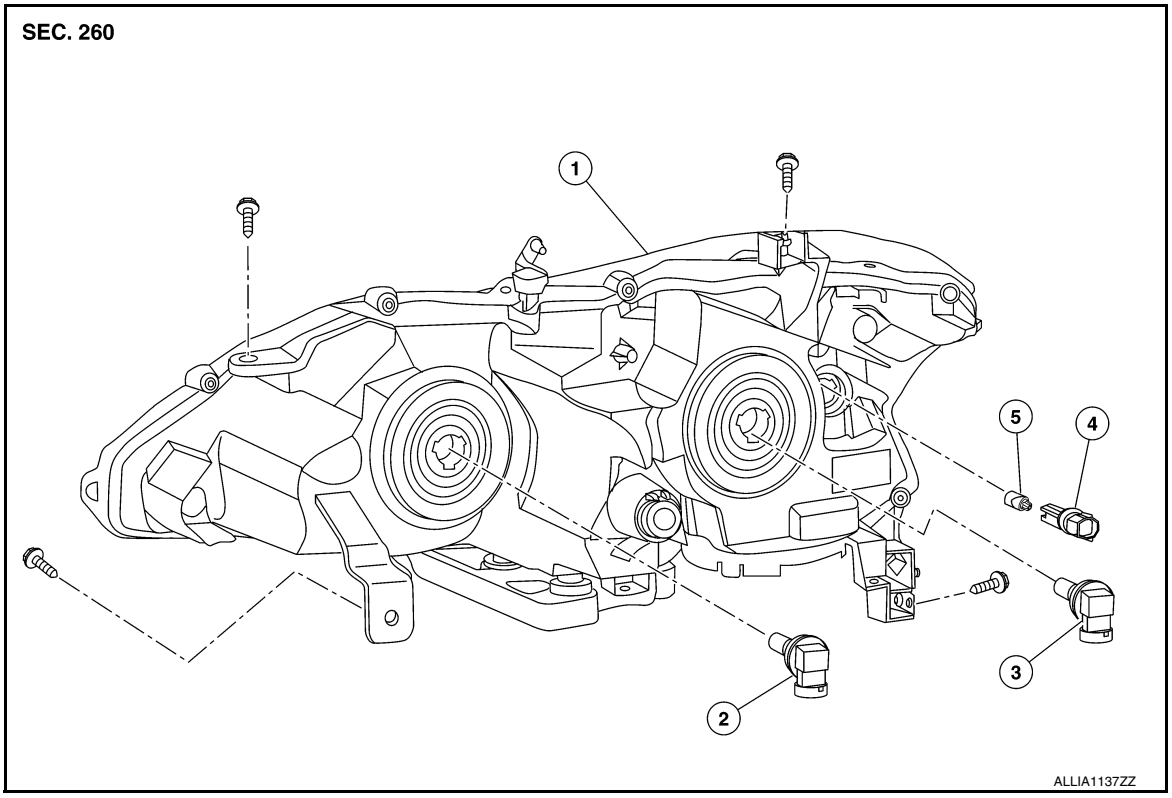
CAUTION:

After installing, be sure to install the bulb socket securely to ensure watertightness.

Exploded View - Halogen

INFOID:0000000009463622

COMBINATION LAMP - HALOGEN



1. Front combination lamp
2. Halogen lamp bulb (high beam)
3. Halogen lamp bulb (low beam)
4. Side marker bulb socket
5. Side marker bulb

Removal and Installation - Halogen

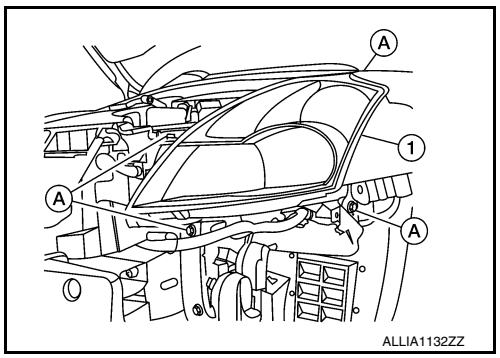
INFOID:0000000009463623

FRONT COMBINATION LAMP - Halogen

Removal

1. Remove the front bumper fascia. Refer to EXT-17, "Removal and Installation".
2. Ensure the lighting switch is OFF.

3. Remove the front combination lamp bolts (A).
4. Pull the front combination lamp (1) forward.
5. Disconnect the harness connectors from the front combination lamp (1).



Installation
Installation is in the reverse order of removal.
NOTE:
After installation perform headlamp aiming adjustment. Refer to EXL-122, "Aiming Adjustment".

Bulb Replacement - Halogen

INFOID:0000000009463624

WARNING:
Do not touch bulb by hand 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.**

HEADLAMP HIGH BEAM

Removal
1. Position the front fender protector aside. Refer to EXT-26, "FENDER PROTECTOR : Removal and Installation".
2. Rotate the headlamp high beam socket counterclockwise and remove from front combination lamp.

Installation
Installation is in the reverse order of removal.
CAUTION:
After installing, be sure to install the bulb socket securely to ensure watertightness.

HEADLAMP LOW BEAM HALOGEN

Removal
1. Position the front fender protector aside. Refer to EXT-26, "FENDER PROTECTOR : Removal and Installation".
2. Rotate the headlamp low beam sockets counterclockwise and remove from front combination lamp.

Installation
Installation is in the reverse order of removal.
CAUTION:
After installing, be sure to install the bulb socket securely to ensure watertightness.

SIDE MARKER LAMP

Removal
1. Position the front fender protector aside. Refer to EXT-26, "FENDER PROTECTOR : Removal and Installation".
2. Rotate the side marker lamp bulb socket counterclockwise and remove.
3. Remove the side marker bulb from the front combination lamp.

Installation
Installation is in the reverse order of removal.
CAUTION:
After installing, be sure to install the bulb socket securely to ensure watertightness.

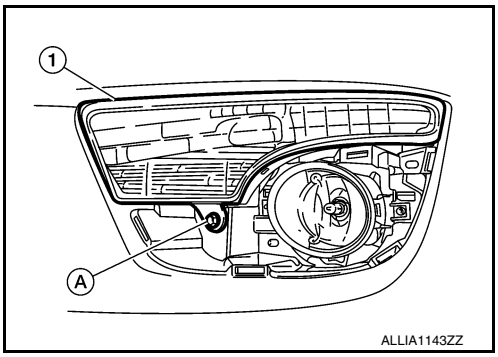
TURN SIGNAL AND HAZARD WARNING LAMPS

Removal and Installation

INFOID:0000000009463625

REMOVAL

1. Remove the front fender protector side cover.
2. Position the fender protector aside. Refer to EXT-26, "FENDER PROTECTOR : Removal and Installation".
3. Disconnect the harness connector from the turn signal and hazard warning lamp.
4. Remove front fog lamp finisher. Refer to EXT-17, "Removal and Installation".
5. Remove the screw (A) from the turn signal and hazard warning lamp (1) and remove.



INSTALLATION

Installation is in the reverse order of removal.

Bulb Replacement

INFOID:0000000009463626

WARNING:

- **Do not touch bulb by hand 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.**

REMOVAL

1. Remove the front fender protector side cover.
2. Position the front fender protector aside. Refer to EXT-26, "FENDER PROTECTOR : Removal and Installation".
3. Disconnect the harness connector from the turn signal and hazard warning lamp.
4. Rotate the turn signal and hazard warning lamp bulb socket counterclockwise and remove it.
5. Remove turn signal and hazard warning lamp bulb from the bulb socket.

Installation

Installation is in the reverse order of removal.

CAUTION:

After installing, be sure to install the bulb socket securely to ensure watertightness.

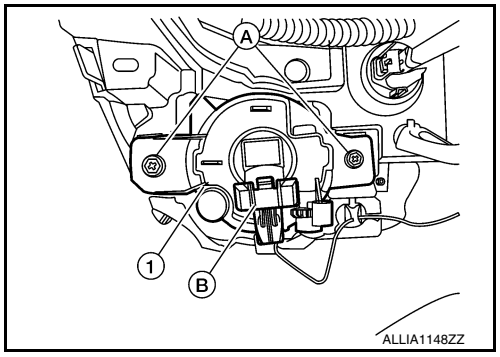
FRONT FOG LAMP

Removal and Installation

INFOID:0000000009463627

REMOVAL

1. Remove the front fender protector side cover.
2. Position the fender protector aside. Refer to EXT-26, "FENDER PROTECTOR : Removal and Installation".
3. Disconnect the harness connector (B) from the front fog lamp (1).
4. Remove the screws (A) and the front fog lamp (1).



INSTALLATION

Installation is in the reverse order of removal.

NOTE:

After installing, perform fog lamp aiming adjustment. Refer to EXL-124, "Aiming Adjustment".

Bulb Replacement

INFOID:0000000009463628

WARNING:

- **Do not touch bulb by hand 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.**

FRONT FOG LAMP BULB

Removal

1. Remove the front fender protector side cover.
2. Position the front fender protector aside. Refer to EXT-26, "FENDER PROTECTOR : Removal and Installation".
3. Disconnect the harness connector from the front fog lamp bulb.
4. Rotate the front fog lamp bulb socket counterclockwise and remove.

Installation

Installation is in the reverse order of removal.

CAUTION:

After installing, be sure to install the bulb socket securely to ensure watertightness.

DAYTIME LIGHT BULB (IF EQUIPPED)

Removal

1. Remove the front fender protector side cover.
2. Position the front fender protector aside. Refer to EXT-26, "FENDER PROTECTOR : Removal and Installation".
3. Disconnect the harness connector from the daytime light lamp.
4. Release the pawls and remove the daytime light lamp bulb.

Installation

Installation is in the reverse order of removal.

CAUTION:
After installing, be sure to install the bulb socket securely to ensure watertightness.

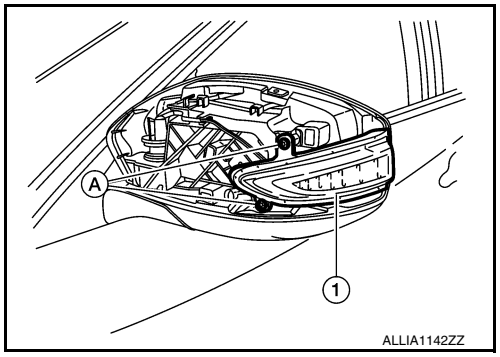
DOOR MIRROR TURN SIGNAL LAMP

Removal and Installation

INFOID:0000000009463629

REMOVAL

1. Remove the door mirror rear finisher. Refer to MIR-20, "Removal and Installation".
2. Remove the screws (A) and door mirror side turn signal lamp (1).



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

INSTALLATION

Installation is in the reverse order of removal.

Bulb Replacement

INFOID:0000000009463630

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-133, "Removal and Installation".

HIGH-MOUNTED STOP LAMP

Removal and Installation

INFOID:0000000009463631

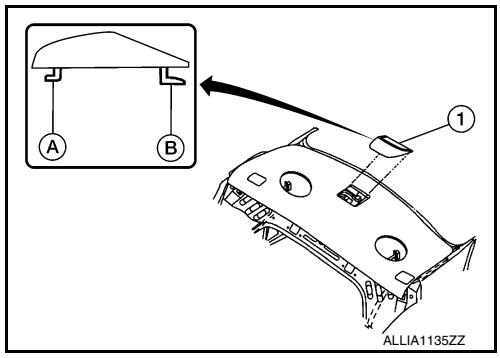
HIGH-MOUNTED STOP LAMP - WITH REAR SPOILER

The high-mount stop lamp is integrated into the rear spoiler and is serviced as an assembly. Refer to EXT-38, "Removal and Installation".

HIGH-MOUNTED STOP LAMP - WITH PARCEL SHELF

Removal

1. Slide high-mounted stop lamp (1) rearward on parcel shelf to provide clearance for front tabs (A).
2. Lift front of lamp assembly up and pull forward to provide clearance for rear tabs (B).



3. Disconnect the harness connector from the high-mounted stop lamp and remove.

Installation

Installation is in the reverse order of removal.

Bulb Replacement

INFOID:0000000009463632

HIGH-MOUNTED STOP LAMP - WITH REAR SPOILER

The high-mounted stop lamp bulb is integrated into the rear spoiler and is serviced as an assembly. Refer to EXT-38, "Removal and Installation".

HIGH-MOUNTED STOP LAMP - WITH PARCEL SHELF

The high-mounted stop lamp bulb is integrated into the high-mounted stop lamp and is serviced as an assembly. Refer to EXL-134, "Removal and Installation".

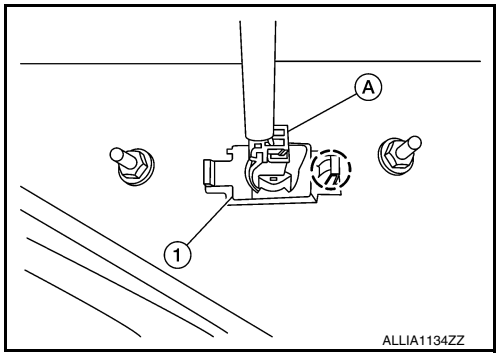
LICENSE PLATE LAMP

Removal and Installation

INFOID:0000000009463633

REMOVAL

1. Remove the license lamp finisher. Refer to EXT-37, "Removal and Installation".
2. Disconnect the harness connector (A) from the license plate lamp (1).
3. Release pawl and remove.
   : Pawl



INSTALLATION

Installation is in the reverse order of removal.

Bulb Replacement

INFOID:0000000009463634

WARNING:

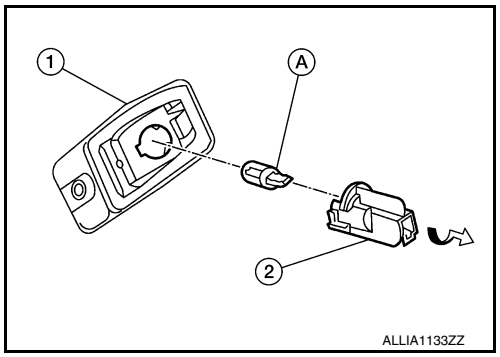
Do not touch bulb while it is lit or right after being turned off. Burning may result.

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.**

REMOVAL

1. Position trunk lid finisher (if equipped) aside. Refer to INT-33, "Exploded View".
2. Rotate license plate lamp bulb socket (2) counterclockwise and remove from license plate lamp (1).
3. Remove license plate lamp bulb (A) from license plate lamp bulb socket (2).



INSTALLATION

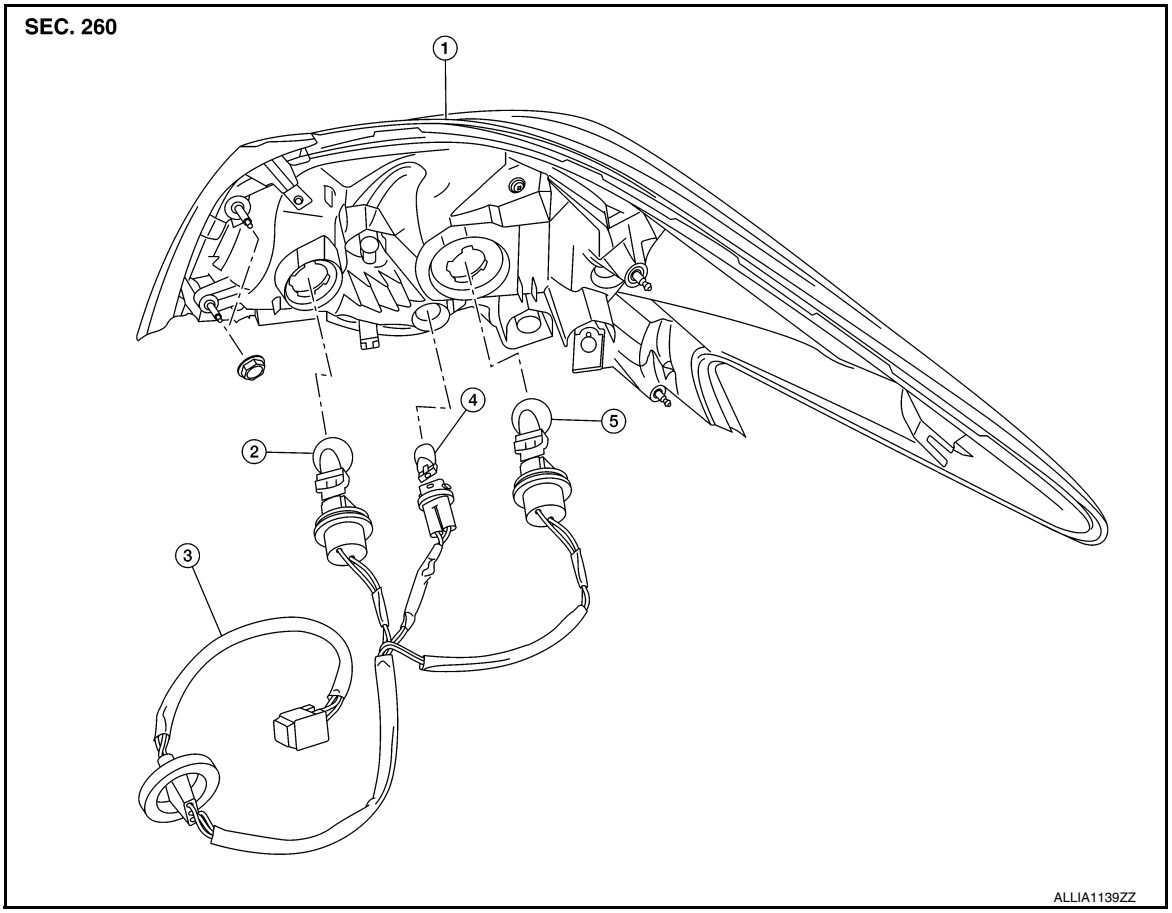
Installation is in the reverse order of removal.

REAR COMBINATION LAMP

Exploded View

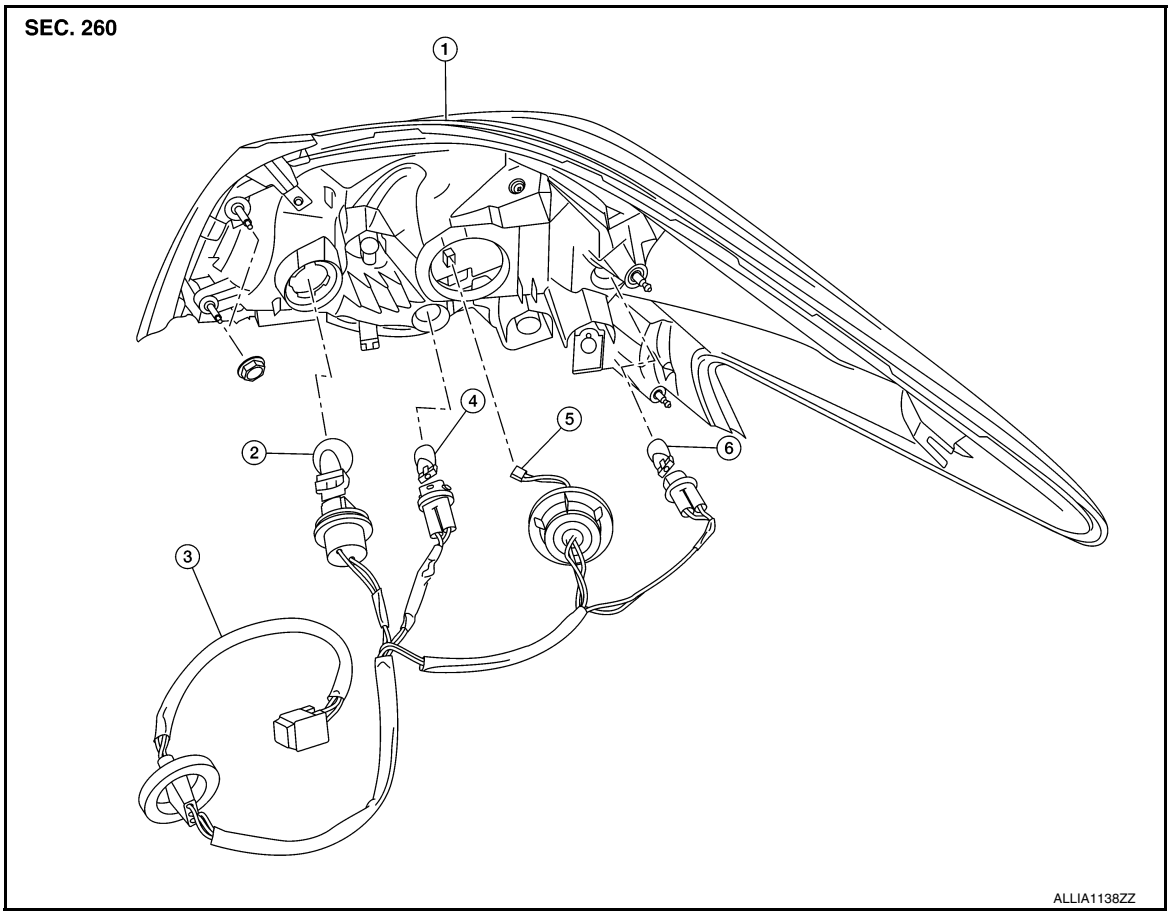
INFOID:0000000009463635

REAR COMBINATION LAMP - NON LED TYPE



1. Rear combination lamp
2. Rear turn signal lamp bulb
3. Rear combination lamp harness
4. Back-up lamp bulb
5. Stop/Tail lamp bulb

REAR COMBINATION LAMP - LED TYPE



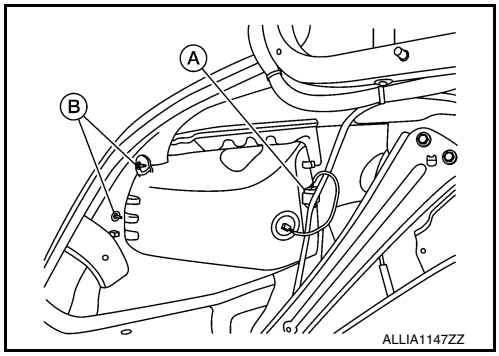
1. Rear combination lamp
2. Rear turn signal lamp bulb
3. Rear combination lamp harness
4. Back-up lamp bulb
5. LED lamp harness connector
6. Side marker lamp bulb

Removal and Installation

INFOID:0000000009463636

Removal

1. Remove trunk rear finisher. Refer to INT-33, "TRUNK LID FINISHER : Removal and Installation".
2. Partially remove trunk side finisher. Refer to INT-34, "TRUNK SIDE FINISHER : Removal and Installation".
3. Remove the rear combination lamp nuts (B).
4. Disconnect the harness connector (A).



5. Pull the rear combination lamp rearward and remove.

Installation

Installation is the reverse order of removal.

Bulb Replacement

INFOID:0000000009463637

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.**

REAR TURN SIGNAL LAMP BULB

Removal

1. Remove the rear combination lamp. Refer to EXL-137, "Removal and Installation".
2. Rotate the rear turn signal lamp bulb socket counterclockwise and remove.
3. Remove the rear turn signal lamp bulb from the bulb socket.

Installation
Installation is in the reverse order of removal.
CAUTION:
After installing, be sure to install the bulb socket securely to ensure watertightness.

STOP/TAIL LAMP BULB (IF EQUIPPED)

Removal

1. Remove the rear combination lamp. Refer to EXL-137, "Removal and Installation".
2. Rotate the stop/tail lamp bulb socket counterclockwise and remove.
3. Remove the stop/tail lamp bulb from the bulb socket.

Installation
Installation is in the reverse order of removal.
CAUTION:
After installing, be sure to install the bulb socket securely to ensure watertightness.

STOP/TAIL LAMP LED (IF EQUIPPED)

The stop/tail lamp LED is integrated into the rear combination lamp and is serviced as an assembly. Refer to EXL-137, "Removal and Installation".

BACK-UP LAMP BULB

Removal

1. Remove the rear combination lamp. Refer to EXL-137, "Removal and Installation".
2. Rotate the back-up lamp bulb socket counterclockwise and remove.
3. Remove the back-up lamp bulb from the bulb socket.

Installation
Installation is in the reverse order of removal.
CAUTION:
After installing, be sure to install the bulb socket securely to ensure watertightness.

SIDE MARKER LAMP BULB

Removal

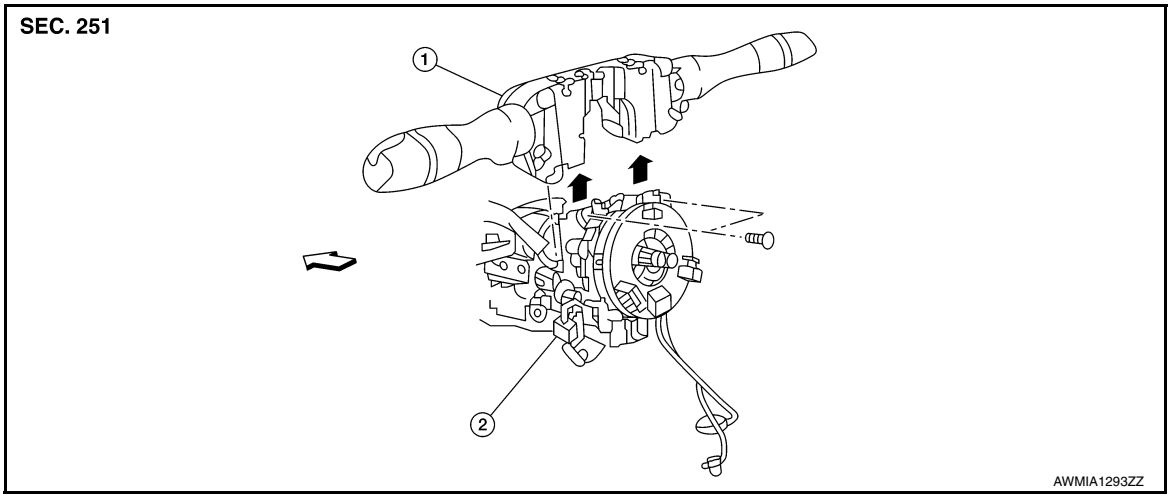
1. Remove the rear combination lamp. Refer to EXL-137, "Removal and Installation".
2. Rotate the side marker lamp bulb socket counterclockwise and remove.
3. Remove the side marker lamp bulb from the bulb socket.

Installation
Installation is in the reverse order of removal.
CAUTION:
After installing, be sure to install the bulb socket securely to ensure watertightness.

COMBINATION SWITCH

Exploded View

INFOID:0000000009463638



1. Combination switch
2. Combination switch harness connector
⇦ Front

NOTE:
Shown with the steering wheel removed for clarity only.

Removal and Installation

INFOID:0000000009463639

REMOVAL

CAUTION:

- **Before servicing, turn the ignition switch OFF, disconnect both battery terminals and wait at least three minutes.**
- **Do not use air tools or electric tools for servicing.**

1. Disconnect both the negative and positive battery terminals, then wait at least three minutes. Refer to PG-73, "Removal and Installation (Battery)".
2. Remove the steering column covers. Refer to IP-17, "Removal and Installation".
3. Rotate steering wheel clockwise to access first combination switch bolt and remove.
4. Rotate steering wheel counter-clockwise to access second combination switch bolt and remove.
5. Disconnect the harness connector from the combination switch and remove.

INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

- **After the work is completed, make sure no system malfunction is detected by air bag warning lamp.**
- **In case a malfunction is detected by the air bag warning lamp, reset with the self-diagnosis function and delete the memory with CONSULT.**
- **If a malfunction is still detected after the above operation, perform self-diagnosis to repair malfunctions. Refer to SRC-42, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".**

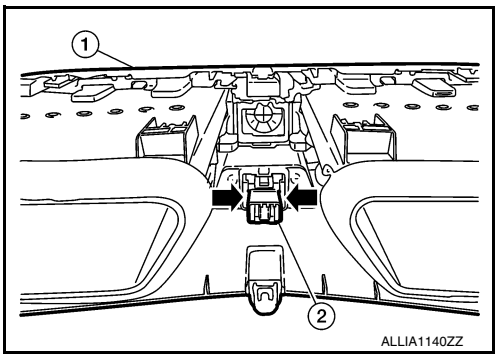
HAZARD SWITCH

Removal and Installation

INFOID:0000000009463640

REMOVAL

1. Remove cluster lid C (1). Refer to IP-20, "Cluster Lid C".
2. Release pawls at (⬅) and remove hazard switch (2).



INSTALLATION

Installation is in the reverse order of removal.

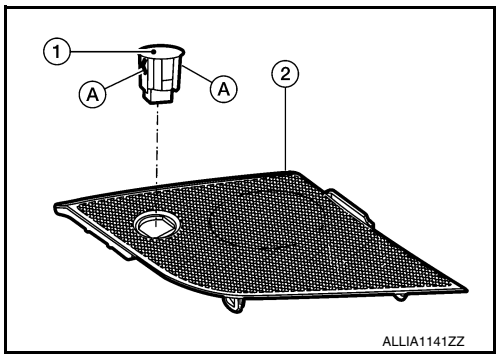
OPTICAL SENSOR

Removal and Installation

INFOID:0000000009463641

REMOVAL

1. Release the front speaker grille RH (2) using a suitable tool.
2. Disconnect the harness connector from the optical sensor (1).
3. Release pawls (A) and remove the optical sensor.



INSTALLATION

Installation is in the reverse order of removal.

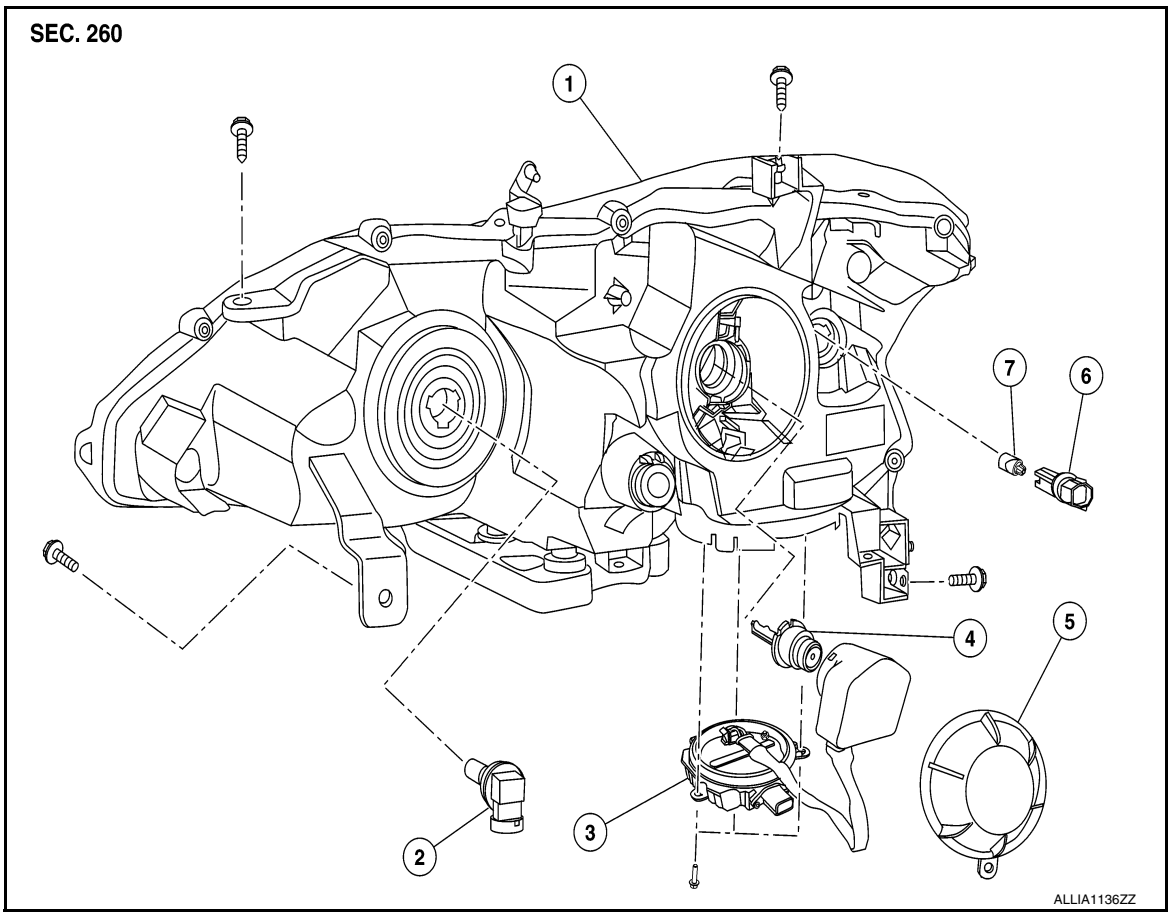
UNIT DISASSEMBLY AND ASSEMBLY

FRONT COMBINATION LAMP

Exploded View - Xenon

INFOID:0000000009463642

FRONT COMBINATION LAMP - XENON



1. Front combination lamp
2. Halogen lamp bulb (high beam)
3. Ballast
4. Xenon lamp bulb
5. Plastic cover
6. Side marker bulb socket
7. Side marker lamp bulb

Disassembly and Assembly - Xenon

INFOID:0000000009463643

FRONT COMBINATION LAMP - XENON

WARNING:

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

CAUTION:

- **Disconnect the battery negative terminal or remove the fuse.**
- **HID control unit and xenon bulb socket cannot be disassembled.**
- **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-126, "Removal and Installation - Xenon".
2. Rotate plastic cover counterclockwise and remove from the front combination lamp.
3. Rotate xenon bulb socket counterclockwise and remove.
4. Remove retaining spring and remove xenon bulb from the front combination lamp.

5. Rotate the halogen lamp bulb (high beam) counterclockwise and remove.
6. Rotate the side marker bulb socket counterclockwise and remove.
7. Remove the side marker lamp bulb from the sidemarker bulb socket.

Assembly

Assembly is in the reverse order of disassembly.

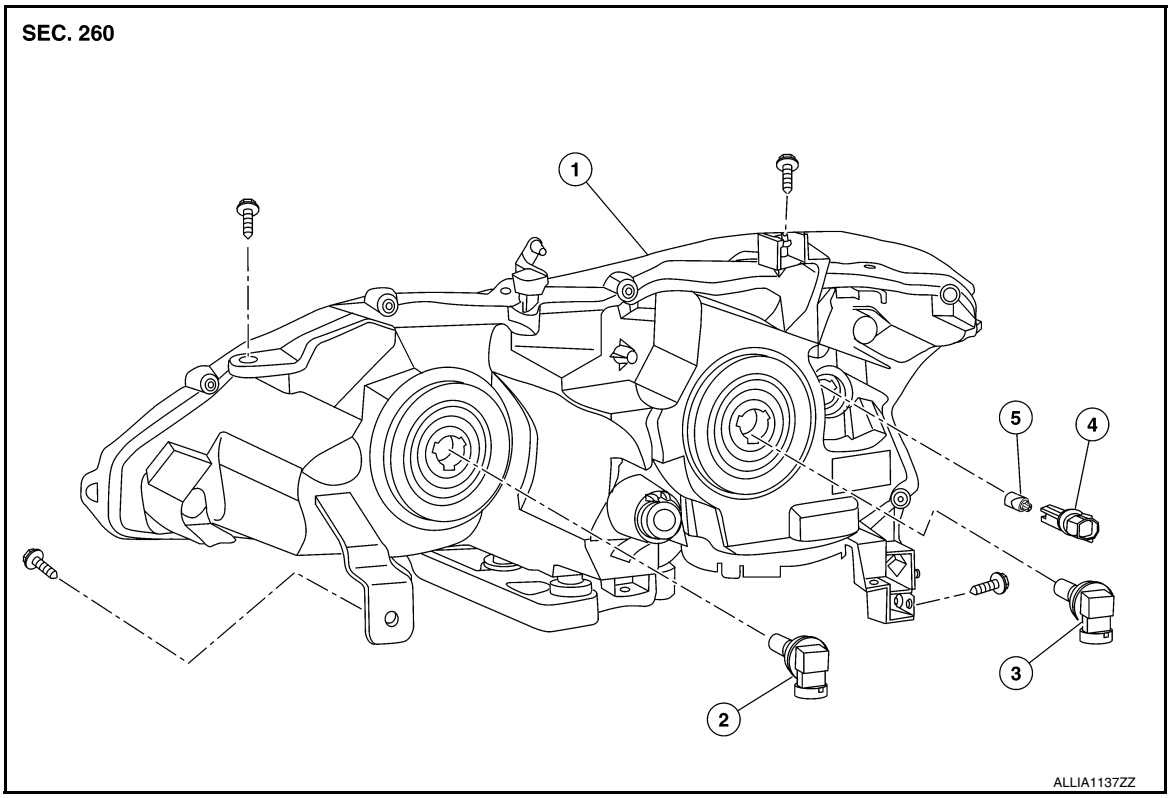
CAUTION:

- **After installing the xenon bulb, be sure to install plastic cover securely to ensure watertightness.**
- **After installing, be sure to install the bulb sockets securely to ensure watertightness.**

Exploded View - Halogen

INFOID:0000000009463644

FRONT COMBINATION LAMP - HALOGEN



1. Front combination lamp
2. Halogen lamp bulb (high beam)
3. Halogen lamp bulb (low beam)
4. Side marker bulb socket
5. Side marker bulb

Disassembly and Assembly - Halogen

INFOID:0000000009463645

FRONT COMBINATION LAMP - HALOGEN

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-128, "Removal and Installation - Halogen".
2. Rotate the halogen lamp bulb (low beam) counterclockwise and remove.
3. Rotate the halogen lamp bulb (high beam) counterclockwise and remove.
4. Rotate the side marker bulb socket counterclockwise and remove.
5. Remove the side marker bulb from the side marker bulb socket.

Assembly

Assembly is in the reverse order of disassembly.

CAUTION:

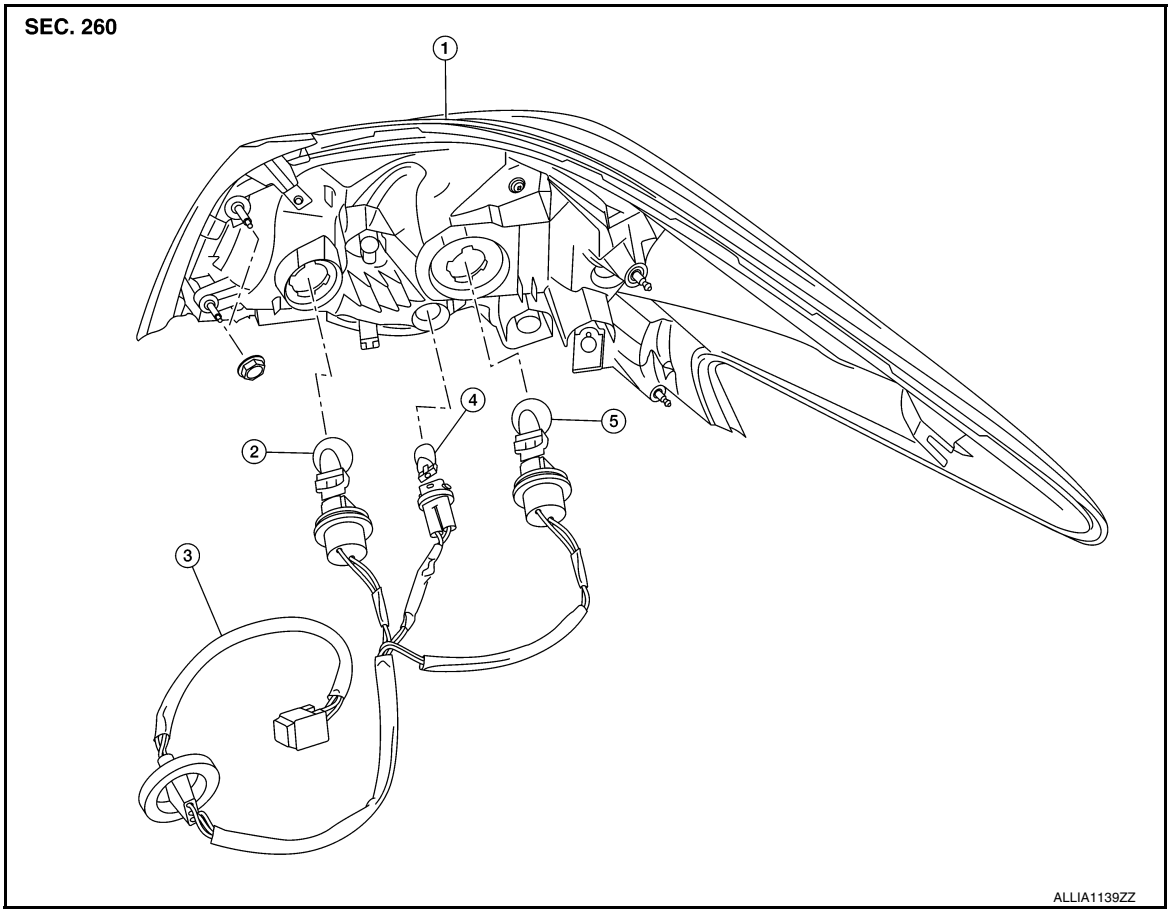
After installing, be sure to install the bulb sockets securely to ensure watertightness.

REAR COMBINATION LAMP

Exploded View - Non LED

INFOID:0000000009463646

REAR COMBINATION LAMP - NON LED



1. Rear combination lamp
2. Rear turn signal lamp bulb
3. Rear combination lamp harness
4. Back-up lamp bulb
5. Stop/Tail lamp bulb

Disassembly and Assembly - Non LED

INFOID:0000000009463647

REAR COMBINATION LAMP - NON LED

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-137, "Removal and Installation".
2. Rotate rear turn signal lamp bulb socket counterclockwise to remove from rear combination lamp.
3. Remove the rear turn signal lamp bulb from bulb socket.
4. Rotate back-up lamp bulb socket counterclockwise to remove from rear combination lamp.
5. Remove the back-up lamp bulb from bulb socket.
6. Rotate stop/tail lamp bulb socket counterclockwise to remove from rear combination lamp.
7. Remove the stop/tail lamp bulb from bulb socket.

Assembly

Assembly is in the reverse order of disassembly.

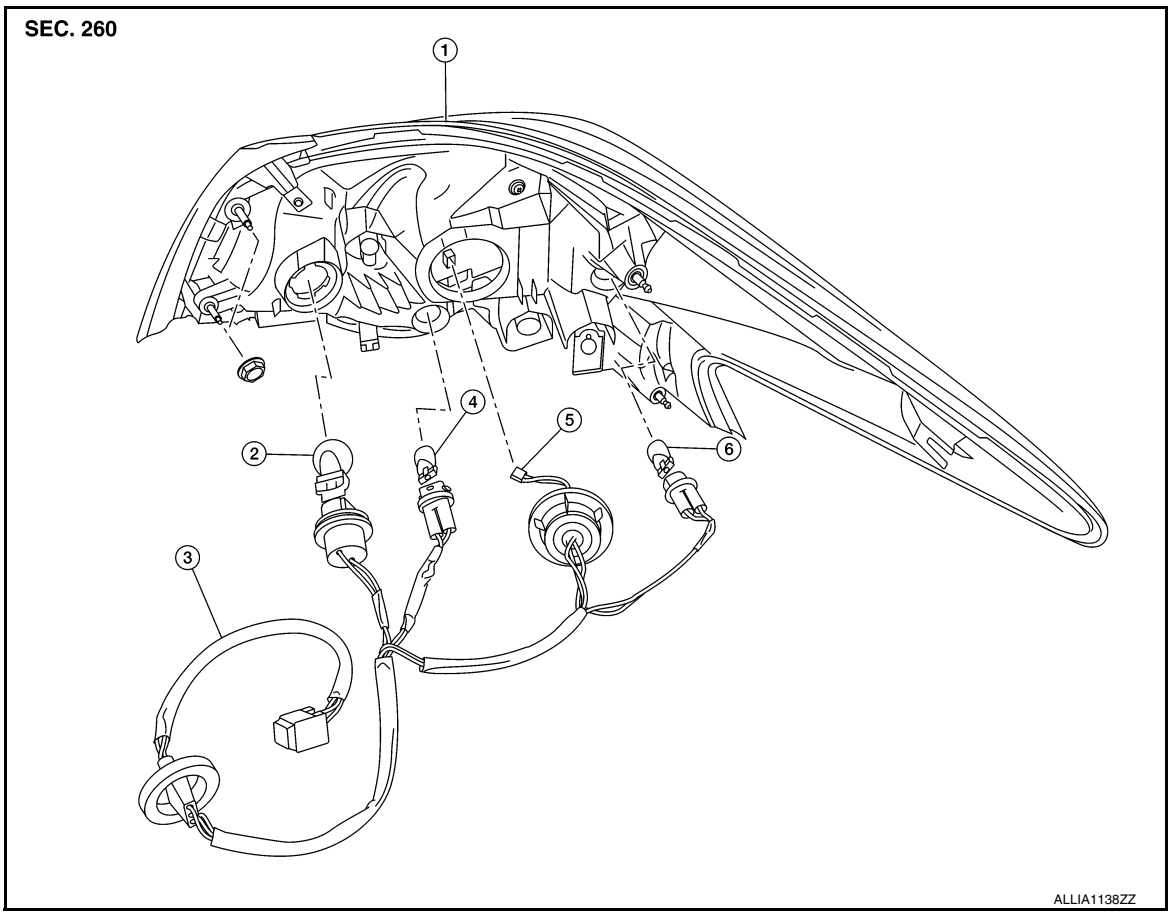
CAUTION:

After installing, be sure to install the bulb sockets securely to ensure watertightness.

Exploded View - LED

INFOID:0000000009463648

REAR COMBINATION LAMP - LED



1. Rear combination lamp
2. Rear turn signal lamp bulb
3. Rear combination lamp harness
4. Back-up lamp bulb
5. LED lamp harness connector
6. Side marker lamp bulb

Disassembly and Assembly - LED

INFOID:0000000009463649

REAR COMBINATION LAMP - LED

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-137, "Removal and Installation".
2. Rotate rear turn signal lamp bulb socket counterclockwise to remove from rear combination lamp.
3. Remove the rear turn signal lamp bulb from bulb socket.
4. Rotate back-up lamp bulb socket counterclockwise to remove from rear combination lamp.
5. Remove the back-up lamp bulb from bulb socket.
6. Disconnect the harness connector from the LED lamp.
7. Rotate side marker lamp bulb socket counterclockwise to remove from rear combination lamp.

8. Remove the side marker 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 Specifications

INFOID:0000000009463650

Item		Wattage (W)*
Front combination lamp	Low beam (halogen)	55
	Low beam (xenon)	35
	High beam	65
	Side marker lamp	5
Turn signal/Park lamp		28/8 (amber)
Door mirror side turn signal lamp (if equipped)		LED
Rear combination lamp	Stop/Tail lamp	21/5
		LED
	Turn signal lamp	27
	Back-up lamp	16
	Side marker lamp	5
Fog lamp (if equipped)		55
Daytime running lamp built-in fog lamp (Canada only)		19
License plate lamp		5
High-mounted stop lamp	Parcel shelf mounted	LED
	Rear spoiler mounted	LED

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