SECTION EXL
EXTERIOR LIGHTING SYSTEM

CONTENTS

LED HEADLAMP

PRECAUTION

PRECAUTIONS

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

INFOID:0000000012591749

The Supplemental Restraint System such as “AIR BAG” and “SEAT BELT PRE-TENSIONER”, used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

WARNING:

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

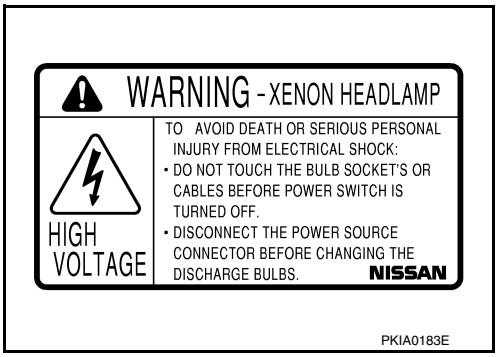
PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

WARNING:

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

General precautions for service operations

INFOID:0000000012591750



- 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

INFOID:0000000012591751

- 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.

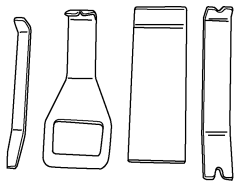
PREPARATION

PREPARATION

Special Service Tool

INFOID:0000000012591752

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

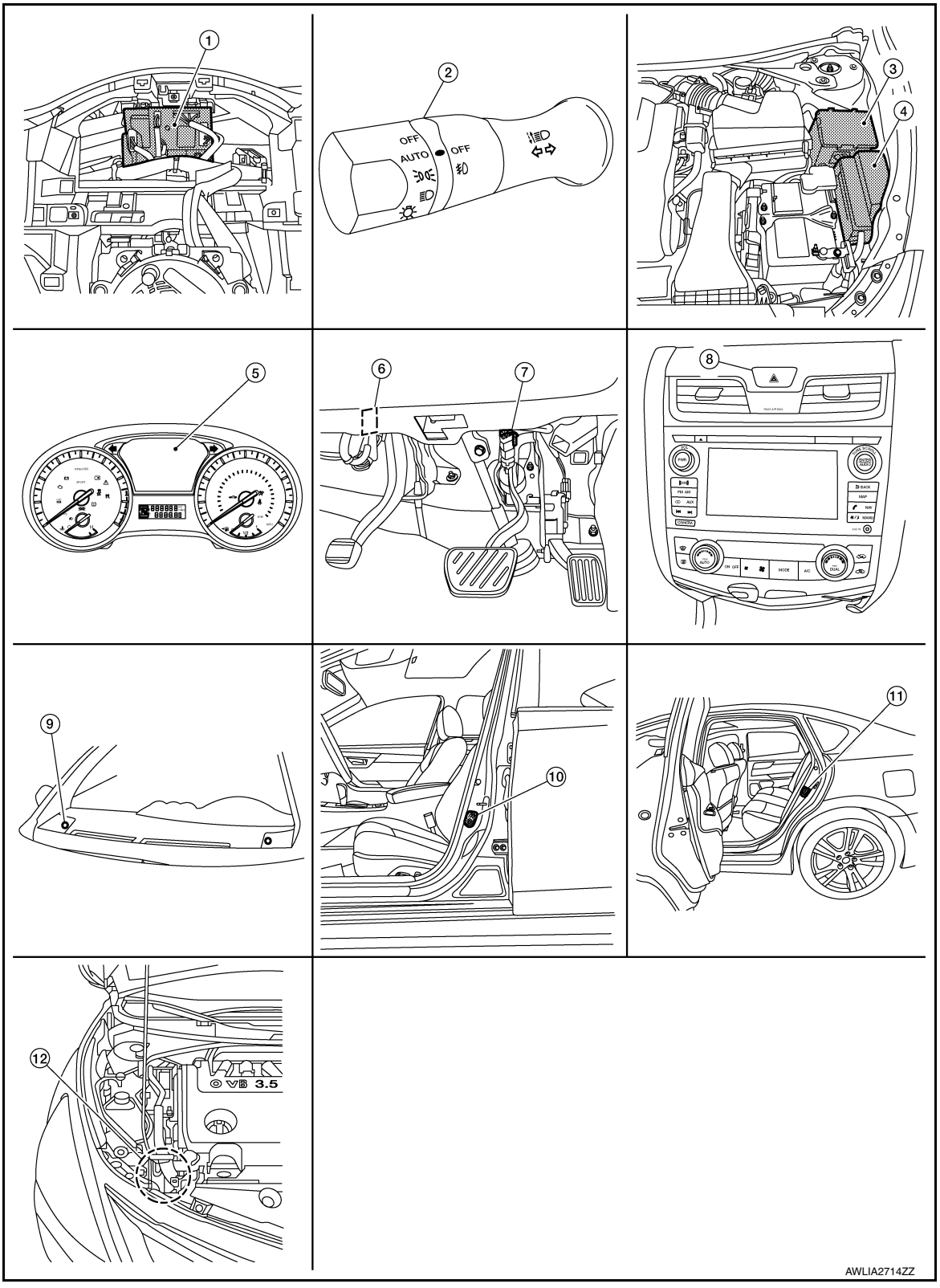
Tool number (TechMate No.) Tool name	Description
— (J-46534) Trim Tool Set  AWJIA0483ZZ	Removing trim components

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000012591753



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 running light relay (if equipped)

Component Description

INFOID:0000000012591754

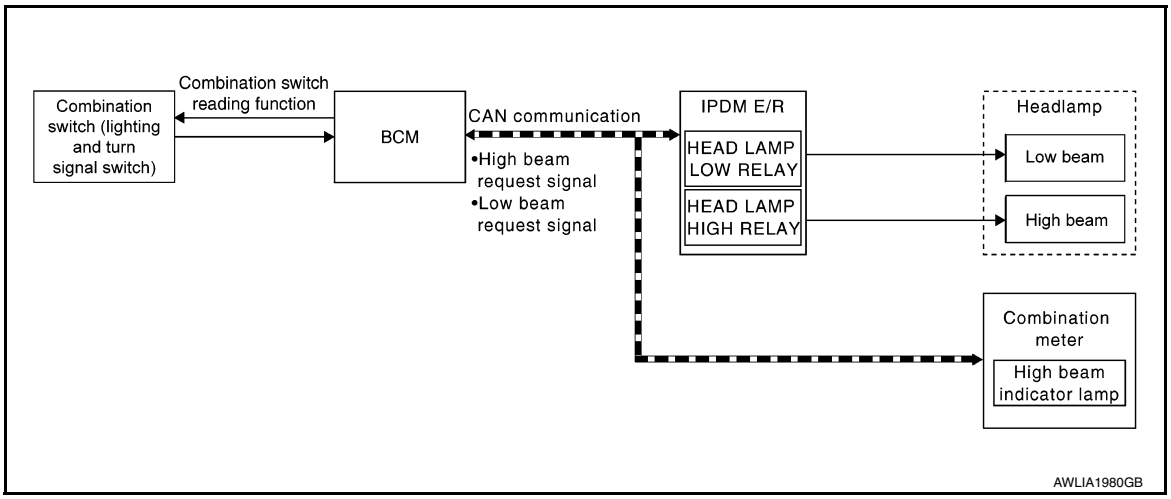
Part	Description
BCM	Controls the exterior lighting system.
Combination switch (Lighting & turn signal switch)	Refer to BCS-9, "COMBINATION SWITCH READING SYSTEM : System Description".
IPDM E/R	Controls the integrated relays and supplies voltage to the load according to the request from the BCM via CAN 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 running light relay (if equipped)	Sends power to the daytime running 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 daytime running light system.
Hazard switch	Inputs the hazard switch signal to BCM.

SYSTEM

HEADLAMP SYSTEM

HEADLAMP SYSTEM : System Diagram

INFOID:0000000012591755



HEADLAMP SYSTEM : System Description

INFOID:0000000012591756

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

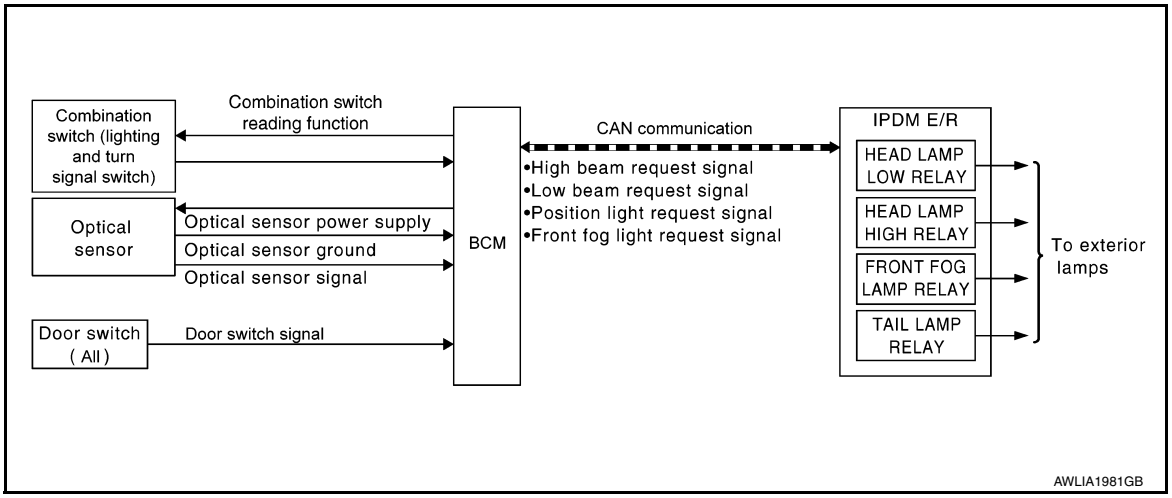
With the combination switch (lighting and turn signal switch) in the 2nd position and the ignition switch is turned from ON or ACC to OFF, the battery saver feature is activated.

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:0000000012591757



AUTO LIGHT SYSTEM : System Description

INFOID:0000000012591758

- 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.

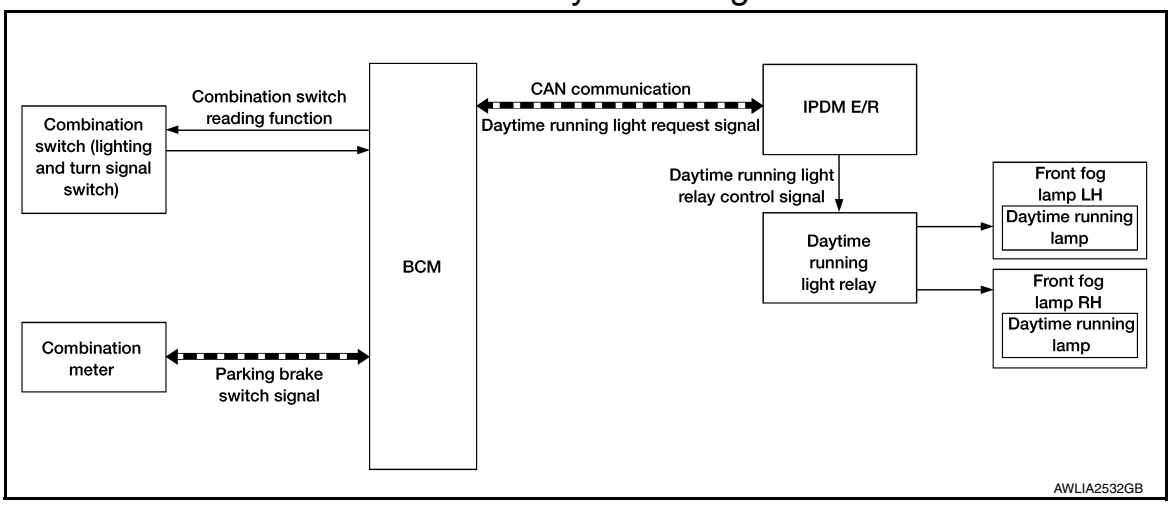
OUTLINE

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-20, "HEADLAMP : CONSULT Function (BCM - HEADLAMP)".

DAYTIME RUNNING LIGHT SYSTEM

DAYTIME RUNNING LIGHT SYSTEM : System Diagram

INFOID:0000000012591759



DAYTIME RUNNING LIGHT SYSTEM : System Description

INFOID:0000000012591760

System Description

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

the daytime running lights will turn OFF. The daytime running lights will turn ON when the parking brake is released.

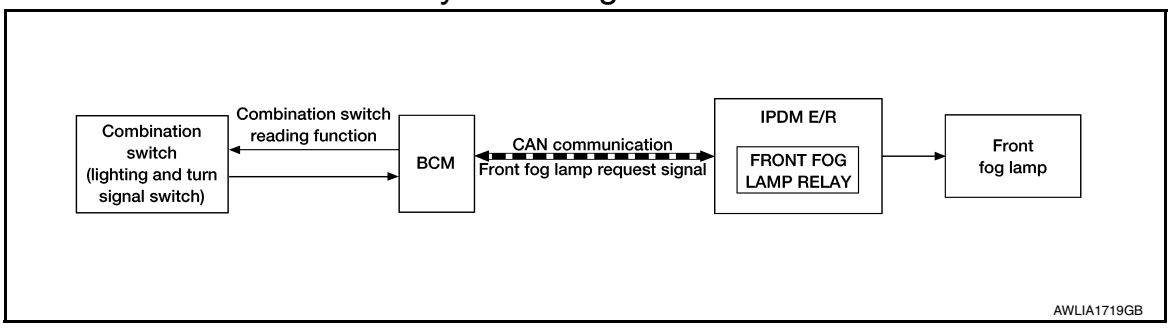
OPERATION

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 running light system. The BCM sends a daytime running light request to the IPDM E/R via the CAN communication lines. The IPDM E/R grounds the daytime running light relay which in turn, provides power to the daytime running lights.

FRONT FOG LAMP SYSTEM

FRONT FOG LAMP SYSTEM : System Diagram

INFOID:0000000012591761



FRONT FOG LAMP SYSTEM : System Description

INFOID:0000000012591762

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.

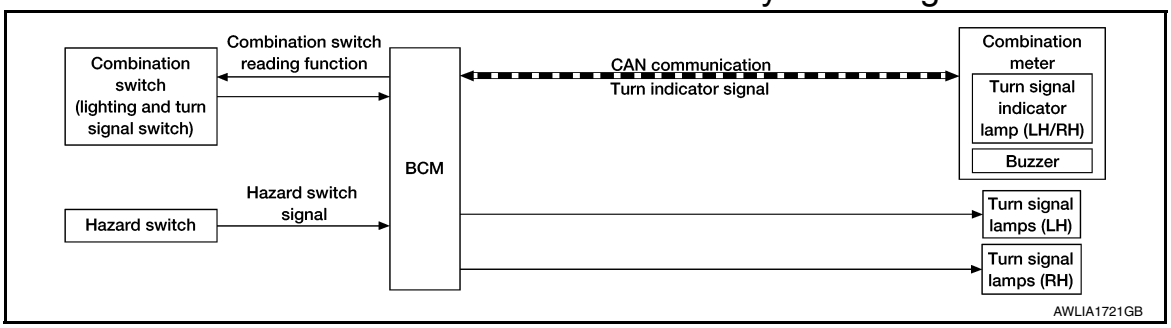
FRONT FOG LAMP OPERATION

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:0000000012591763



TURN SIGNAL AND HAZARD WARNING LAMPS : System Description

INFOID:0000000012591764

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

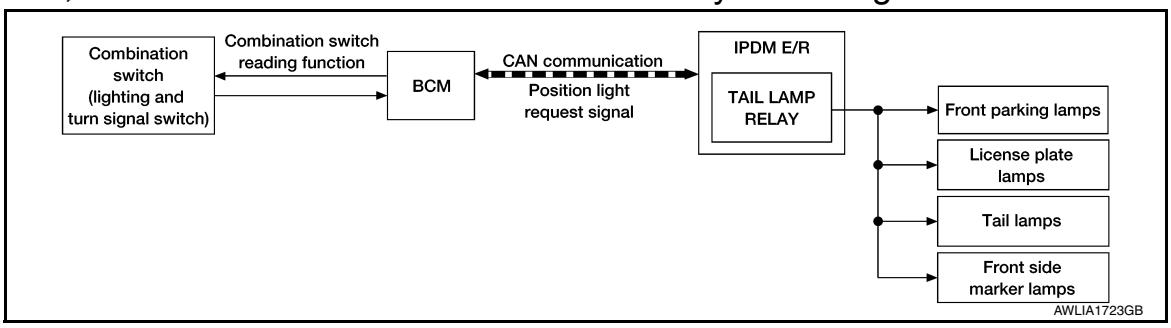
When the hazard switch is in the ON position, the BCM receives input requesting the hazard lamps illuminate. The BCM controls the turn signal power to both the LH and RH turn signal lamps. The BCM sends a hazard

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:0000000012591765



PARKING, LICENSE PLATE AND TAIL LAMPS : System Description

INFOID:0000000012591766

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.

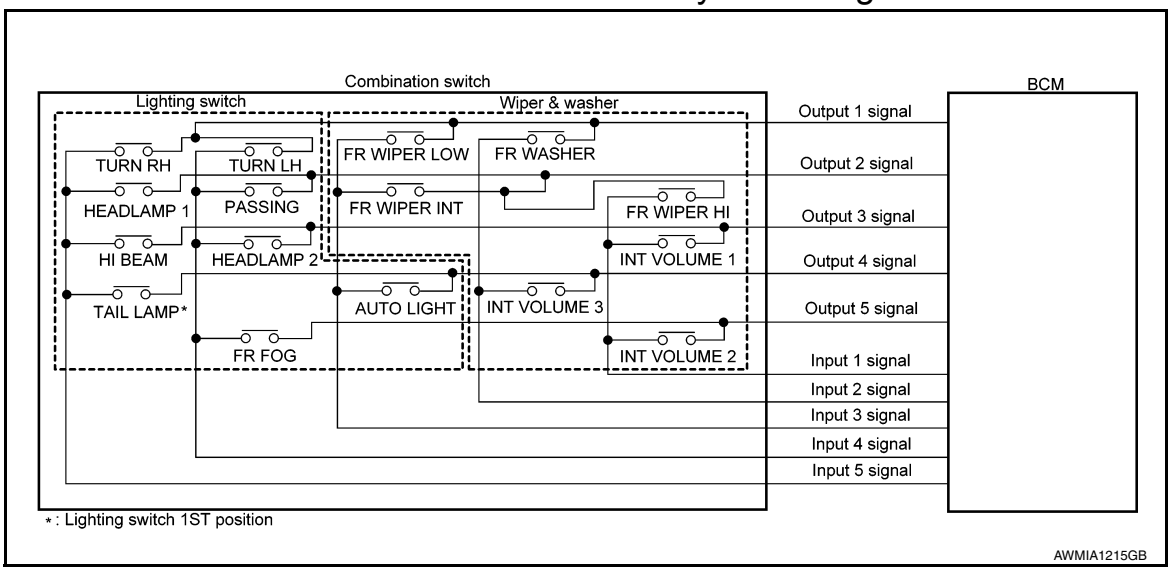
EXTERIOR LAMP BATTERY SAVER CONTROL

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

INFOID:0000000012866006



COMBINATION SWITCH READING SYSTEM : System Description

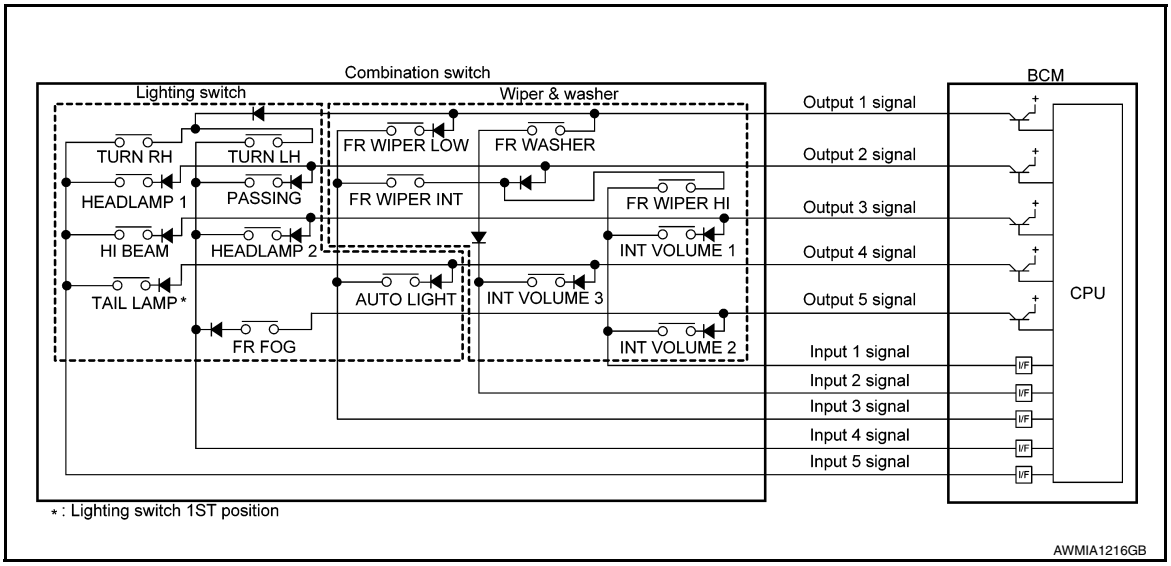
INFOID:0000000012866007

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



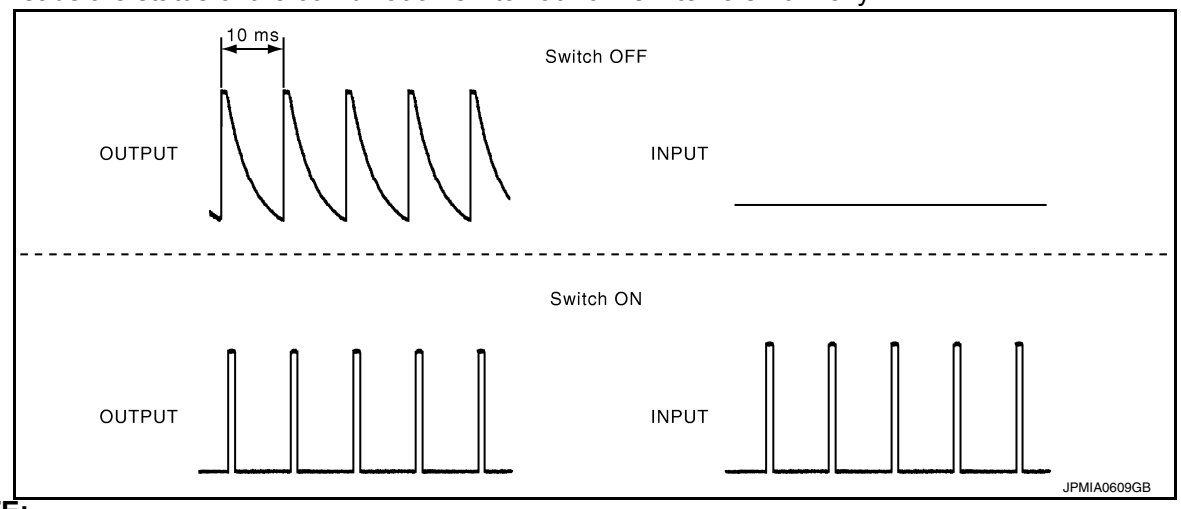
Combination switch INPUT-OUTPUT system list

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

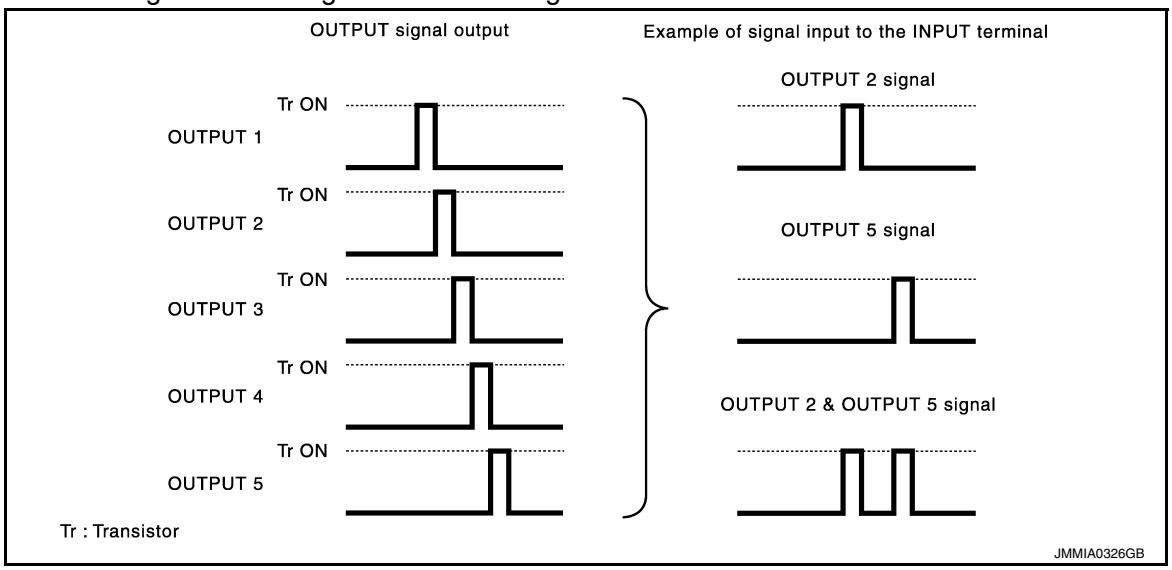
- BCM reads the status of the combination switch at 10 ms intervals normally.



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.

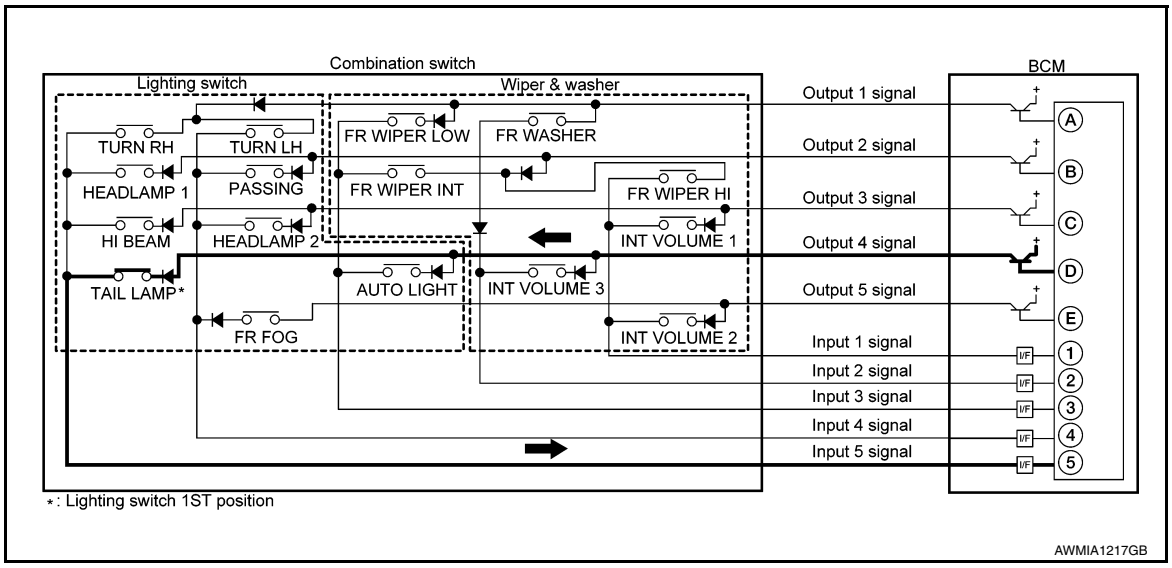


Operation Example

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

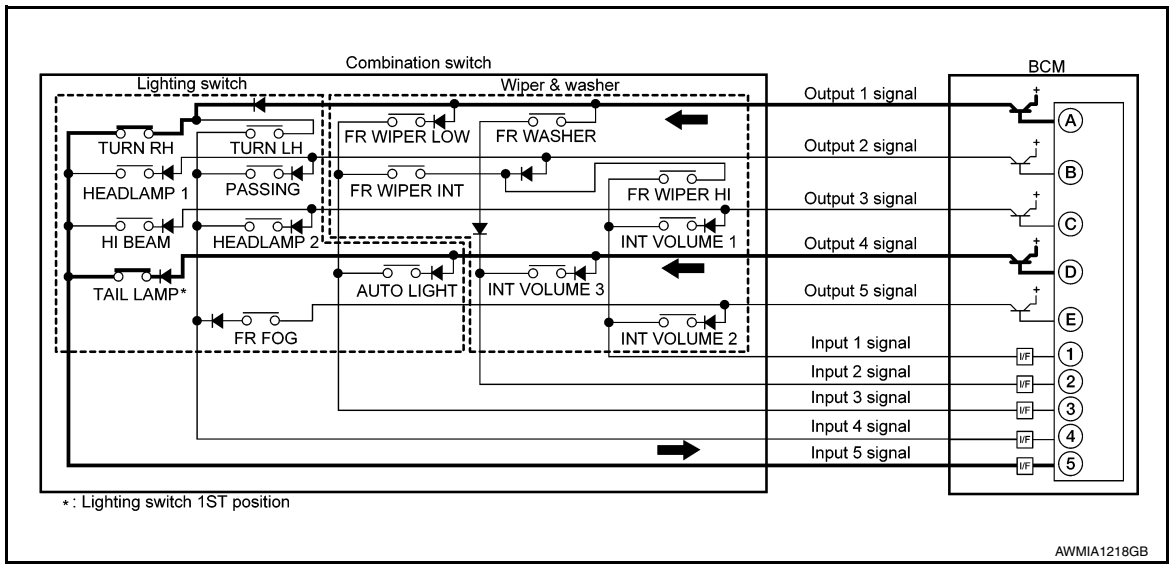
- The circuit between OUTPUT 4 and INPUT 5 is formed when the TAIL LAMP switch is turned ON.



- 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
6	OFF	ON	ON
7	OFF	ON	OFF

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

INFOID:0000000012866008

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

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

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

SYSTEM APPLICATION
BCM can perform the following functions.

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

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

HEADLAMP

HEADLAMP : CONSULT Function (BCM - HEADLAMP)

INFOID:0000000012866009

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.
OPTICAL SENSOR [On/Off]	Indicates condition of optical sensor.

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:0000000012866010

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 unlock signal from Intelligent Key.
RKE-PANIC [On/Off]	Indicates condition of panic alarm signal from Intelligent Key.

ACTIVE TEST

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

WORK SUPPORT

Support Item	Setting	Description
3-TIME FLASHER SETTING	On	3-Time flasher setting ON.
	Off*	3-Time flasher setting OFF.

* : Initial setting

COMB SW

COMB SW : CONSULT Function (BCM - COMB SW)

INFOID:0000000012866011

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:0000000012866012

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.

Monitor Item [Unit]	Description
DOOR SW-RR [On/Off]	Indicates condition of rear door switch RH.
DOOR SW-RL [On/Off]	Indicates condition of rear door switch LH.
DOOR SW-BK [On/Off]	Indicates condition of trunk switch.
CDL LOCK SW [On/Off]	Indicates condition of lock signal from door lock and unlock switch.
CDL UNLOCK SW [On/Off]	Indicates condition of unlock signal from door lock and unlock switch.
KEY CYL LK-SW [On/Off]	Indicates condition of lock signal from door key cylinder switch.
KEY CYL UN-SW [On/Off]	Indicates condition of unlock signal from door key cylinder switch.
TRNK/HAT MNTR [On/Off]	Indicates condition of trunk room lamp switch.
RKE-LOCK [On/Off]	Indicates condition of lock signal from Intelligent Key.
RKE-UNLOCK [On/Off]	Indicates condition of unlock signal from Intelligent Key.

ACTIVE TEST

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

DIAGNOSIS SYSTEM (IPDM E/R)

Diagnosis Description

INFOID:0000000012866013

AUTO ACTIVE TEST

Description

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

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

Operation Procedure

CAUTION:

Do not start the engine.

NOTE:

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

NOTE:

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

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

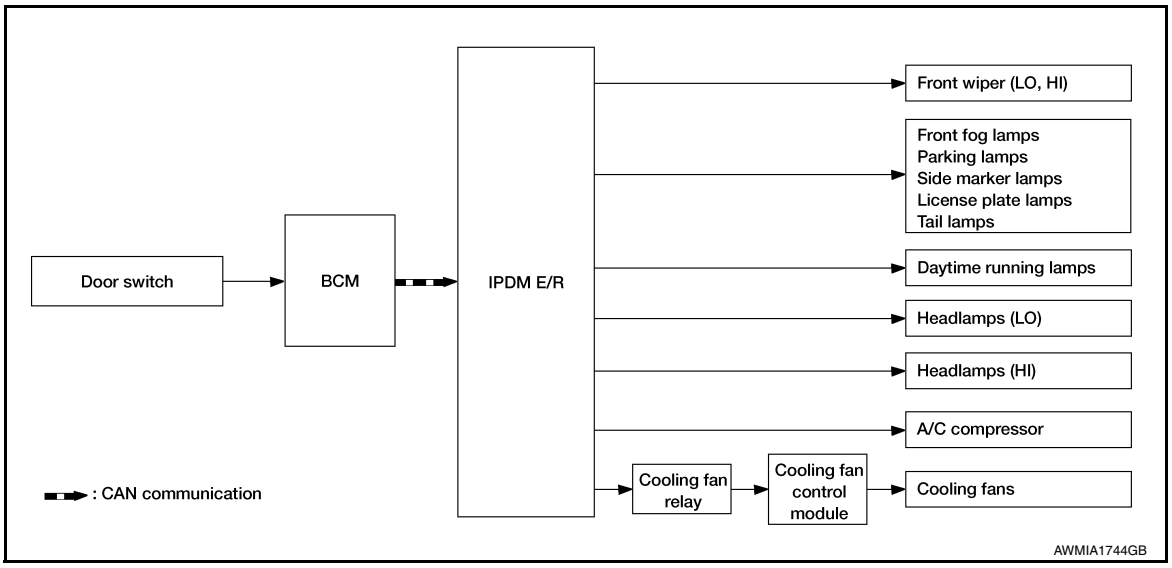
Inspection in Auto Active Test Mode

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

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

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

Concept of auto active test



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

Diagnosis chart in auto active test mode

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

CONSULT Function (IPDM E/R)

INFOID:0000000012866014

CAUTION:

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

APPLICATION ITEM

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

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

ECU IDENTIFICATION

The IPDM E/R part number is displayed.

SELF DIAGNOSTIC RESULT

Refer to PCS-21, "DTC Index".

DATA MONITOR

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

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

ACTIVE TEST

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

CAN DIAG SUPPORT MNTR

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

ECU DIAGNOSIS INFORMATION

BCM, IPDM E/R

List of ECU Reference

INFOID:0000000012591776

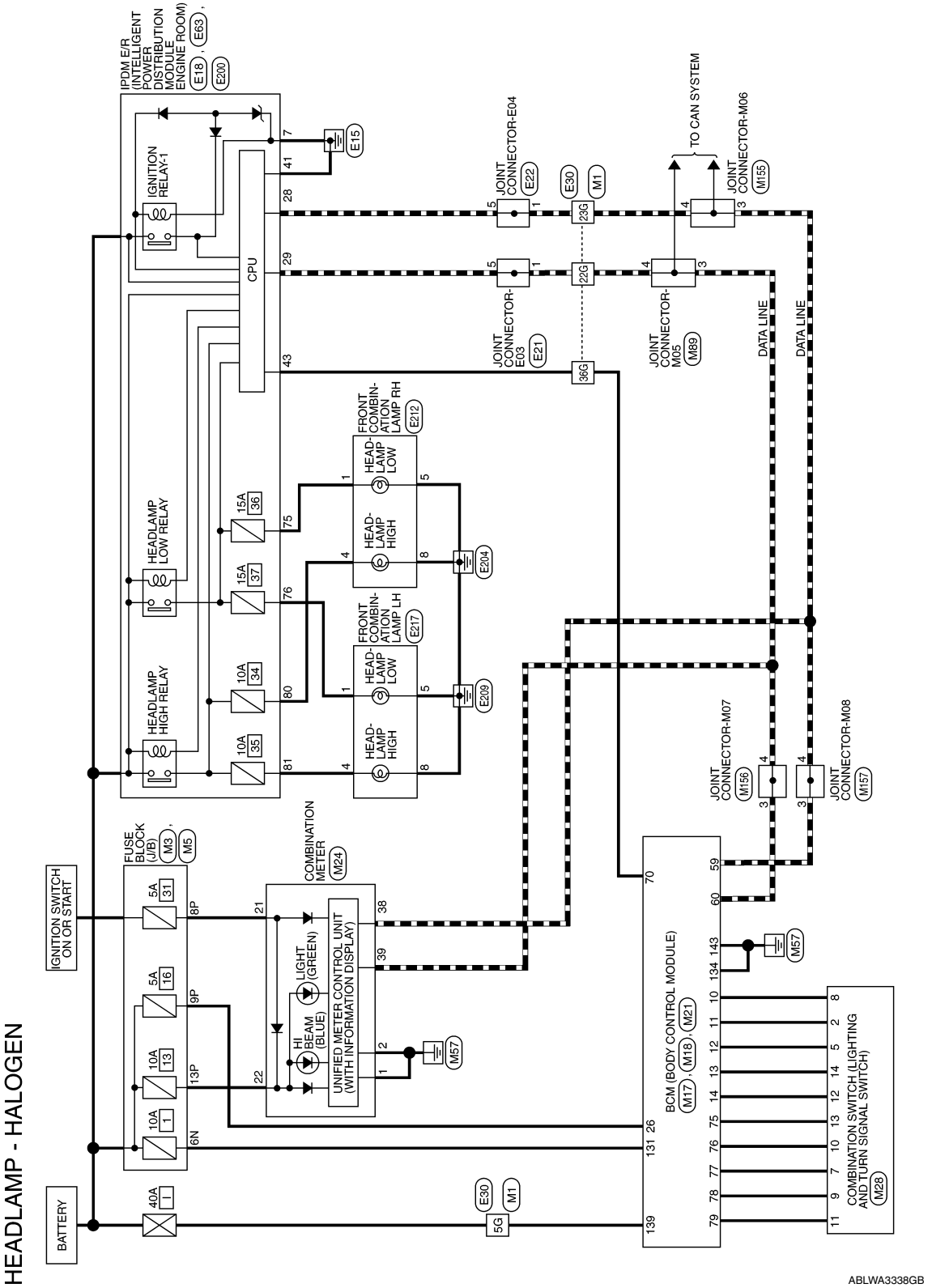
ECU	Reference
BCM	BCS-31, "Reference Value"
	BCS-50, "Fail Safe"
	BCS-51, "DTC Inspection Priority Chart"
	BCS-52, "DTC Index"
IPDM E/R	PCS-13, "Reference Value"
	PCS-20, "Fail Safe"
	PCS-21, "DTC Index"

WIRING DIAGRAM

HEADLAMP

Wiring Diagram

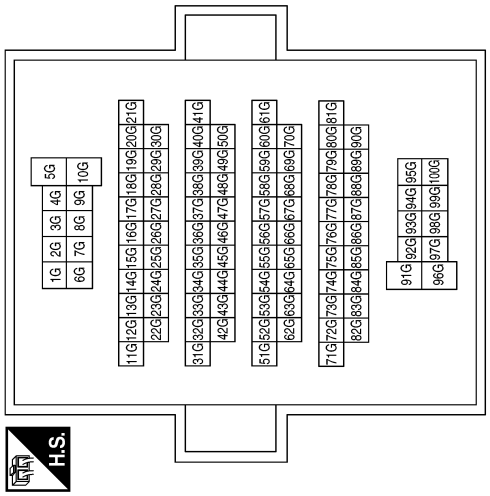
INFOID:0000000012591777



HEADLAMP CONNECTORS - HALOGEN

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

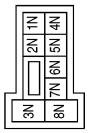
H.S.



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

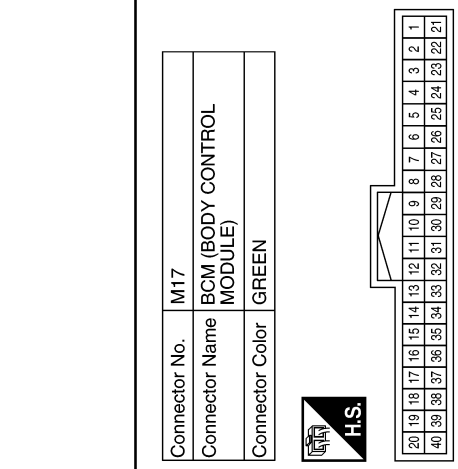
H.S.



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

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

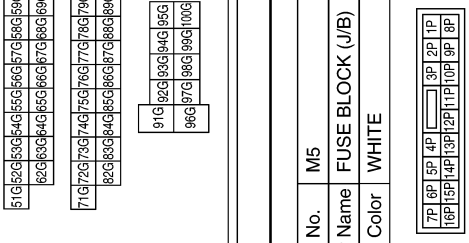
H.S.



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
26	Y	SHORTING IN PIN INPUT

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

H.S.



Terminal No.	Color of Wire	Signal Name
8P	BR	–
9P	Y	–
13P	G	–

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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	–

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

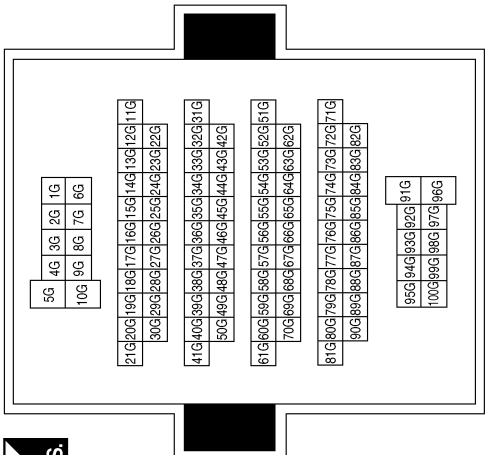
H.S.

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

ABLIA8316GB

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

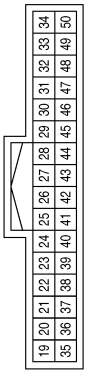
H.S.



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

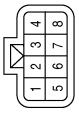
Connector No.	E200
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

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.	E212
Connector Name	FRONT COMBINATION LAMP RH
Connector Color	GRAY

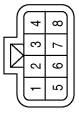
H.S.



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

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

H.S.



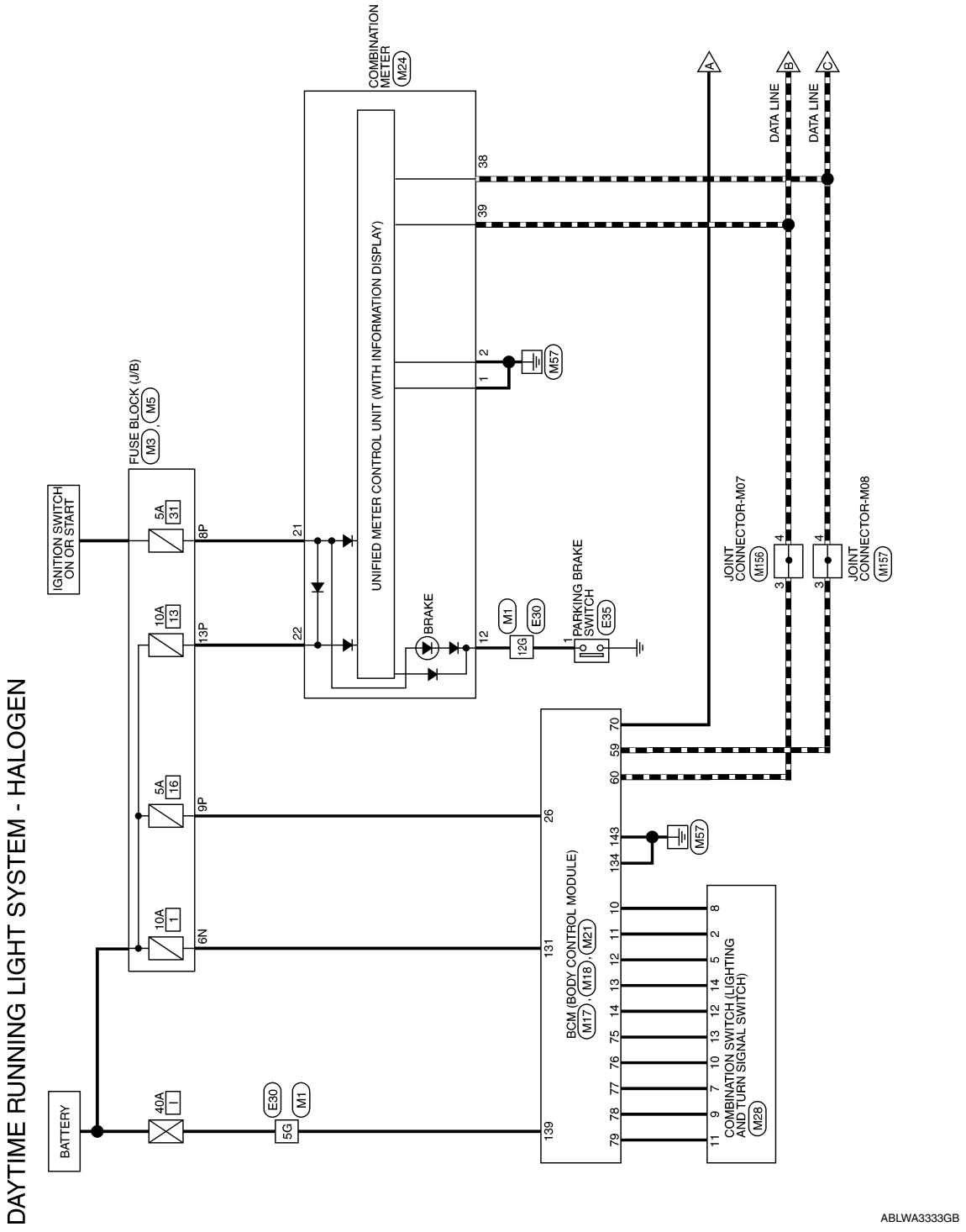
Terminal No.	Color of Wire	Signal Name
1	P	–
4	Y	–
5	B	–
8	B	–

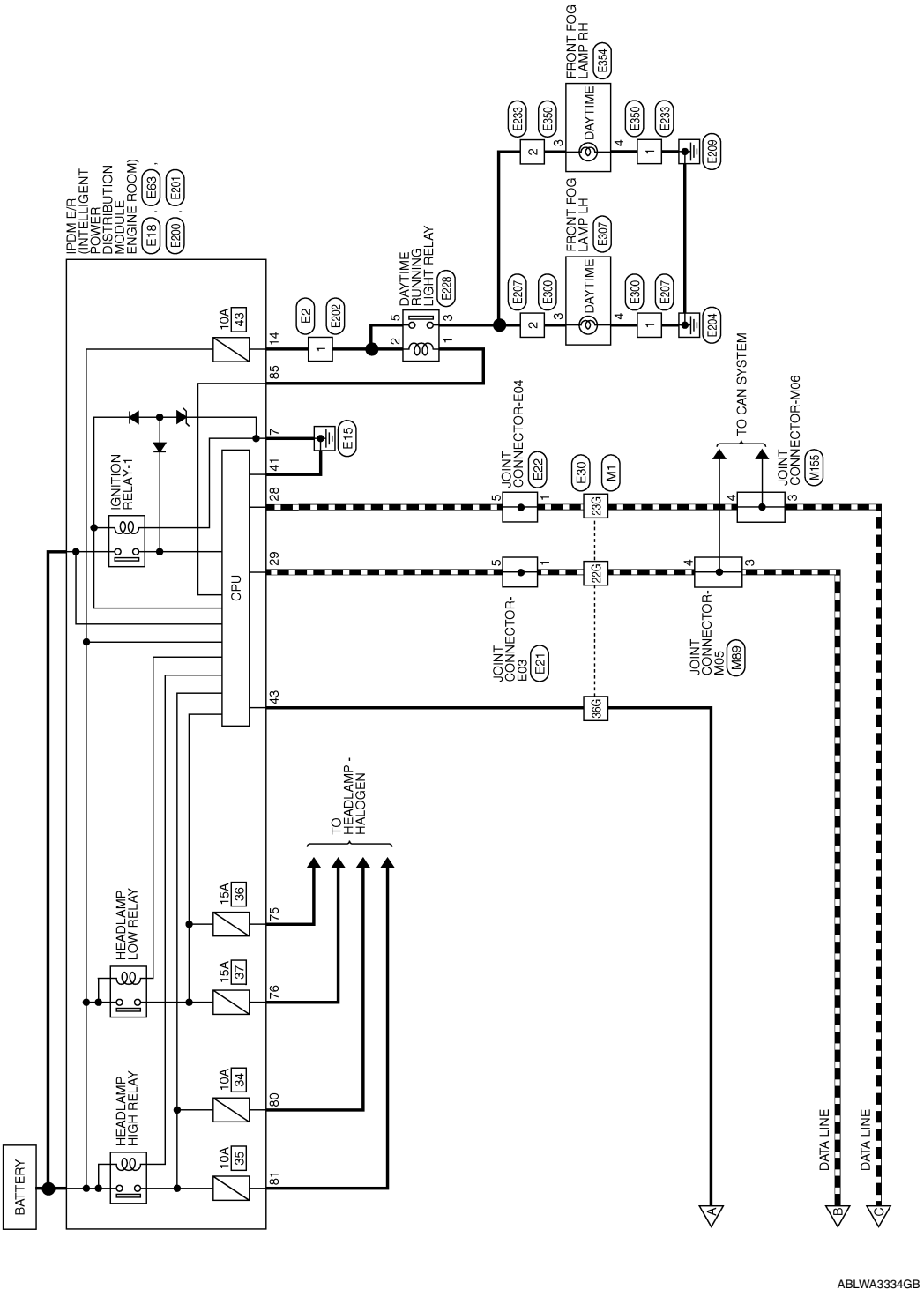
ABLIA8269GB

DAYTIME RUNNING LIGHT SYSTEM

Wiring Diagram

INFOID:0000000012591779

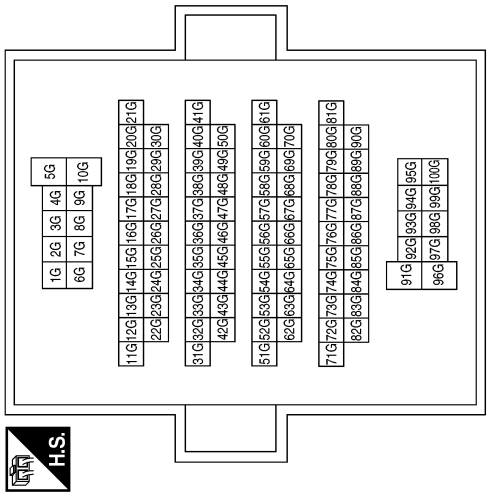



IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
E18, E63, E200, E201
10A 43
E2
E202
DAYTIME RUNNING LIGHT RELAY
E228
FRONT FOG LAMP RH
E354
FRONT FOG LAMP LH
E307
DAYTIME
E233
E350
E209
E207
E300
E204
E15
IGNITION RELAY-1
CPU
JOINT CONNECTOR-E04
E22
E30
M1
23G
22G
36G
TO CAN SYSTEM
JOINT CONNECTOR-M06
M155
JOINT CONNECTOR-E03
E21
JOINT CONNECTOR-M05
M89
TO HEADLAMP - HALOGEN
HEADLAMP LOW RELAY
HEADLAMP HIGH RELAY
15A 36
15A 37
10A 34
10A 35
BATTERY
DATA LINE
A
B
C
ABLWA3334GB

DAYTIME RUNNING LIGHT SYSTEM CONNECTORS - HALOGEN

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

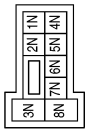
H.S.



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

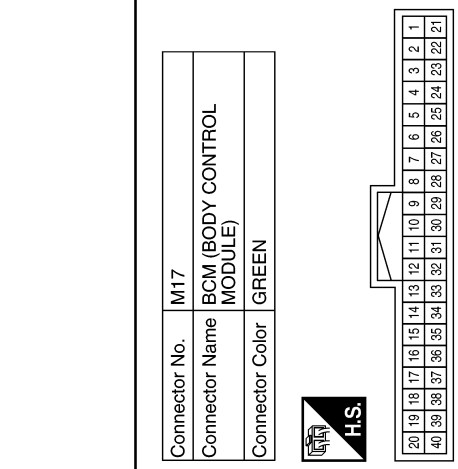
H.S.



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

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

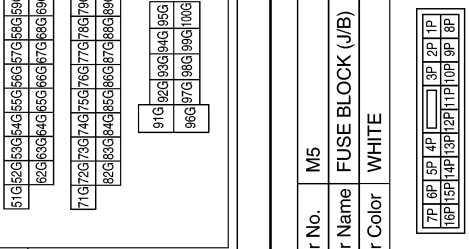
H.S.



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
26	Y	SHORTING IN PIN INPUT

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

H.S.



Terminal No.	Color of Wire	Signal Name
8P	BR	–
9P	Y	–
13P	G	–

ABLIA8262GB

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	–

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	–

ABLIA5155GB

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	–

Connector No.	E2
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
1	Y	–

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)
14	Y	DTRL

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

H.S.

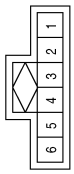
6	5	4	3	2	1

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

ABLIA8311GB

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

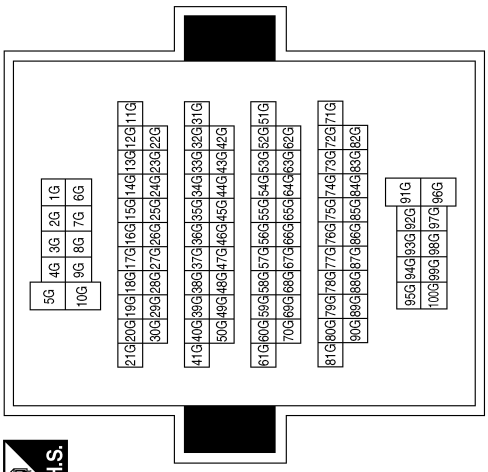
H.S.



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

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

H.S.



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

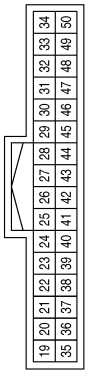
Connector No.	E35
Connector Name	PARKING BRAKE SWITCH
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	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

ABLIA8312GB

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
85	V	DTRL RLY

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

H.S.

Terminal No.	Color of Wire	Signal Name
1	SB	–

Connector No.	E207
Connector Name	WIRE TO WIRE
Connector Color	BLACK

H.S.

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

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

H.S.

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

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

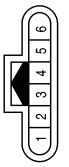
H.S.

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

ABLIA8263GB

Connector No.	E300
Connector Name	WIRE TO WIRE
Connector Color	BLACK

H.S.



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

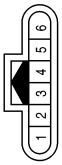
Connector No.	E307
Connector Name	FRONT FOG LAMP LH
Connector Color	BLACK

H.S.

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

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

H.S.



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

Connector No.	E354
Connector Name	FRONT FOG LAMP RH
Connector Color	BLACK

H.S.

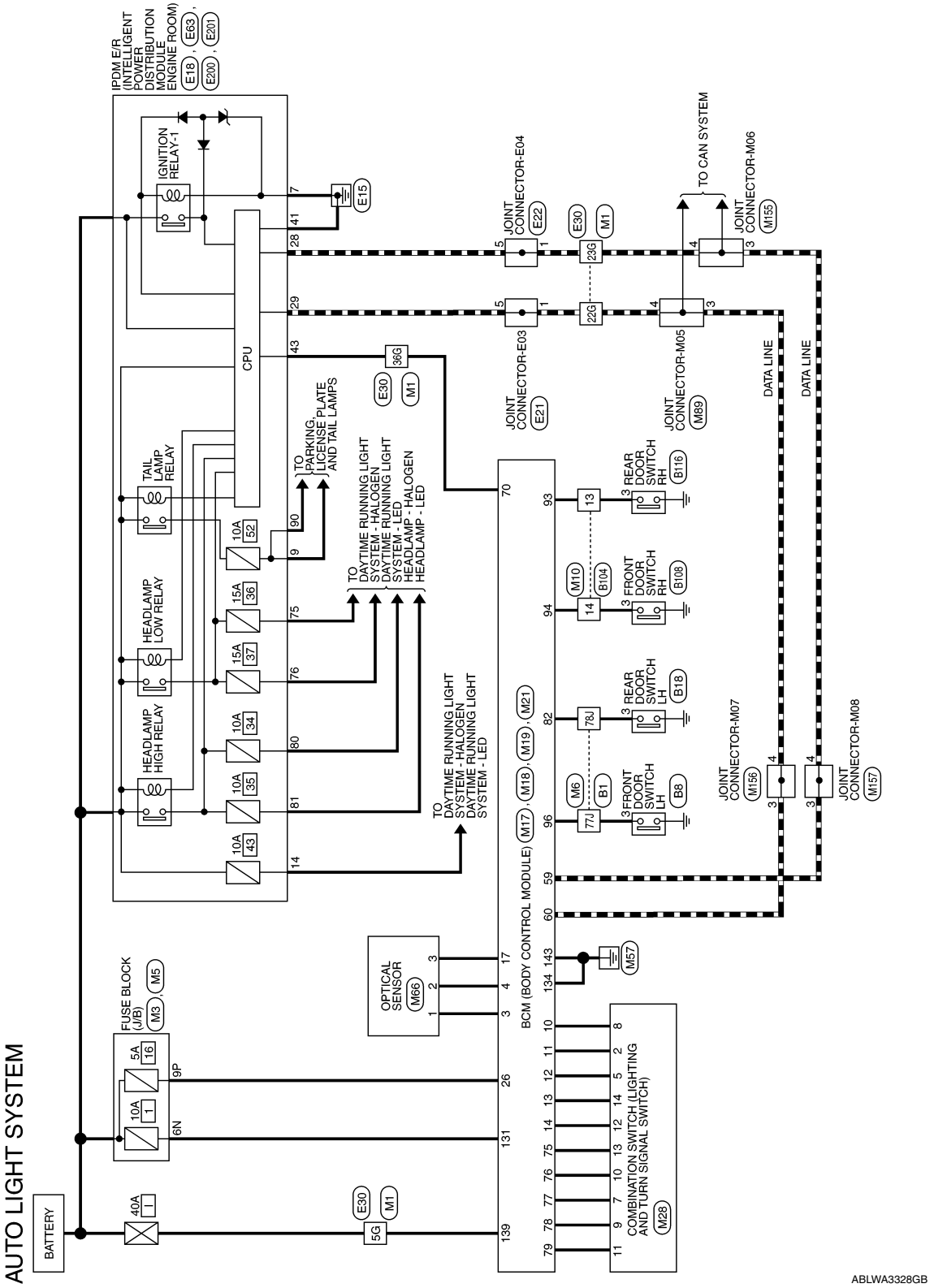
Terminal No.	Color of Wire	Signal Name
3	LG	–
4	B	–

ABLIA8264GB

AUTO LIGHT SYSTEM

Wiring Diagram

INFOID:0000000012591781



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
		7N	6N	5N	4N
	8N				

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
9P	Y	–

ABLIA8296GB

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
26	Y	SHORTING IN PIN INPUT

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.	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	–

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.	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

ABLIA8297GB

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

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	–

ABLIA8298GB

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.	M157
Connector Name	JOINT CONNECTOR-M08
Connector Color	WHITE

H.S.

4	3	2	1

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

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

H.S.

4	3	2	1

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

Connector No.	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	–

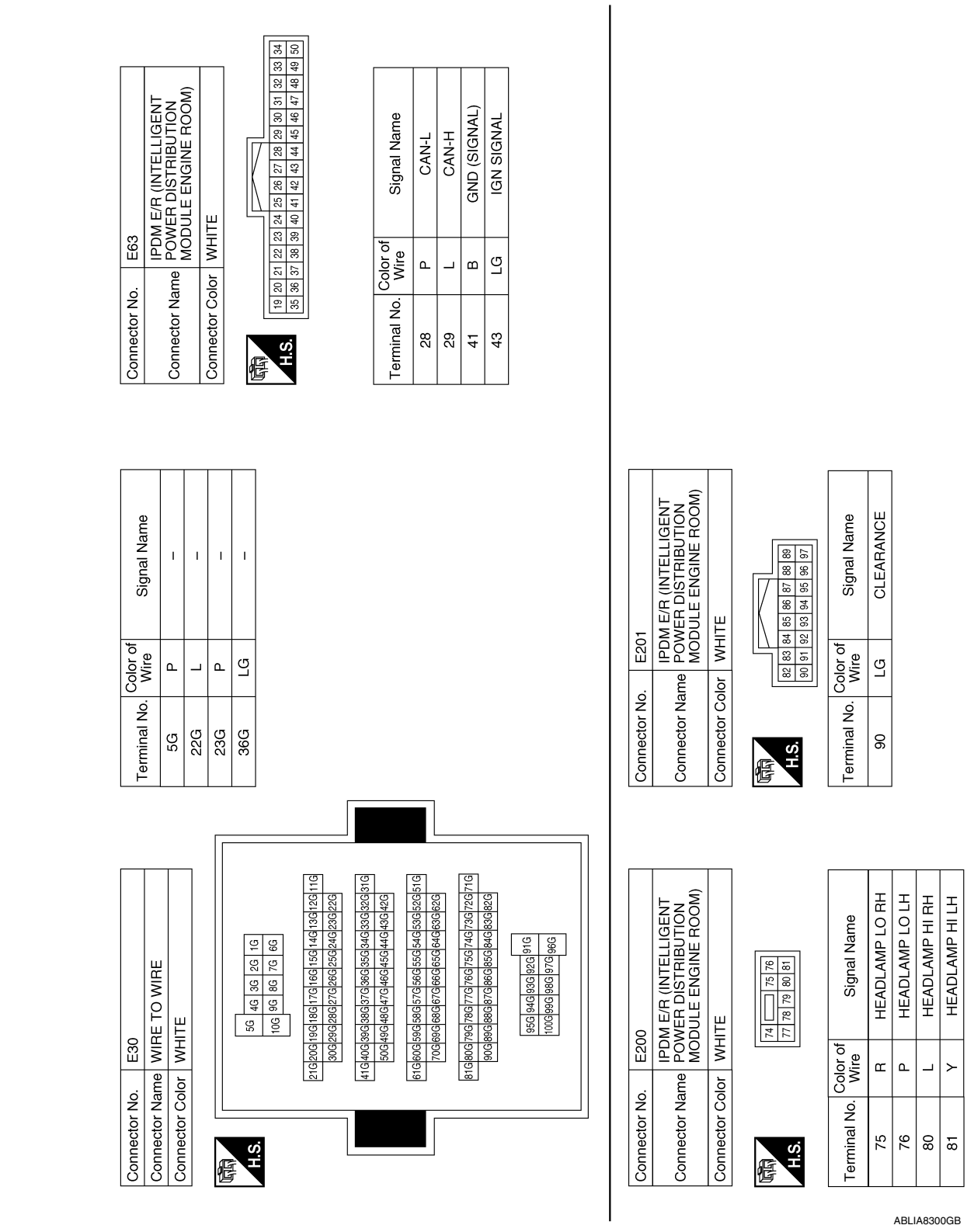
Connector No.	E21
Connector Name	JOINT CONNECTOR-E03
Connector Color	GRAY

H.S.

6	5	4	3	2	1

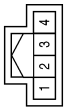
Terminal No.	Color of Wire	Signal Name
1	L	–
5	L	–

ABLIA8299GB


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. 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. 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
90 | LG | CLEARANCE
ABLIA8300GB

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

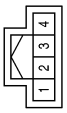
H.S.



Terminal No.	Color of Wire	Signal Name
3	L	–

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

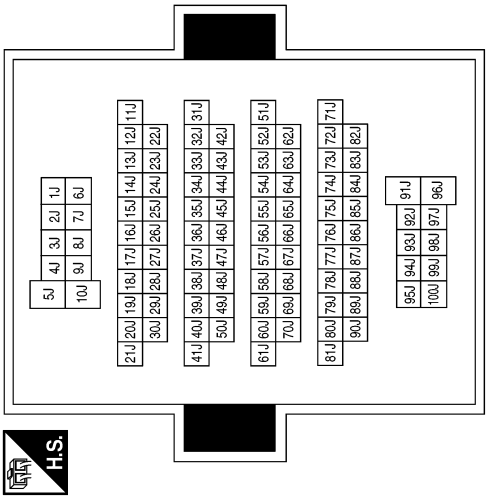
H.S.



Terminal No.	Color of Wire	Signal Name
3	L	–

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

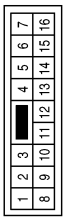
H.S.



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

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

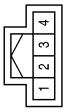
H.S.



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

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

H.S.

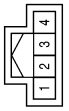


Terminal No.	Color of Wire	Signal Name
3	LG	–

ABLIA8301GB

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

H.S.



Terminal No.	Color of Wire	Signal Name
3	V	–

ABLIA8302GB

FRONT FOG LAMP

Wiring Diagram

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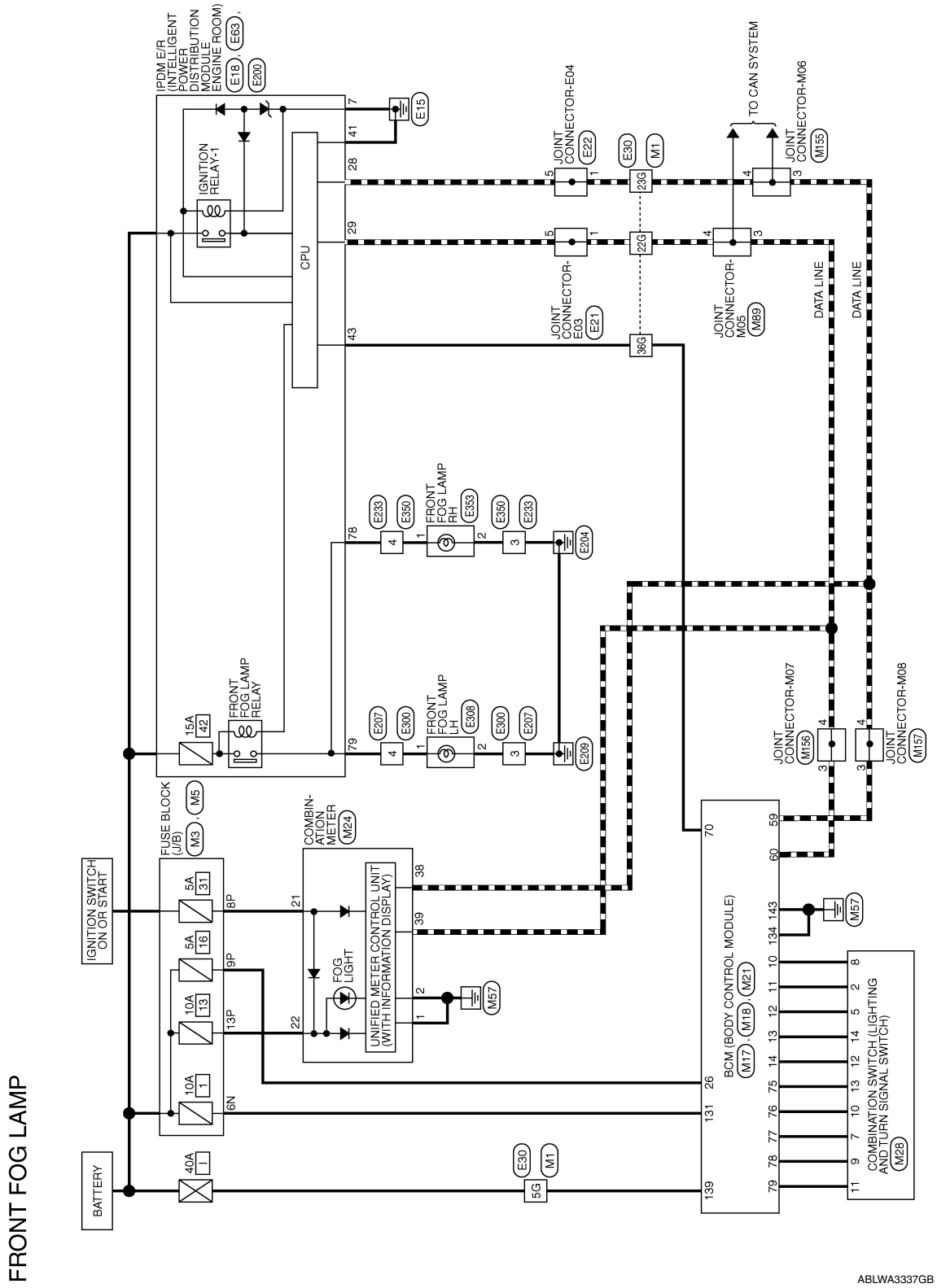


ABLWA3337GB

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.	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	–
9P	Y	–
13P	G	–

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
26	Y	SHORTING IN PIN INPUT

ABLIA8304GB

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.

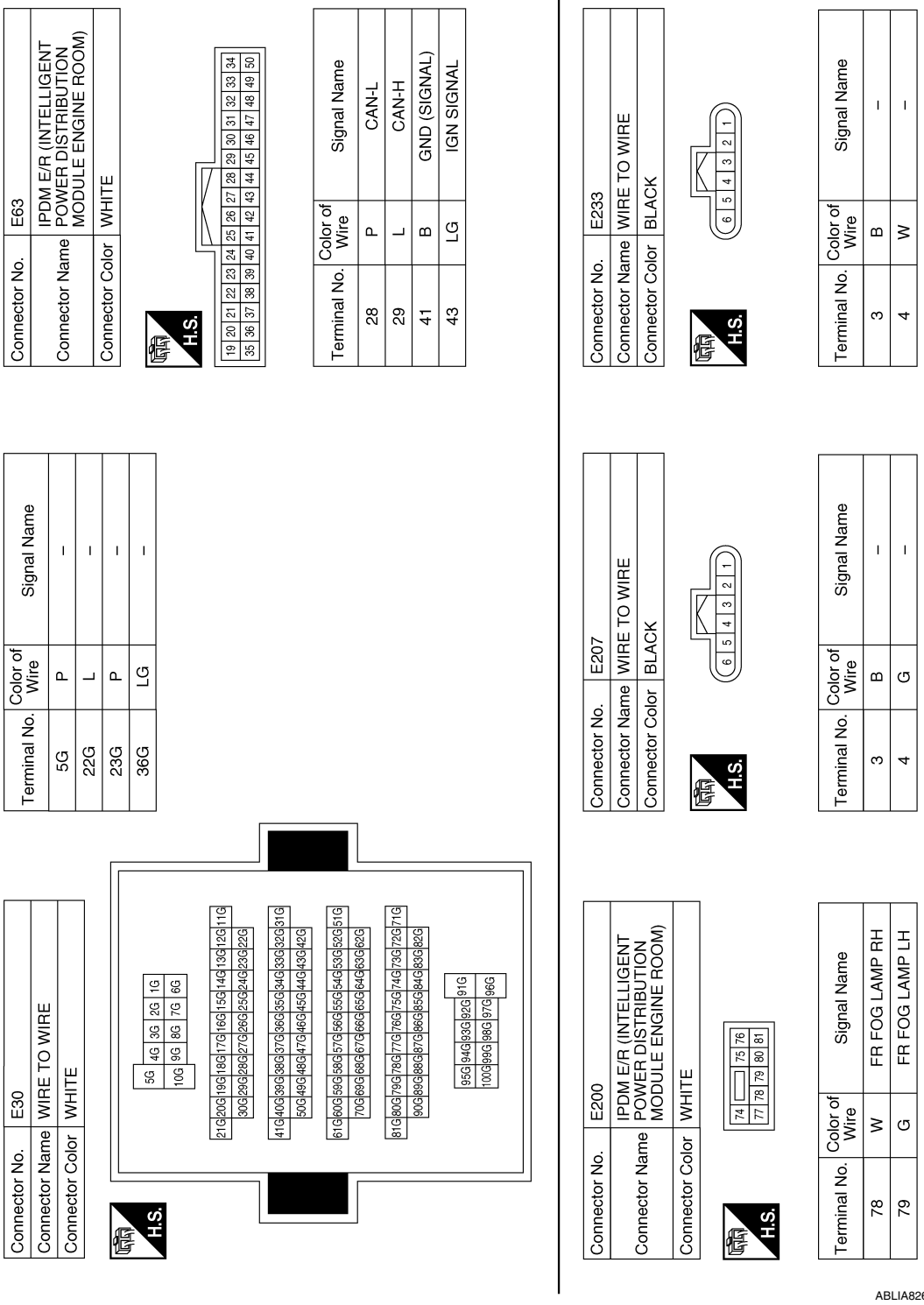
Terminal No.	Color of Wire	Signal Name
1	L	–
5	L	–

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

H.S.

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

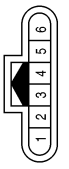
ABLIA8315GB



ABLIA8267GB

Connector No.	E300
Connector Name	WIRE TO WIRE
Connector Color	BLACK

H.S.



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

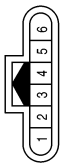
Connector No.	E308
Connector Name	FRONT FOG LAMP LH
Connector Color	BLACK

H.S.

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

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

H.S.



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

Connector No.	E353
Connector Name	FRONT FOG LAMP RH
Connector Color	BLACK

H.S.

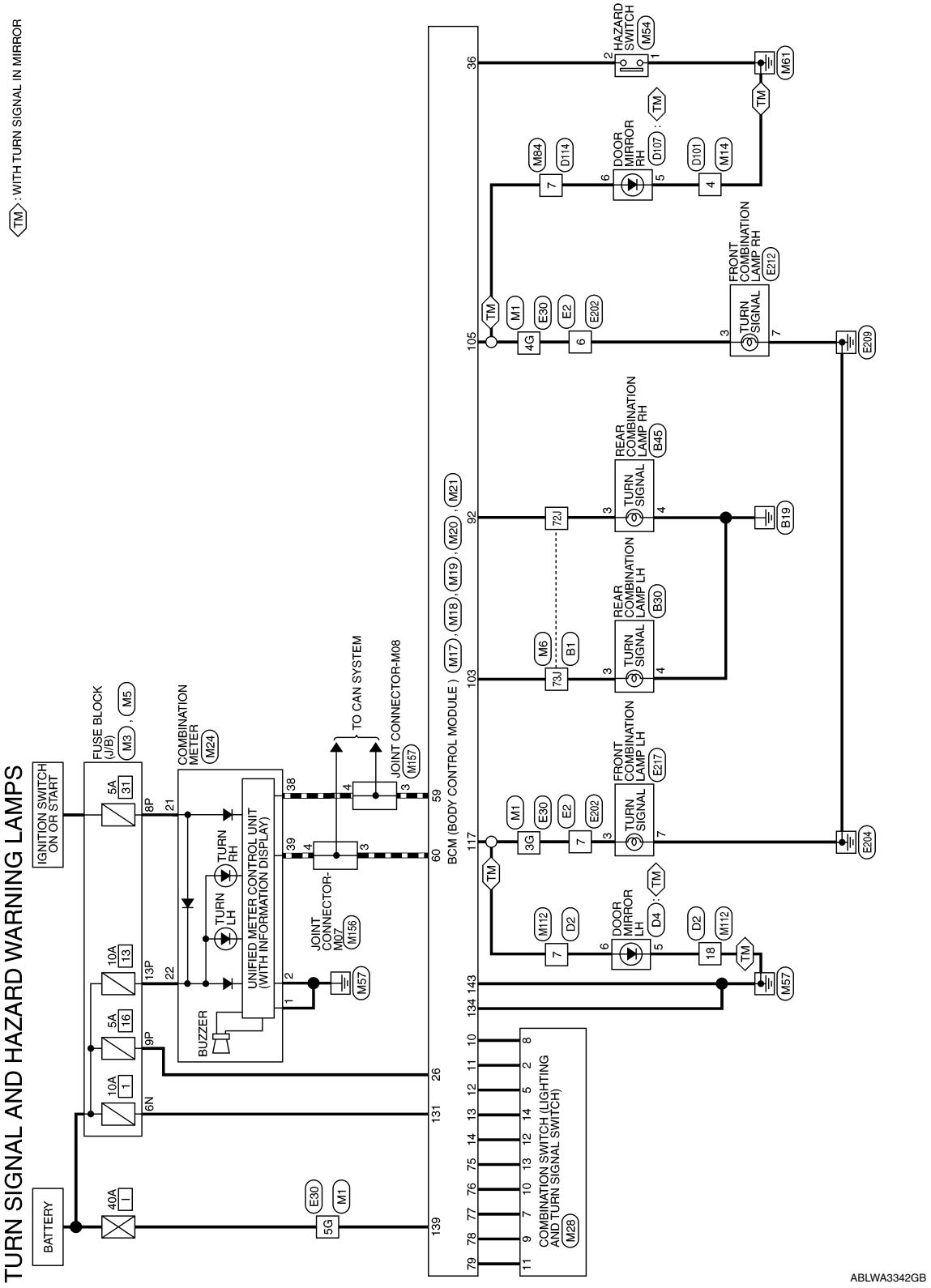
Terminal No.	Color of Wire	Signal Name
1	W	–
2	B	–

ABLIA8268GB

TURN SIGNAL AND HAZARD WARNING LAMPS

Wiring Diagram

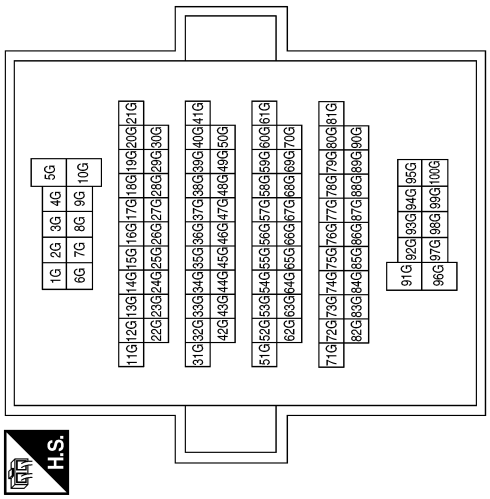
INFOID:0000000012591783



TURN SIGNAL AND HAZARD WARNING LAMPS CONNECTORS

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

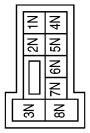
H.S.



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.



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

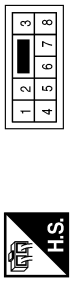
Connector No.	M5
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
8P	BR	–
9P	Y	–
13P	G	–

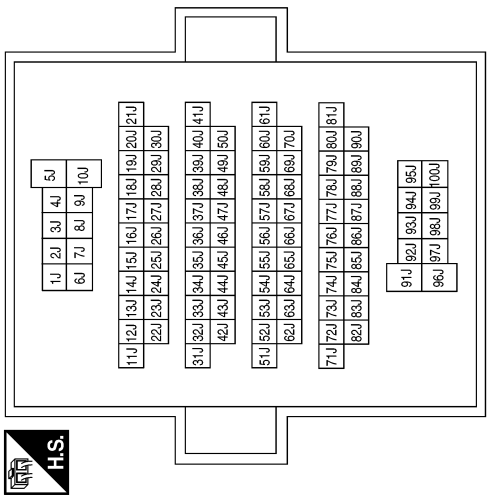
ABLIA8276GB

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



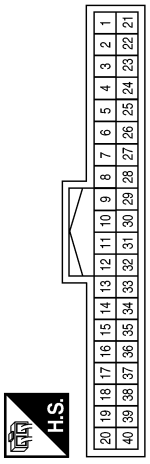
Terminal No.	Color of Wire	Signal Name
4	GR	–

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



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

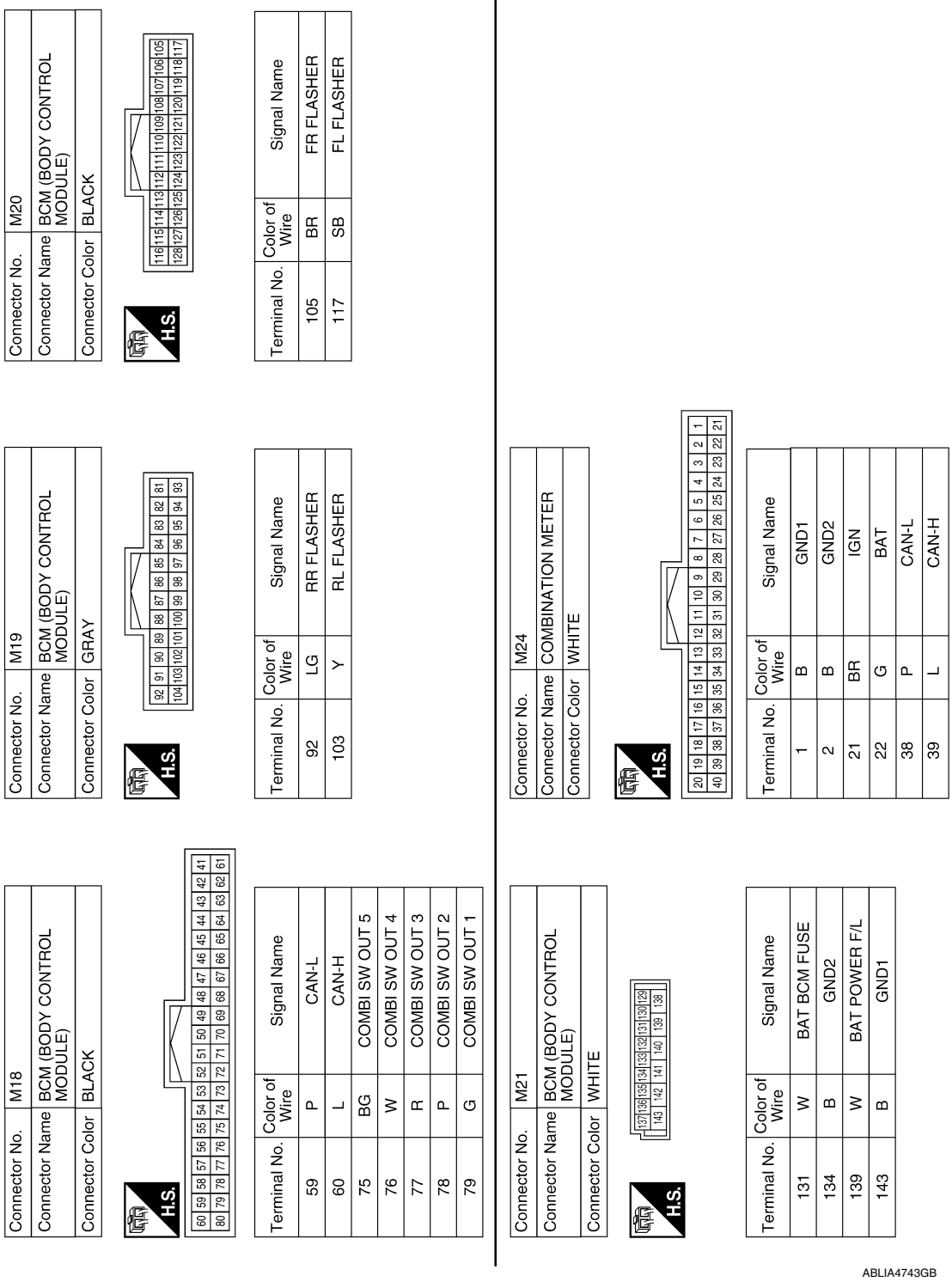
Connector No.	M17
Connector Name	BCM (BODY CONTROL MODULE)
Connector Color	GREEN



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
26	Y	SHORTING IN PIN INPUT
36	Y	HAZARD SW

ABLIA8277GB



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	–

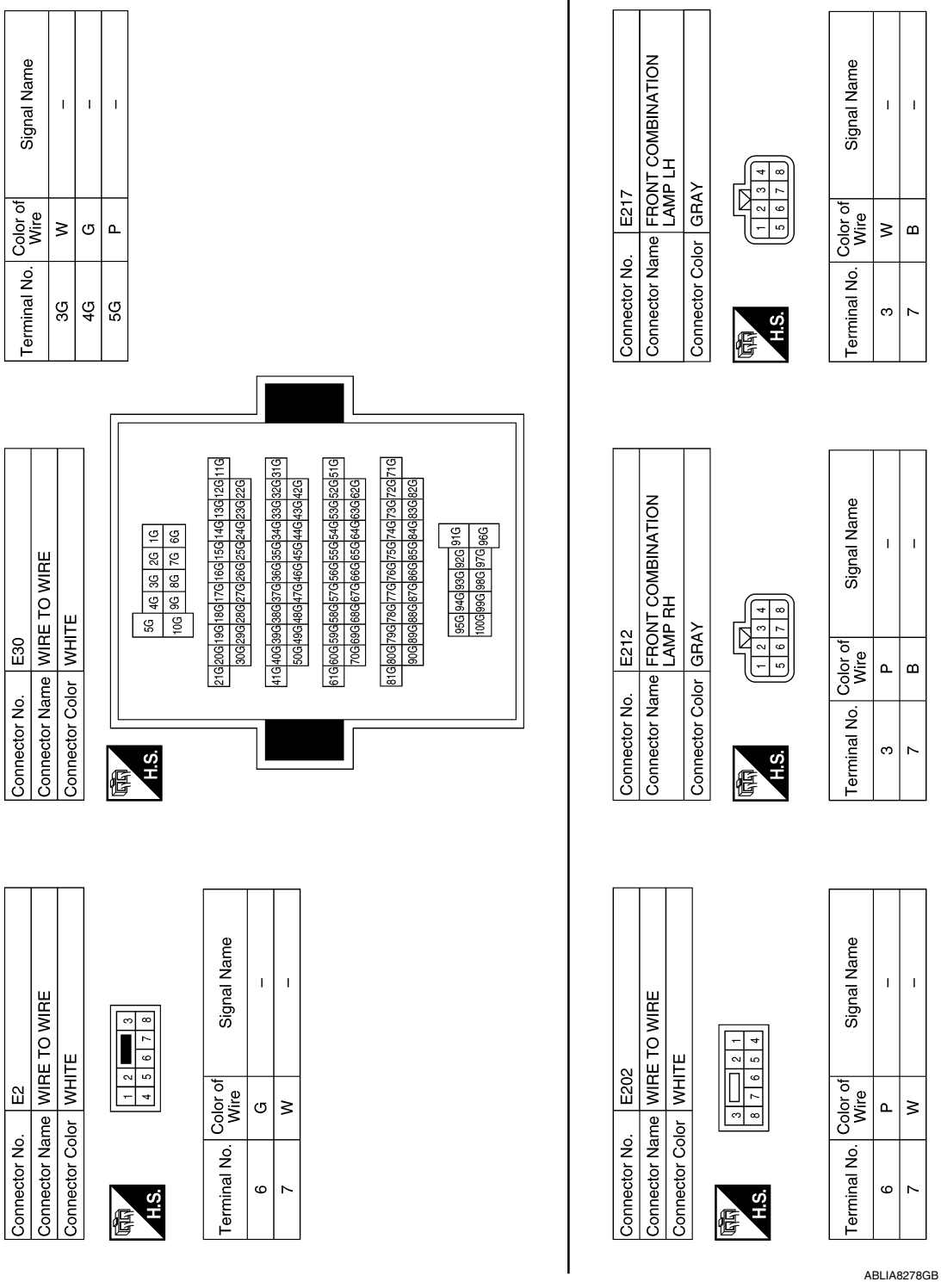
Connector No.	M157
Connector Name	JOINT CONNECTOR-M08
Connector Color	WHITE

H.S.

4	3	2	1

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

ABLIA5165GB


Connector No. 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. E217
Connector Name FRONT COMBINATION LAMP LH
Connector Color GRAY
H.S.
Terminal No. Color of Wire Signal Name
3 W –
7 B –
Connector No. E212
Connector Name FRONT COMBINATION LAMP RH
Connector Color GRAY
H.S.
Terminal No. Color of Wire Signal Name
3 P –
7 B –
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. E202
Connector Name WIRE TO WIRE
Connector Color WHITE
H.S.
Terminal No. Color of Wire Signal Name
6 P –
7 W –
ABLIA8278GB

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

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

H.S.

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

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

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

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

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

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

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

H.S.

4	3	2	1

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

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

H.S.

4	3	2	1

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

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

H.S.

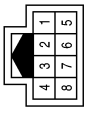
12	11	10	9	8	7	6	5	4	3	2	1	13
24	23	22	21	20	19	18	17	16	15	14		

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

ABLIA8294GB

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

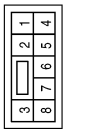
H.S.



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

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

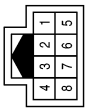
H.S.



Terminal No.	Color of Wire	Signal Name
4	B	–

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

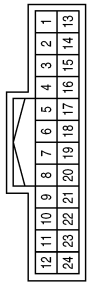
H.S.



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

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

H.S.



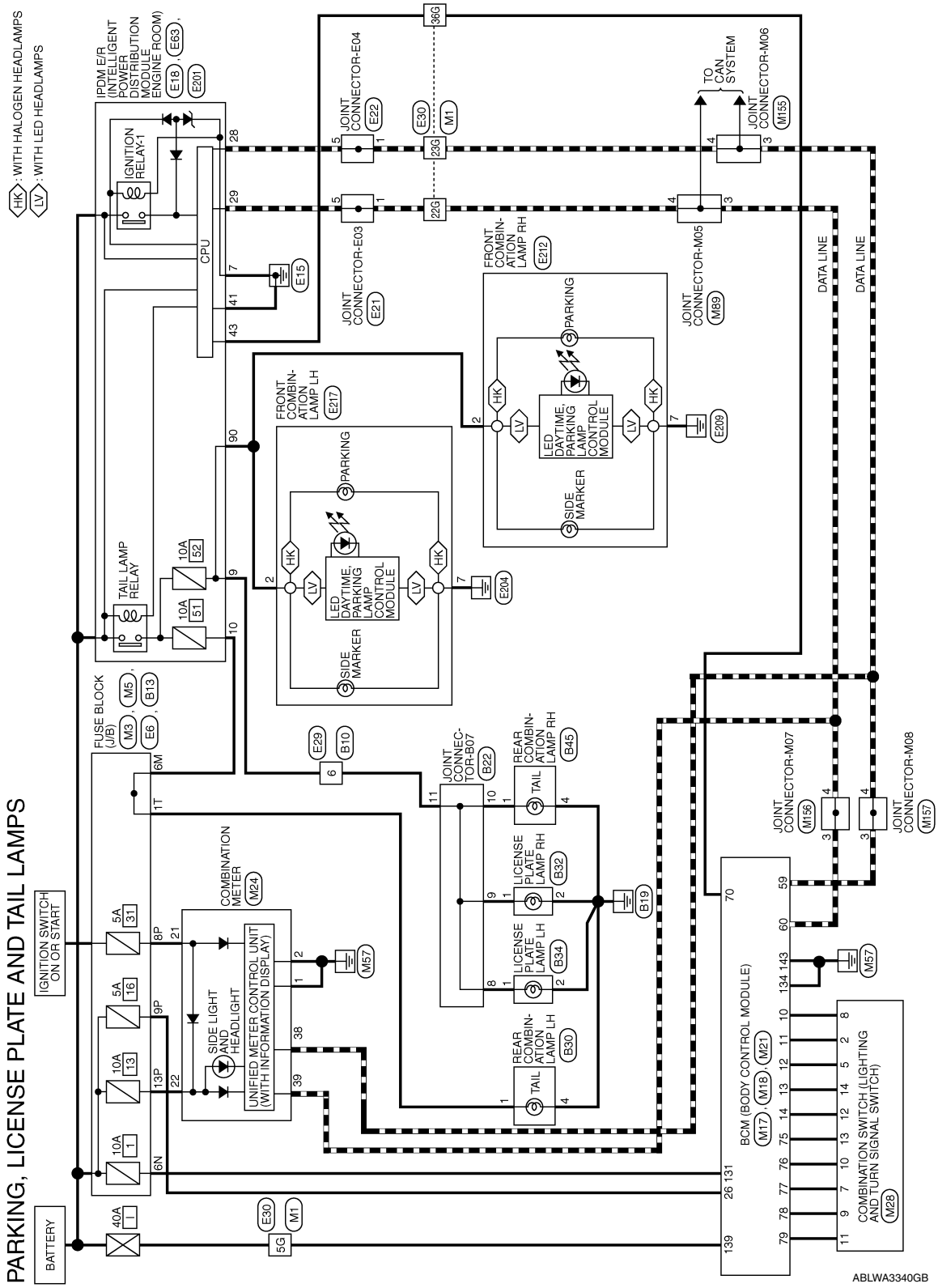
Terminal No.	Color of Wire	Signal Name
7	LG	–

ABLIA8295GB

PARKING, LICENSE PLATE AND TAIL LAMPS

Wiring Diagram

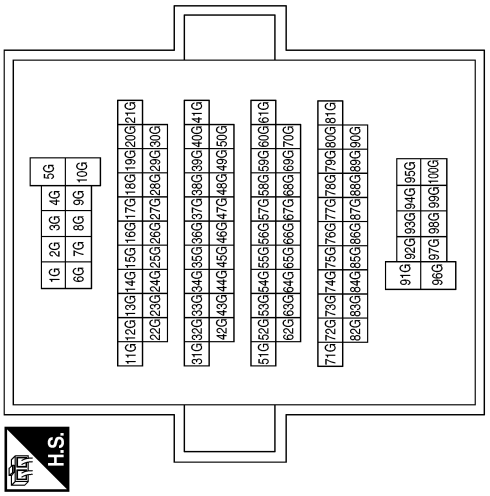
INFOID:0000000012591784



PARKING, LICENSE PLATE AND TAIL LAMPS CONNECTORS

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

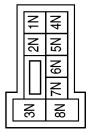
H.S.



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

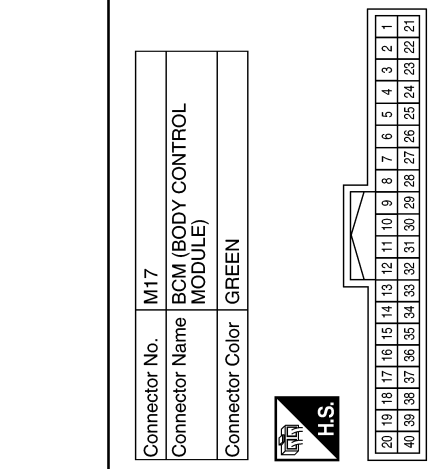
H.S.



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
26	Y	SHORTING IN PIN INPUT

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

H.S.

Terminal No.	Color of Wire	Signal Name
8P	BR	–
9P	Y	–
13P	G	–

ABLIA8272GB

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	–

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.	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

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	–

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	–

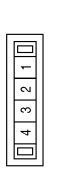
Connector No.	M157
Connector Name	JOINT CONNECTOR-M08
Connector Color	WHITE

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	–

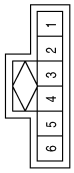
Connector No.	E18
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

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	–

ABLIA8317GB

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

ABLIA8318GB

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.	E212
Connector Name	FRONT COMBINATION LAMP RH
Connector Color	GRAY

H.S.

1	2	3	4
5	6	7	8

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

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

H.S.

1	2	3	4
5	6	7	8

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

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
6	SB	–

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

H.S.

2T		1T
6T	5T	4T	3T

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

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

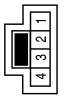
H.S.

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

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

ABLIA8273GB

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



Terminal No.	Color of Wire	Signal Name
1	V	–
4	GR	–

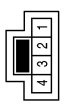
Connector No.	B32
Connector Name	LICENSE PLATE LAMP RH
Connector Color	BROWN

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

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

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

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



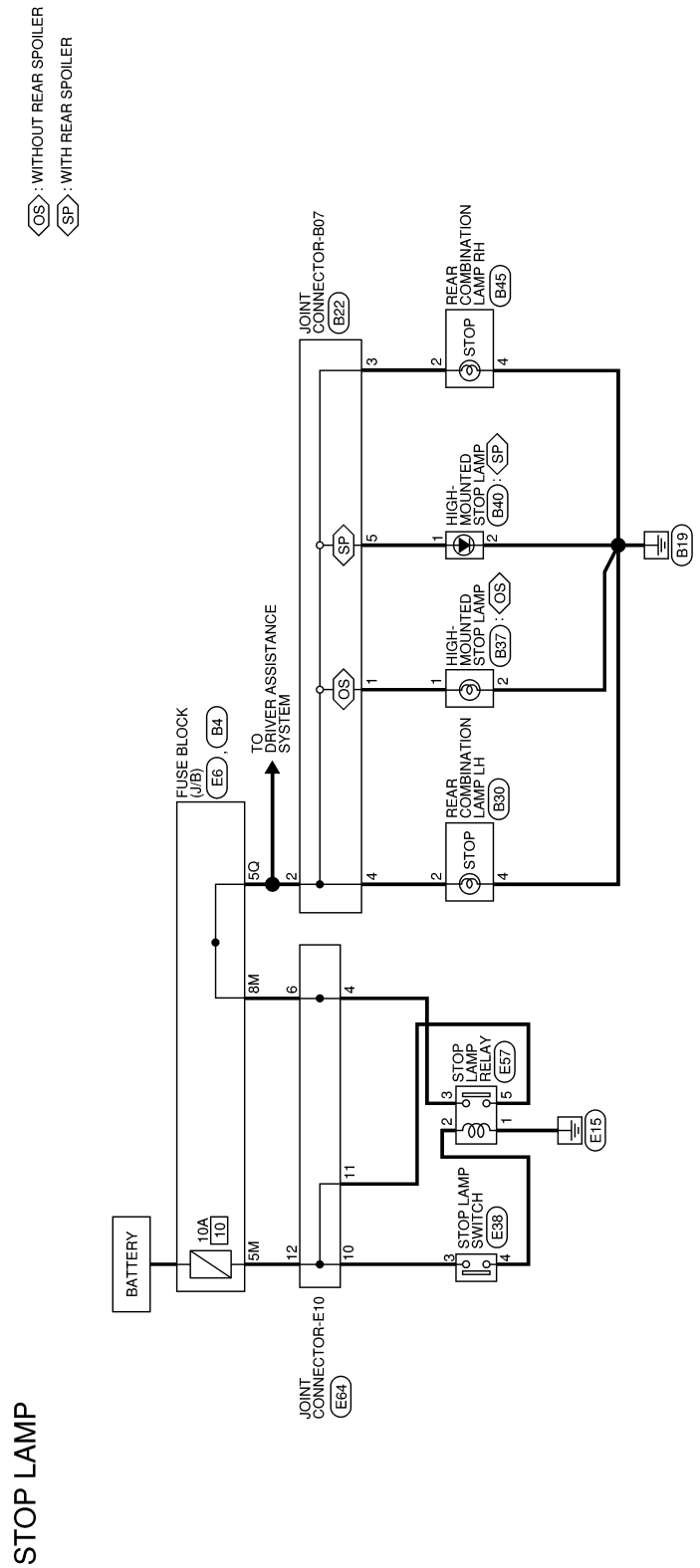
Terminal No.	Color of Wire	Signal Name
1	SB	–
4	B	–

ABLIA8293GB

STOP LAMP

Wiring Diagram

INFOID:0000000012591785



STOP LAMP

ABLWA3341GB

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
3	G	–
4	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	BLUE

H.S.

Terminal No.	Color of Wire	Signal Name
4	W	–
6	W	–
10	G	–
11	G	–
12	G	–

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

H.S.

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

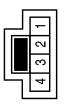
Connector No.	B22
Connector Name	JOINT CONNECTOR-B07
Connector Color	BLUE

H.S.

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

ABLIA8274GB

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



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

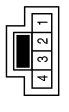
Connector No.	B37
Connector Name	HIGH-MOUNTED STOP LAMP (WITHOUT REAR SPOILER)
Connector Color	BLACK

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

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

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



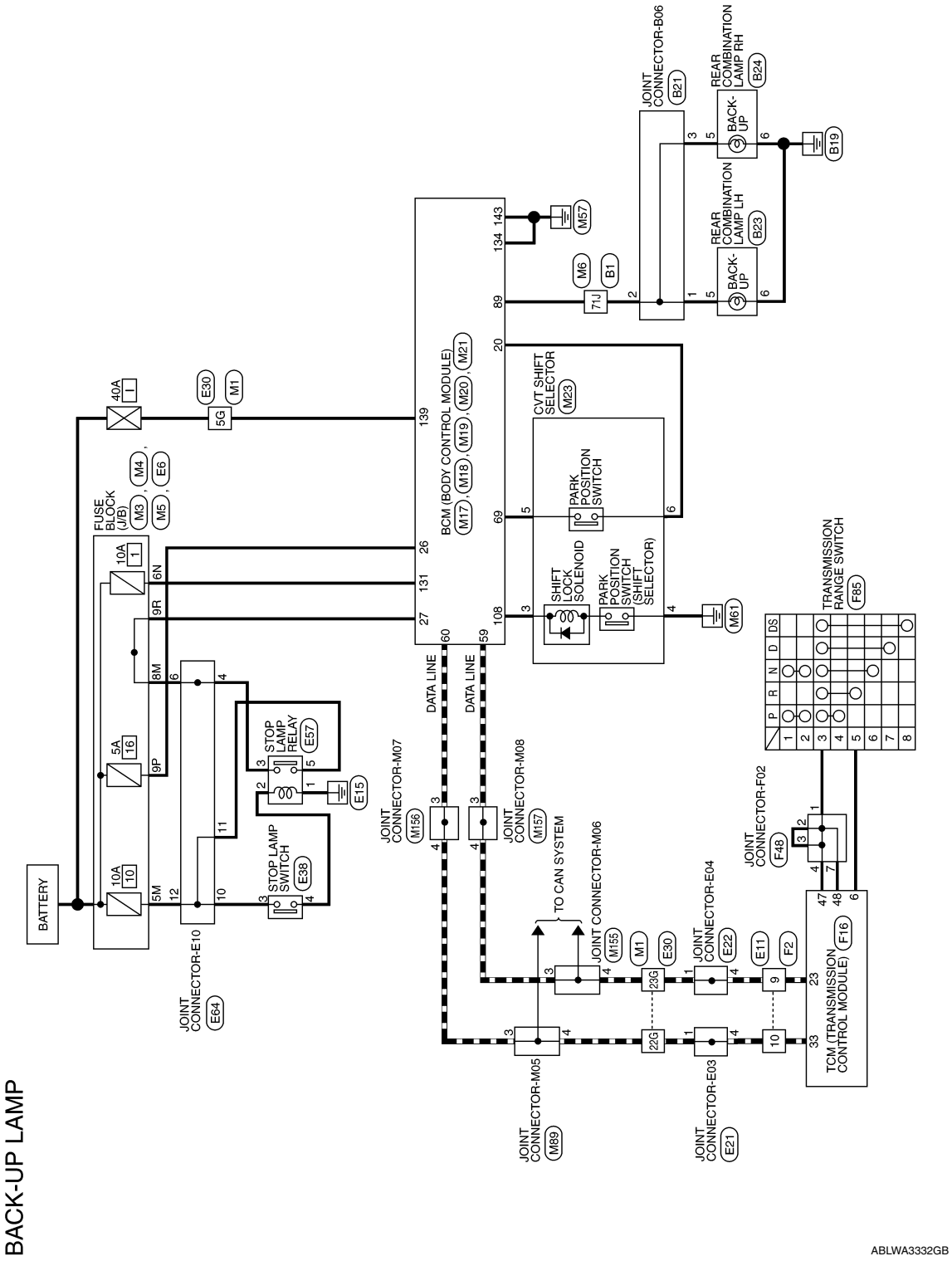
Terminal No.	Color of Wire	Signal Name
2	L	–
4	B	–

ABLIA8275GB

BACK-UP LAMP

Wiring Diagram

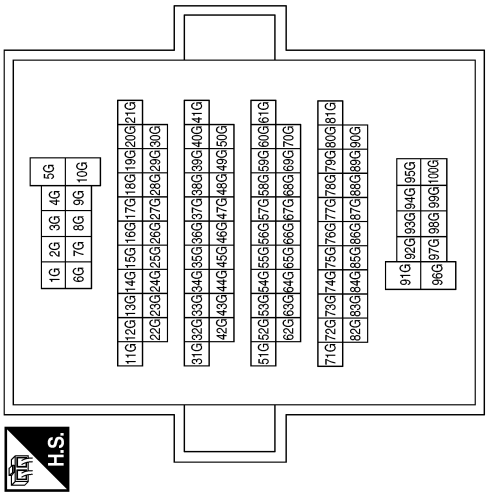
INFOID:0000000012591786



BACK-UP LAMP CONNECTORS

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

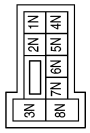
H.S.



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	–

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

H.S.

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

ABLIA8303GB

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

H.S.

Terminal No.	Color of Wire	Signal Name
71J	BR	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
20	W	SHIFT P
26	Y	SHORTING IN PIN INPUT
27	G	BRAKE SW LAMP

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

H.S.

Terminal No.	Color of Wire	Signal Name
59	P	CAN-L
60	L	CAN-H
69	L	AT DEVICE OUT

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

H.S.

Terminal No.	Color of Wire	Signal Name
89	BR	REVERSE LAMP OUT

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

H.S.

Terminal No.	Color of Wire	Signal Name
108	BG	SHIFT LOCK SOLENOID OUT

ABLIA8259GB

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	–

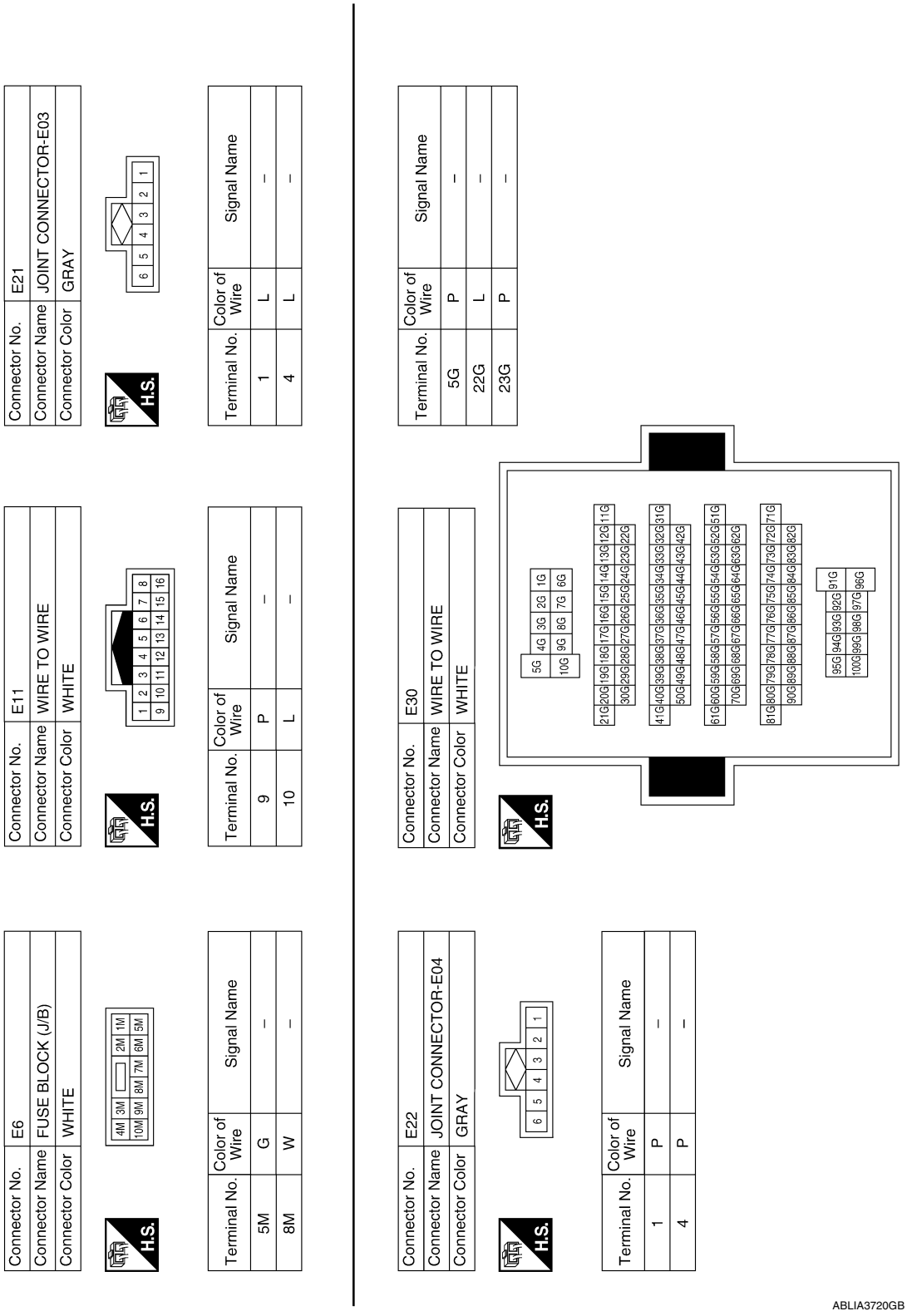
Connector No.	M157
Connector Name	JOINT CONNECTOR-M08
Connector Color	WHITE

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.

2	1
4	3

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

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

H.S.

3		1
	5	
2		

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	BLUE

H.S.

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

Terminal No.	Color of Wire	Signal Name
4	W	–
6	W	–
10	G	–
11	G	–
12	G	–

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

H.S.

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

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

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

H.S.

31	32	33	34	35	36	37	38	39	40	47	48
21	22	23	24	25	26	27	28	29	30	45	46
11	12	13	14	15	16	17	18	19	20	43	44
1	2	3	4	5	6	7	8	9	10	41	42

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

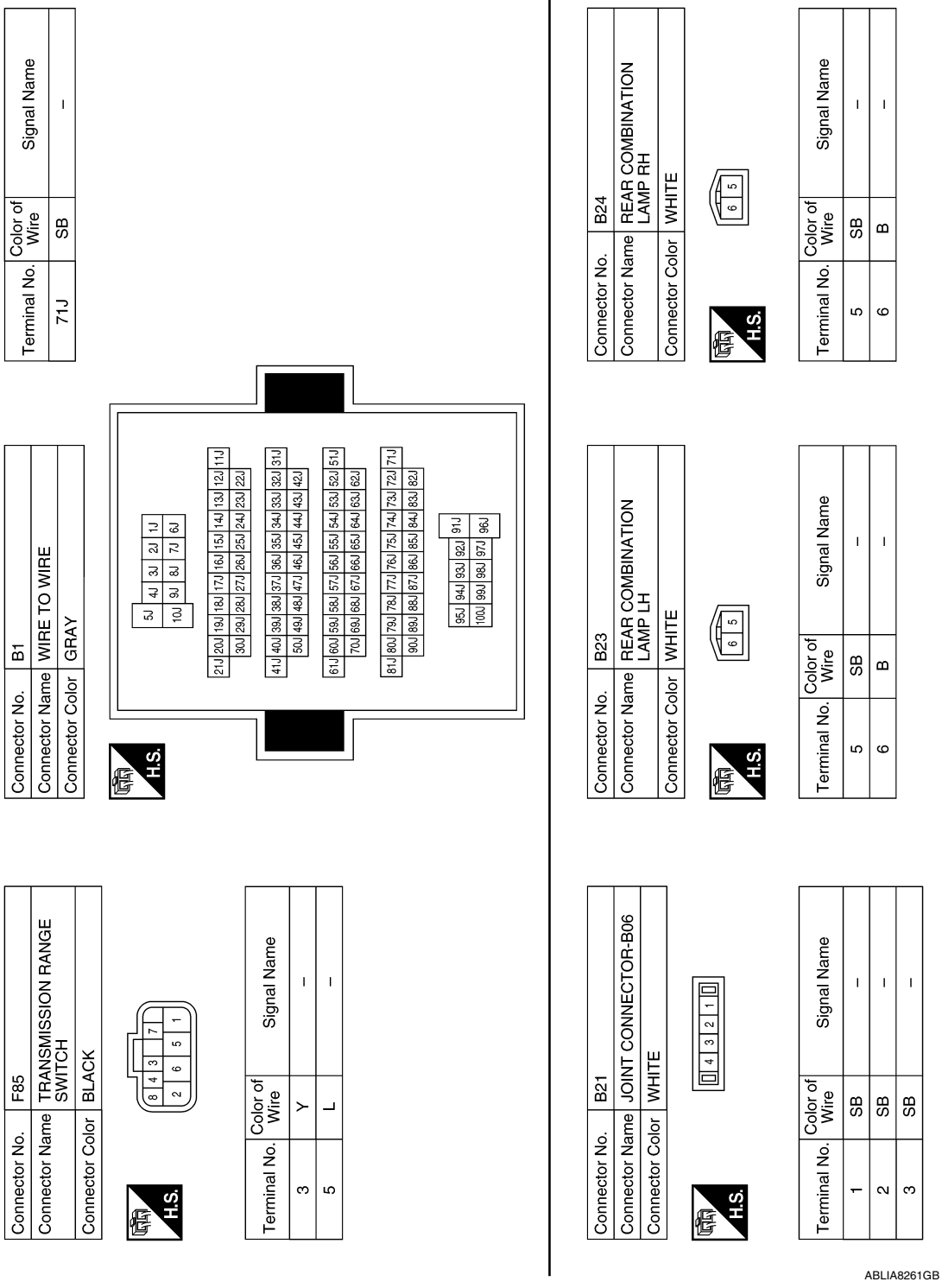
Connector No.	F48
Connector Name	JOINT CONNECTOR-F02
Connector Color	BLACK

H.S.

5	4	3	2	1
10	9	8	7	6

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

ABLIA8260GB



ABLIA8261GB

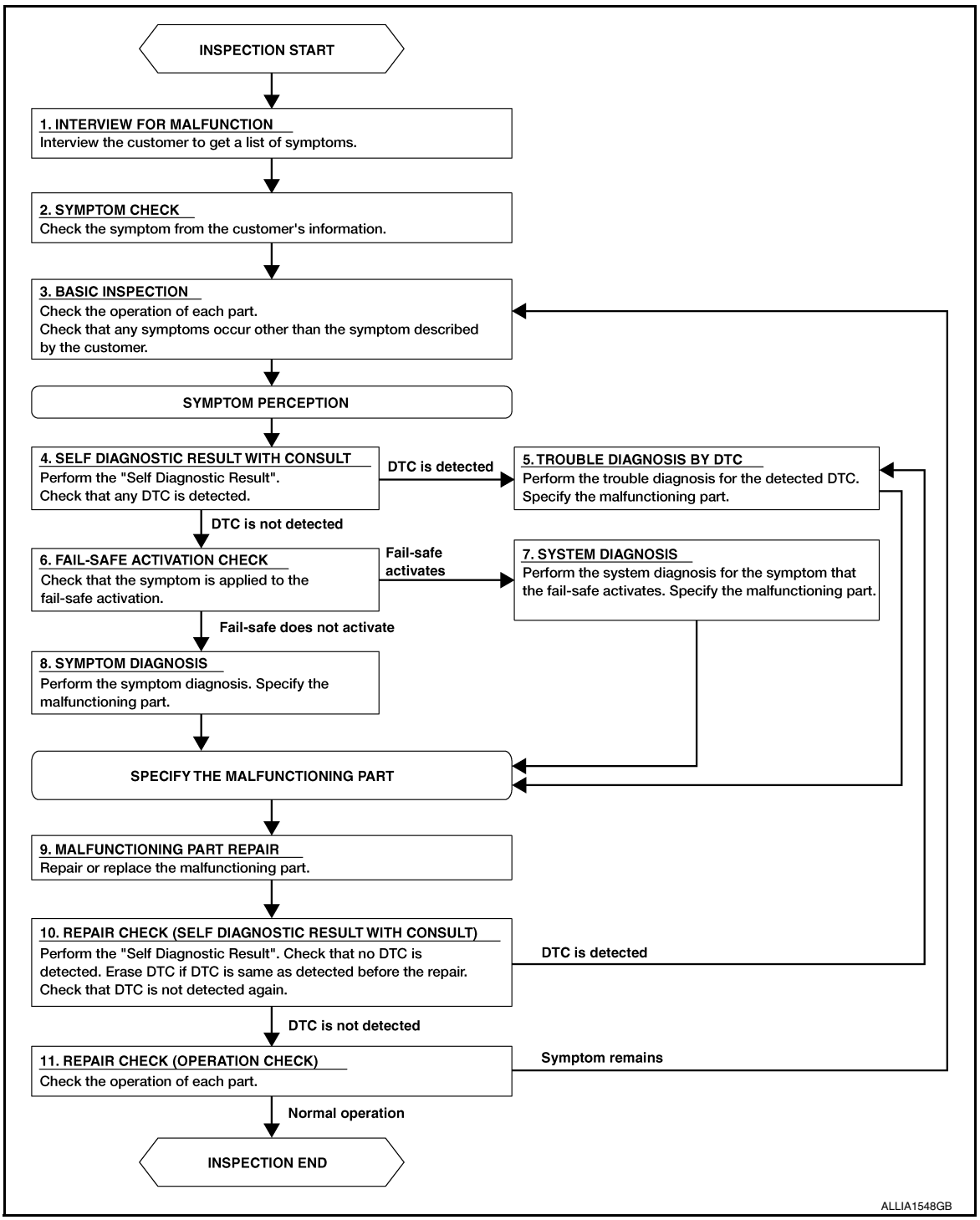
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

INFOID:0000000012591787

OVERALL SEQUENCE



DETAILED FLOW

1.INTERVIEW FOR MALFUNCTION

Find out what the customer's concerns are.

>> GO TO 2.

2.SYMPTOM CHECK

Verify the symptom from the customer's information.

>> GO TO 3.

3.BASIC INSPECTION

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

>> GO TO 4.

4.SELF DIAGNOSTIC RESULT WITH CONSULT

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

Is any DTC detected?

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

5.TROUBLE DIAGNOSIS BY DTC

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

>> GO TO 9.

6.FAIL-SAFE ACTIVATION CHECK

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

Does the fail-safe activate?

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

7.SYSTEM DIAGNOSIS

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

>> GO TO 9.

8.SYMPTOM DIAGNOSIS

Perform the symptom diagnosis. Specify the malfunctioning part.

>> GO TO 9.

9.MALFUNCTION PART REPAIR

Repair or replace the malfunctioning part.

>> GO TO 10.

10.REPAIR CHECK (SELF DIAGNOSTIC RESULT WITH CONSULT)

Perform the “Self Diagnostic Result”. Verify that no DTCs are detected. Erase all DTCs detected prior to the repair. Verify that DTC is not detected again.

Is any DTC detected?

YES >> GO TO 5.
NO >> GO TO 11.

11.REPAIR CHECK (OPERATION CHECK)

Check the operation of each part.

Does it operate normally?

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

DTC/CIRCUIT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

BCM (BODY CONTROL MODULE)

BCM (BODY CONTROL MODULE) : Diagnosis Procedure

INFOID:0000000012866179

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:0000000012866180

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

1. CHECK FUSIBLE LINKS

Check that the following fusible links are not blown.

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

Is the fusible link blown?

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

2. CHECK POWER SUPPLY CIRCUIT

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

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

Is the inspection result normal?

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

3. CHECK GROUND CIRCUIT

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

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

Is the inspection result normal?

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

HEADLAMP (HI) CIRCUIT

Description

INFOID:0000000012591790

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:0000000012591791

1.CHECK HEADLAMP (HI) OPERATION

WITHOUT CONSULT
1. Start IPDM E/R auto active test. Refer to PCS-9, "Diagnosis Description".
2. Check that the headlamp switches to the high beam.
   NOTE:
   HI/LO is repeated 1 second each when using the IPDM E/R auto active test.

CONSULT
1. Select “EXTERNAL LAMPS” in “Active Test” of “IPDM E/R”.
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-85, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012591792

Regarding Wiring Diagram information, refer to EXL-28, "Wiring Diagram".

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)		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. Disconnect the front combination lamp harness connector E217 or E212 in question.
2. Turn the ignition switch ON.
3. Select “EXTERNAL LAMPS” in “Active Test” of “IPDM E/R”.
4. With EXTERNAL LAMP ON, check the voltage between the combination lamp connector and ground.

(+)		(–)	Voltage
Connector	Terminal		

RH	E212	4	Ground	Battery voltage
LH	E217			

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	E212	4	Yes
LH		81	E217		

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-47, "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 8 and ground.

Connector		Terminal	-	Continuity
RH	E212	8	Ground	Yes
LH	E217			

Is the inspection result normal?

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

HEADLAMP (LO) CIRCUIT
HEADLAMP
HEADLAMP : Description

INFOID:0000000012591793

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 : Component Function Check

INFOID:0000000012591794

1.CHECK HEADLAMP (LO) OPERATION

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

NOTE:
HI/LO is repeated 1 second each when using the IPDM E/R auto active test.

CONSULT
1. Select “EXTERNAL LAMPS” in “Active Test” of “IPDM E/R”.
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-87, "HEADLAMP : Diagnosis Procedure".

HEADLAMP : Diagnosis Procedure

INFOID:0000000012591795

Regarding Wiring Diagram information, refer to EXL-28, "Wiring Diagram".

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)		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. Disconnect the front combination lamp harness connector E212 or E217 in question.
2. Turn the ignition switch ON.
3. Select “EXTERNAL LAMPS” in “Active Test” of “IPDM E/R”.
4. With EXTERNAL LAMP ON, check the voltage between the combination lamp connector E212 or E217 terminal 1 and ground.

(+)		(–)	Voltage
Connector	Terminal		

RH	E212	1	Ground	Battery voltage
LH	E217			

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 E217 or E212.

IPDM E/R			Front combination lamp		Continuity
Connector		Terminal	Connector	Terminal	
RH	E200	75	E212	1	Yes
LH		76	E217		

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-47, "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 E217 or E212 terminal 5 and ground.

Connector		Terminal	-	Continuity
RH	E212	5	Ground	Yes
LH	E217			

Is the inspection result normal?

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

DAYTIME RUNNING LIGHT RELAY CIRCUIT

Description

INFOID:0000000012591801

The BCM sends a daytime running 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 running light relay coil. When the IPDM E/R operates the daytime running light relay, power is sent to the daytime running lamps.

Diagnosis Procedure

INFOID:0000000012591802

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

1.CHECK DAYTIME RUNNING LIGHT RELAY VOLTAGE SUPPLY

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

Daytime running 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 RUNNING 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 running light relay harness connector E228.

Daytime running 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-47, "Removal and Installation".
NO >> Repair or replace the harness or connector.

3.CHECK DAYTIME RUNNING LIGHT RELAY CONTROL CIRCUIT

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

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

3. Check continuity between the daytime running 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 RUNNING LIGHT RELAY

Check the daytime running light relay. Refer to EXL-90, "Component Inspection".

Is the inspection result normal?

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

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

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

Daytime running light relay		Front fog lamp			Continuity
Connector	Terminal		Connector	Terminal	
E228	3	LH	E307	3	Yes
		RH	E354		

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

Daytime running 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 RUNNING LIGHT GROUND CIRCUIT FOR OPEN

1. Turn the ignition switch OFF.
2. Disconnect front fog lamp connector E307 or E354 in question.
3. Check continuity between the front fog lamp connector E307 or E354 and ground.

Connector	Terminal	-	Continuity
LH E307	4	Ground	Yes
RH E354			

Is the inspection result normal?

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

Component Inspection

INFOID:0000000012591803

1. CHECK DAYTIME RUNNING LIGHT RELAY

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

FRONT FOG LAMP CIRCUIT

Description

INFOID:0000000012591804

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:0000000012591805

1.CHECK FRONT FOG LAMP OPERATION

WITHOUT CONSULT
1. Activate IPDM E/R auto active test. Refer to PCS-10, "CONSULT Function (IPDM E/R)".
2. Check that the front fog lamp is turned ON.

WITH CONSULT
1. Select “EXTERNAL LAMPS” in “Active Test” of “IPDM E/R”.
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-92, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012591806

Regarding Wiring Diagram information, refer to EXL-49, "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. Disconnect the front fog lamp harness connector E308 or E353 in question.
2. Turn the ignition switch ON.
3. Turn the front fog lamps ON.
4. Check the voltage between the front fog lamp harness connector E308 or E353 terminal 1 and ground.

(+)			(−)	Voltage
Connector		Terminal		
LH	E308	1	Ground	Battery voltage
RH	E353			

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	E353	1	Yes
LH		79	E308		

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-47, "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	E353	2	Ground	Yes
LH	E308			

Is the inspection result normal?

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

PARKING LAMP CIRCUIT

Description

INFOID:0000000012591807

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:0000000012591808

1.CHECK PARKING LAMP OPERATION

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

WITH CONSULT
1. Select “EXTERNAL LAMPS” in “Active Test” of “IPDM E/R”.
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-94, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012591809

Regarding Wiring Diagram information, refer to EXL-63, "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	2	Ground	Battery voltage
RH	E212			

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

(+)			(−)	Voltage (Approx.)
Connector		Terminal		
LH	E217	2	Ground	Battery voltage
RH	E212			

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

(+)			(−)	Voltage (Approx.)
Connector		Terminal		
LH	B30	1	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	2	Yes
RH			E212		

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	E217	2	Yes
RH			E212		

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	1	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-47, "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	E212			

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

(+)			(−)	Continuity
Connector		Terminal		
LH	E217	7	Ground	Yes
RH	E212			

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

(+)			(−)	Continuity
Connector		Terminal		
LH	B30	4	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:0000000012591810

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:0000000012591811

1.CHECK TURN SIGNAL LAMP

CONSULT
1. Select “FLASHER” in “Active Test” of “BCM (FLASHER)”.
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-97, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012591812

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

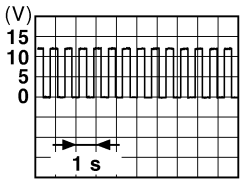
Is the bulb OK?

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

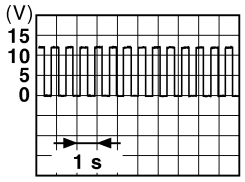
2.CHECK TURN SIGNAL LAMP OUTPUT VOLTAGE

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.

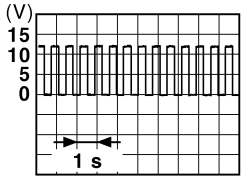
(+)		(–)	Voltage (Approx.)
Connector	Terminal		

RH	E212	3	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	3	Yes
RH		105	E212		

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			Continuity
Connector	Terminal		
M19	92	Ground	No
	103		
M20	105		
	117		

Are the inspection results normal?

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

5. CHECK TURN SIGNAL LAMP GROUND CIRCUIT

1. Turn the ignition switch OFF.
2. 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	E212			

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

Rear combination lamp			(–)	Continuity
Connector		Terminal		
LH	B30	4	Ground	Yes
RH	B45			

4. 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:0000000012591813

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

Component Function Check

INFOID:0000000012591814

1.CHECK OPTICAL SENSOR SIGNAL BY CONSULT

CONSULT
1. Turn the ignition switch ON.
2. Select “OPTI SEN (DTCT)” in “Data Monitor” of “BCM (HEAD LAMP)”.
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-101, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012591815

Regarding Wiring Diagram information, refer to EXL-41, "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 M66 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-81, "Removal and Installation".
NO >> Repair or replace the harness or connectors.

4. CHECK OPTICAL SENSOR SIGNAL OPEN CIRCUIT

1. Disconnect optical sensor connector and BCM connector.
2. Check continuity between optical sensor harness connector and BCM harness connector.

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

3. 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-131, "Removal and Installation".
NO >> Repair or replace harness or connectors.

5. CHECK OPTICAL SENSOR GROUND FOR OPEN CIRCUIT

1. Disconnect the BCM harness connector M17.
2. 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-81, "Removal and Installation".
NO >> Repair or replace harness or connector.

HAZARD SWITCH

Component Function Check

INFOID:0000000012591816

1.CHECK HAZARD SWITCH SIGNAL BY CONSULT

CONSULT DATA MONITOR
1. Turn ignition switch ON.
2. Select “HAZARD SW” in “Data Monitor” of “BCM (FLASHER)”.
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-103, "Diagnosis Procedure".

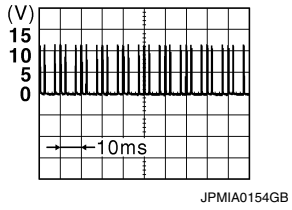
Diagnosis Procedure

INFOID:0000000012591817

Regarding Wiring Diagram information, refer to EXL-55, "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-81, "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-130, "Removal and Installation".
NO >> Repair or replace harness or connector.

SYMPTOM DIAGNOSIS

EXTERIOR LIGHTING SYSTEM SYMPTOMS

Symptom Table

INFOID:0000000012591818

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

Symptom		Possible cause	Inspection item
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-85.
	Both sides	—	**Symptom diagnosis** "BOTH SIDE HEADLAMPS DO NOT SWITCH TO HIGH BEAM" Refer to EXL-108.
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.		• 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-87.
	Both sides	—	**Symptom diagnosis** "BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON" Refer to EXL-110.
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-9.
	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-101.
Daytime running light system does not activate.		—	**Symptom diagnosis** "DAYTIME RUNNING LIGHT SYSTEM INOPERATIVE" Refer to EXL-109.
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-92.
	Both side	—	**Symptom diagnosis** "BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON" Refer to EXL-112.
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-94.
	Both sides	—	**Symptom diagnosis** "PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON" Refer to EXL-111.
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-97.
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-59.
• 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-103.

NORMAL OPERATING CONDITION

Description

INFOID:0000000012591819

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:0000000012591820

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

Diagnosis Procedure

INFOID:0000000012591821

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” in “Data Monitor” of “IPDM E/R”.
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-81, "Removal and Installation".

3.HEADLAMP (HI) CIRCUIT INSPECTION

Check the headlamp (HI) circuit. Refer to EXL-85, "Diagnosis Procedure".

Is the inspection results normal?

YES >> Replace IPDM E/R. Refer to PCS-47, "Removal and Installation".
NO >> Repair or replace the malfunctioning part.

DAYTIME LIGHT SYSTEM INOPERATIVE

Description

INFOID:0000000012591822

The daytime running 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:0000000012591823

1.CHECK DAYTIME RUNNING LIGHT OPERATION

1. Perform “DAYTIME RUNNING LIGHT” in “Active Test” of “BCM”. Refer to BCS-20, "HEADLAMP : CONSULT Function (BCM - HEADLAMP)".
2. Check that the daytime running lights turn on.

Is the inspection results normal?

YES >> Replace BCM. Refer to BCS-81, "Removal and Installation".
NO >> GO TO 2.

2.CHECK DAYTIME RUNNING LIGHT RELAY FUSE

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

Unit	Fuse No.	Capacity
Daytime running light system	43	10 A

Is the fuse blown?

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

3.CHECK DAYTIME RUNNING LIGHT BULBS

Check the daytime running light bulbs are not open.

Is the inspection result normal?

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

4.PERFORM DAYTIME RUNNING LIGHT CIRCUIT INSPECTION

Check the daytime running light circuit. Refer to EXL-89, "Diagnosis Procedure".

Is the inspection results normal?

YES >> Replace IPDM E/R. Refer to PCS-47, "Removal and Installation".
NO >> Repair or replace the malfunctioning part.

BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

Description

INFOID:0000000012591824

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

Diagnosis Procedure

INFOID:0000000012591825

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” in “Data Monitor” of “IPDM E/R”.
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-81, "Removal and Installation".

3.HEADLAMP (LO) CIRCUIT INSPECTION

Check the headlamp (LO) circuit. Refer to EXL-87, "HEADLAMP : Diagnosis Procedure".

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-47, "Removal and Installation".
NO >> Repair or replace the malfunctioning part.

PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON

Description

INFOID:0000000012591826

The parking, license plate and tail lamps do not turn ON in with any lighting switch setting.

Diagnosis Procedure

INFOID:0000000012591827

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” in “Data Monitor” of “IPDM E/R”.
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-81, "Removal and Installation".

3.PARK LAMP CIRCUIT INSPECTION

Check the parking lamp circuit. Refer to EXL-94, "Diagnosis Procedure".

Is the inspection results normal?

YES >> Replace IPDM E/R. Refer to PCS-47, "Removal and Installation".
NO >> Repair or replace the malfunctioning part.

BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

Description

INFOID:0000000012591828

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

Diagnosis Procedure

INFOID:0000000012591829

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” in “Data Monitor” of “IPDM E/R”.
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 1st)	ON	ON
		OFF	OFF

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace BCM. Refer to BCS-81, "Removal and Installation".

3.FRONT FOG LAMP CIRCUIT INSPECTION

Check the front fog lamp circuit. Refer to EXL-92, "Diagnosis Procedure".

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-47, "Removal and Installation".
NO >> Repair or replace the malfunctioning part.

PERIODIC MAINTENANCE

HEADLAMP

Aiming Adjustment

INFOID:0000000012591830

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:

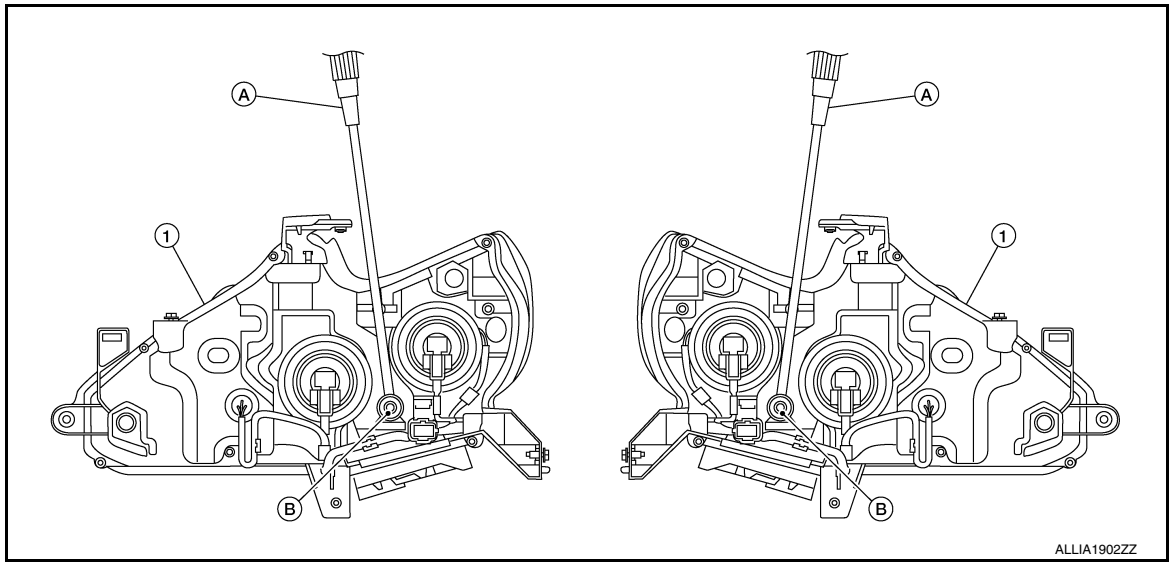
Do not use organic solvent (thinner, gasoline etc.)

- 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.

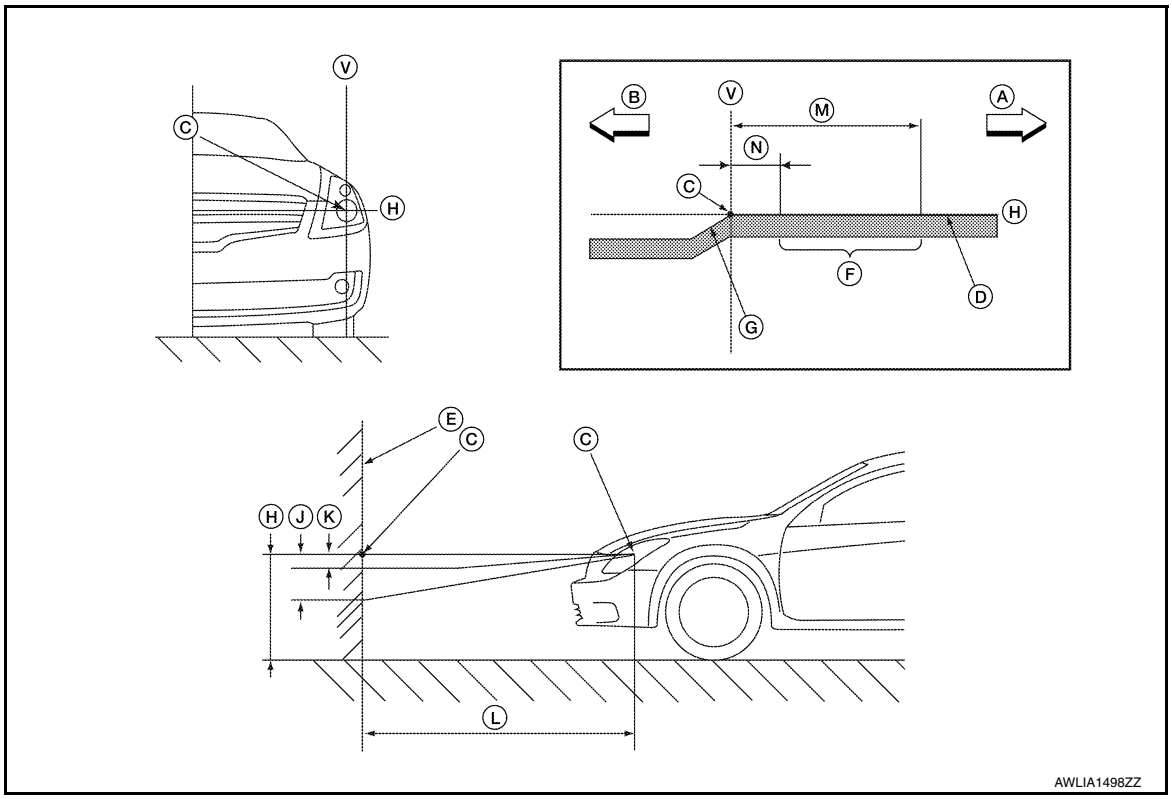


1. Front combination lamp
A. Suitable tool (for aiming adjustment)
B. Adjusting screw

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:0000000012591831

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.

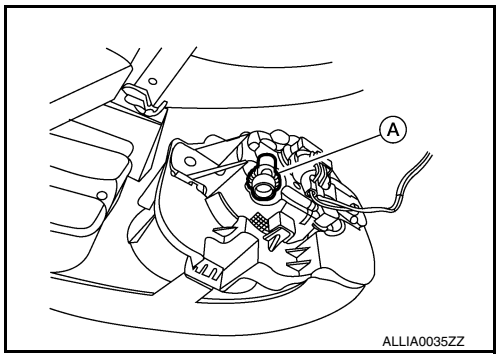
NOTE:

- For fog lamp 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 fog lamp aiming if:

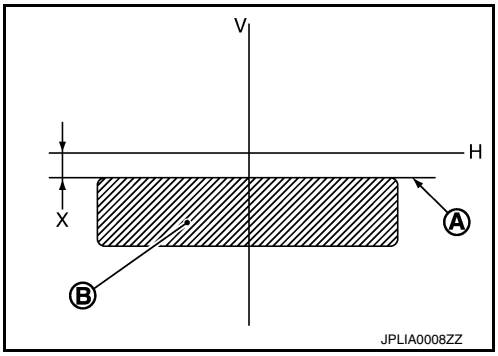
- The vehicle front body has been repaired.
- The front fog lamp has been removed or replaced.
- Any outfitting has been installed.
- The vehicle’s standard load condition has been substantially increased.

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 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).



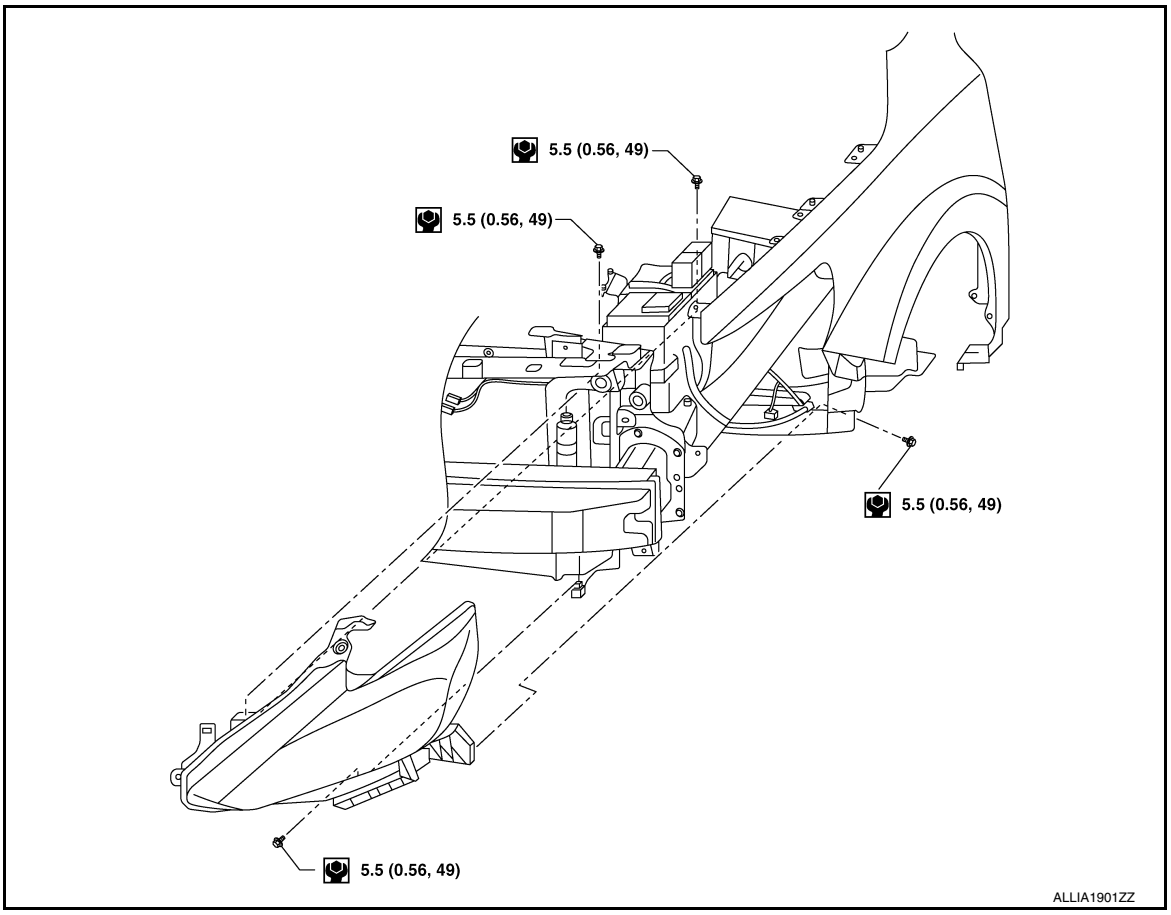
A : Cutoff line
B : High illuminance area
H : Horizontal center line of front fog lamp
V : Vertical center line of front fog lamp
X : Cutoff line height

REMOVAL AND INSTALLATION

FRONT COMBINATION LAMP

Exploded View

INFOID:0000000012591832



1. Front combination lamp

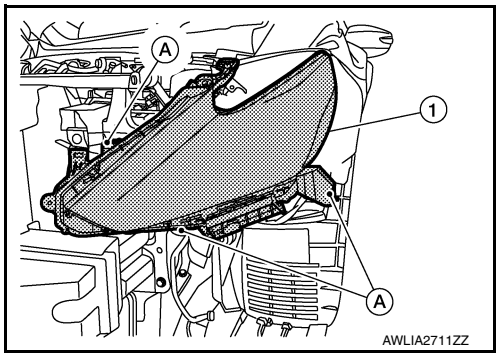
Removal and Installation

INFOID:0000000012591835

FRONT COMBINATION LAMP

Removal

1. Remove the front bumper fascia. Refer to EXT-25, "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 and remove.



Installation

Installation is in the reverse order of removal.

NOTE:
After installation perform headlamp aiming adjustment. Refer to EXL-113, "Aiming Adjustment".

Bulb Replacement

INFOID:0000000012591836

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-36, "FENDER PROTECTOR : Removal and Installation".
2. Rotate the headlamp high beam socket counterclockwise and remove from front combination lamp.
3. Remove the headlamp high beam bulb from harness connector.

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

Removal

1. Position the front fender protector aside. Refer to EXT-36, "FENDER PROTECTOR : Removal and Installation".
2. Rotate the headlamp low beam sockets counterclockwise and remove from front combination lamp.
3. Remove the headlamp low beam bulb from harness connector.

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-36, "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.

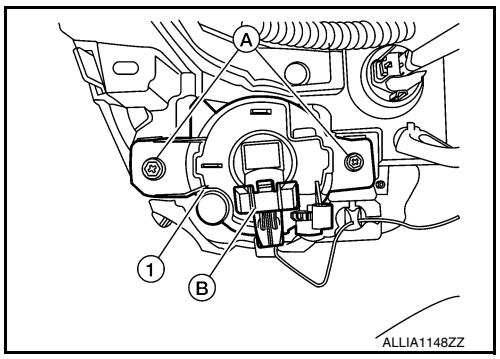
FRONT FOG LAMP

Removal and Installation

INFOID:0000000012591839

REMOVAL

1. Remove the front under cover. Refer to EXT-38, "FRONT UNDER COVER : Removal and Installation"
2. Remove the front fender protector side cover. EXT-36, "FENDER PROTECTOR : Exploded View".
3. Position the fender protector aside. Refer to EXT-36, "FENDER PROTECTOR : Removal and Installation".
4. Disconnect the harness connector (B) from the front fog lamp (1).
5. 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-115, "Aiming Adjustment".

Bulb Replacement

INFOID:0000000012591840

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 under cover. Refer to EXT-38, "FRONT UNDER COVER : Removal and Installation"
2. Remove the front fender protector side cover. EXT-36, "FENDER PROTECTOR : Exploded View".
3. Position the front fender protector aside. Refer to EXT-36, "FENDER PROTECTOR : Removal and Installation".
4. Disconnect the harness connector from the front fog lamp bulb.
5. 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 (CANADA ONLY)

Removal

1. Remove the front under cover. Refer to EXT-38, "FRONT UNDER COVER : Removal and Installation"
2. Remove the front fender protector side cover. EXT-36, "FENDER PROTECTOR : Exploded View".
3. Position the front fender protector aside. Refer to EXT-36, "FENDER PROTECTOR : Removal and Installation".
4. Disconnect the harness connector from the daytime light lamp.

5. 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.

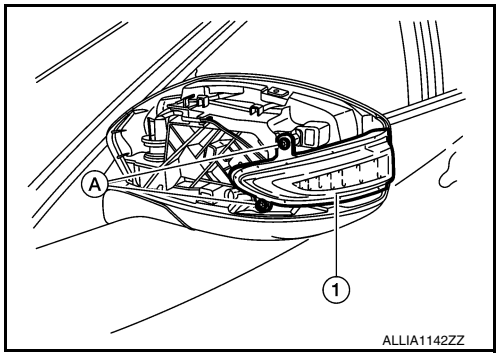
DOOR MIRROR TURN SIGNAL LAMP

Removal and Installation

INFOID:0000000012591841

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:0000000012591842

DOOR MIRROR SIDE TURN SIGNAL LAMP

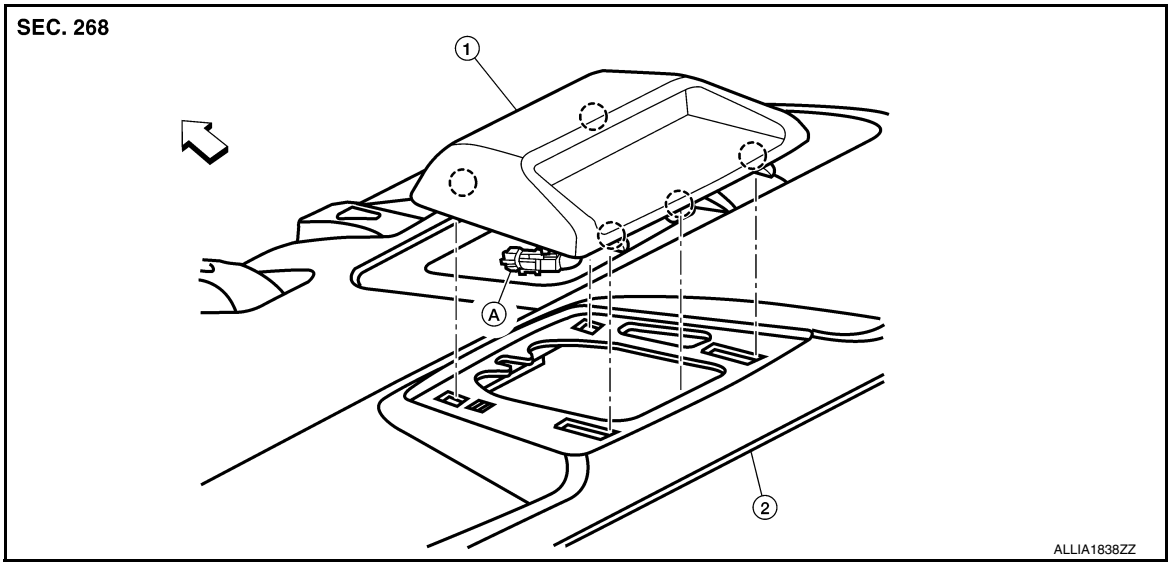
The door mirror side turn signal lamp bulb is integrated into the door mirror side turn signal lamp and is serviced as an assembly. Refer to EXL-121, "Removal and Installation".

HIGH-MOUNTED STOP LAMP

Exploded View

INFOID:0000000012851420

PARCEL SHELF MOUNTED



1. High-mounted stop lamp
2. Rear parcel shelf finisher
A. Harness connector
Pawl
Front

Removal and Installation

INFOID:0000000012591843

REMOVAL

1. Release pawls and lift up on high-mounted stop lamp.
2. Disconnect the harness connector from the high-mounted stop lamp then remove the high-mounted stop lamp.

INSTALLATION

Installation is in the reverse order of removal.

Bulb Replacement

INFOID:0000000012591844

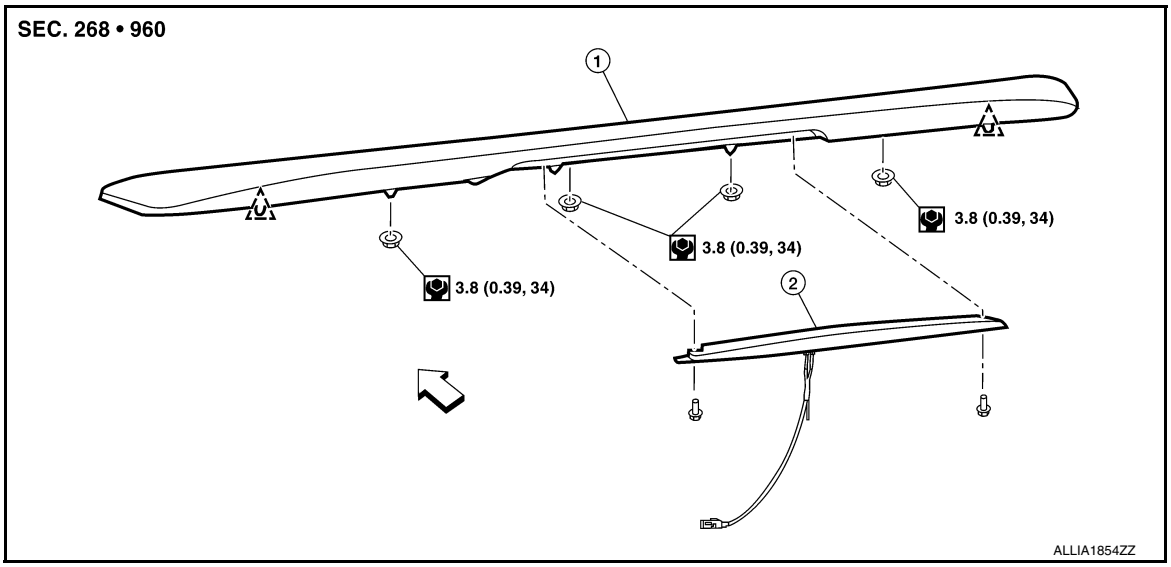
HIGH-MOUNTED STOP LAMP BULB

The high-mounted stop lamp bulb is LED and not serviced separately. Refer to EXL-122, "Removal and Installation".

Exploded View

INFOID:0000000012851421

REAR SPOILER MOUNTED



1. Rear air spoiler
2. High-mounted stop lamp
Clip
Front

Removal and Installation

INFOID:0000000012851422

REMOVAL

1. Remove rear spoiler. Refer to EXT-47, "Removal and Installation".
2. Remove nuts and remove high-mounted stop lamp.

INSTALLATION

Installation is in the reverse order of removal.

Bulb Replacement

INFOID:0000000012851423

HIGH-MOUNTED STOP LAMP BULB

The high-mounted stop lamp bulb is LED and not serviced separately. Refer to EXL-123, "Removal and Installation".

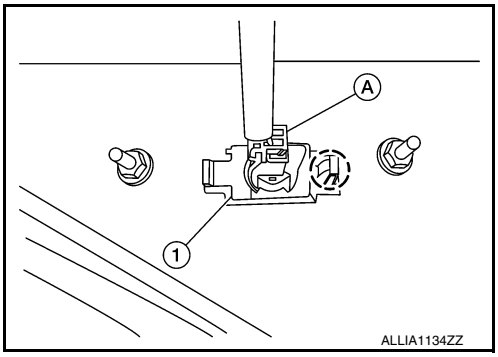
LICENSE PLATE LAMP

Removal and Installation

INFOID:0000000012591845

REMOVAL

1. Remove the license lamp finisher. Refer to EXT-46, "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.

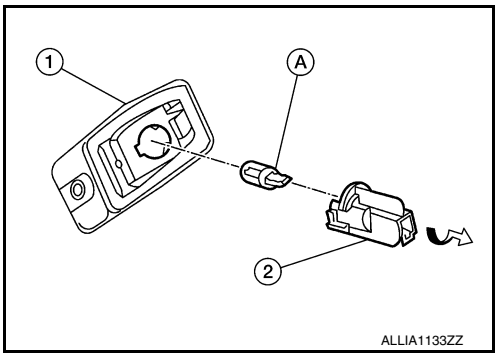
Bulb Replacement

INFOID:0000000012591846

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).



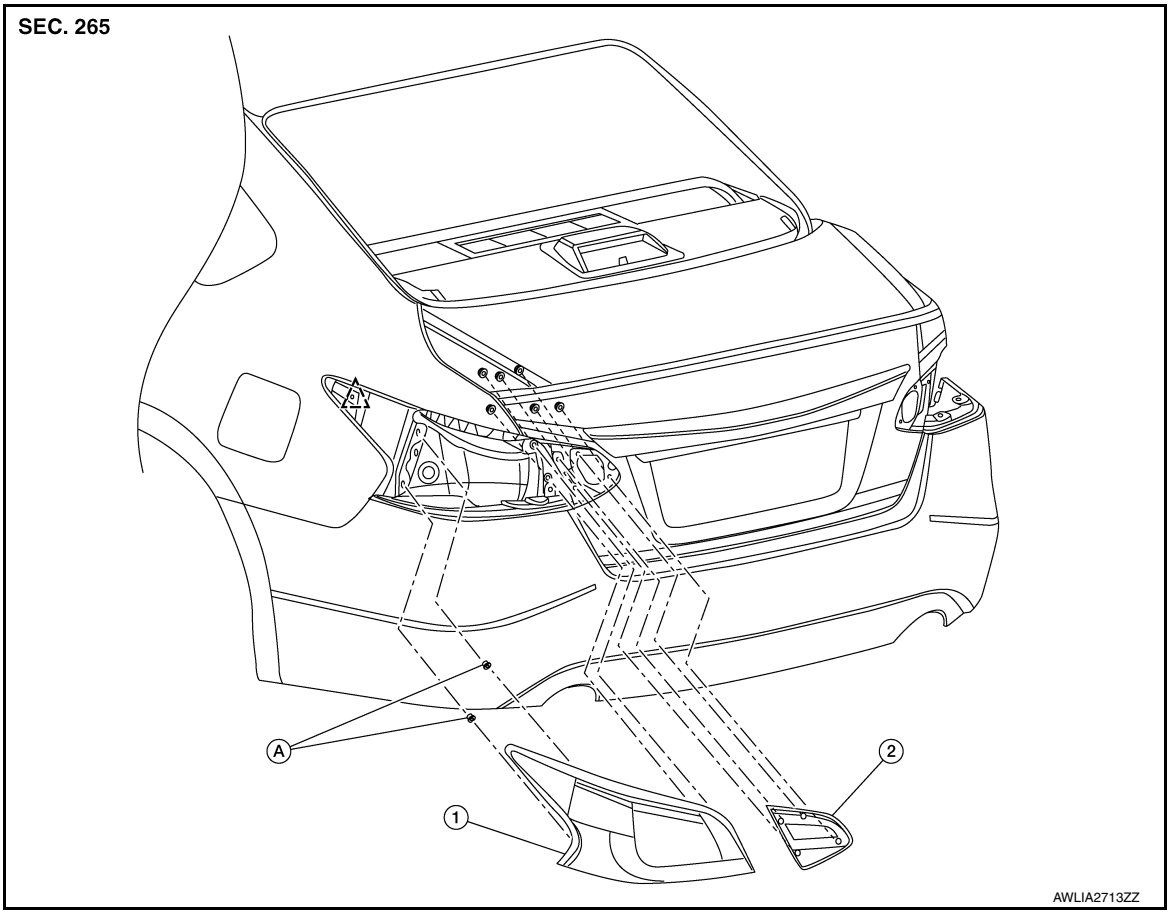
INSTALLATION

Installation is in the reverse order of removal.

REAR COMBINATION LAMP

Exploded View

INFOID:0000000012591847



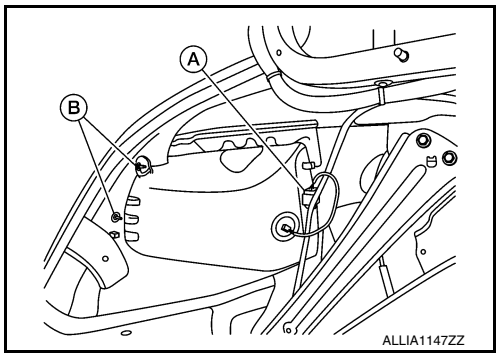
1. Rear combination lamp
2. Back-up lamp
A. Grommet
Clip

Removal and Installation

INFOID:0000000012591848

Removal

1. Remove trunk rear finisher. Refer to INT-34, "TRUNK REAR 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:0000000012591849

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-125, "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

Removal

1. Remove the rear combination lamp. Refer to EXL-125, "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.

SIDE MARKER LAMP BULB

Removal

1. Remove the rear combination lamp. Refer to EXL-125, "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.

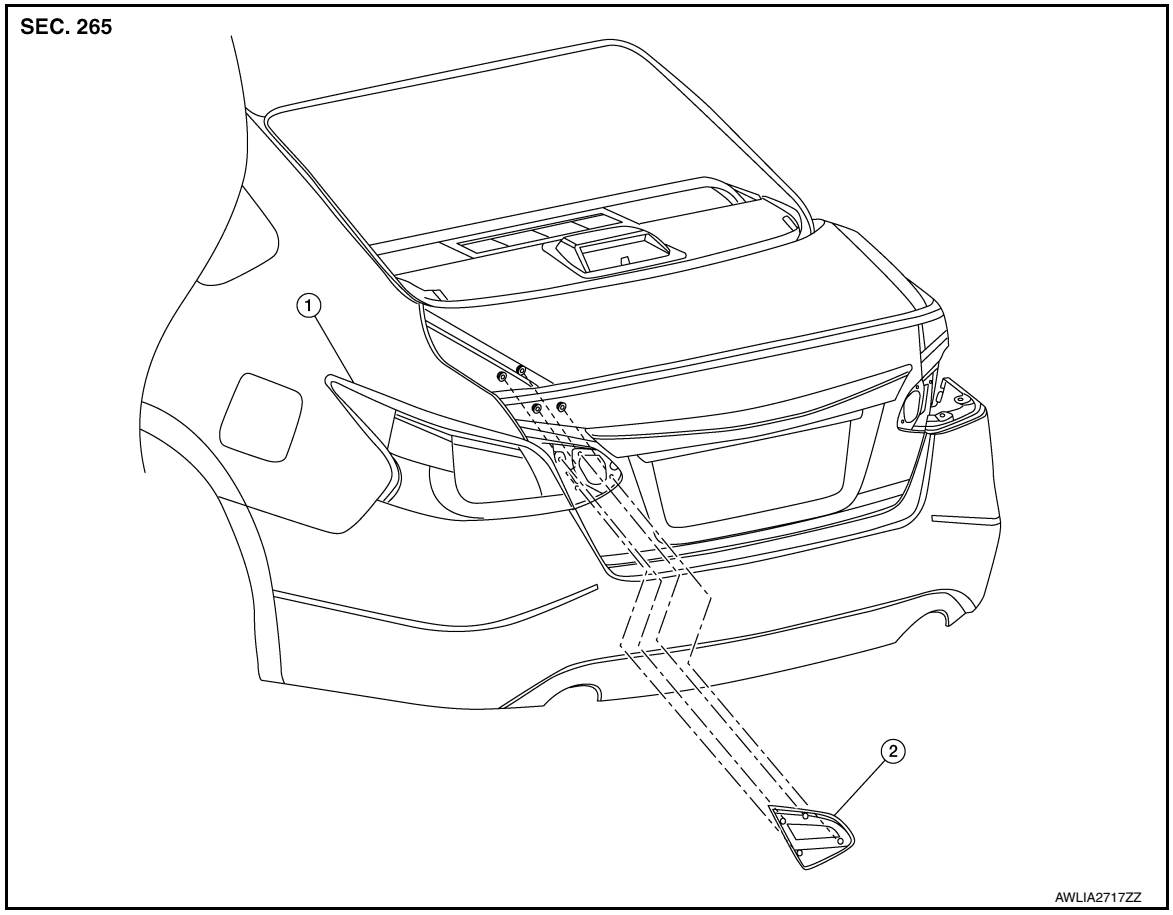
CAUTION:

After installing, be sure to install the bulb socket securely to ensure watertightness.

BACK-UP LAMP

Exploded View

INFOID:0000000012855651



1. Rear combination lamp
2. Back-up lamp
3. Clip

Removal and Installation

INFOID:0000000012851441

REMOVAL

1. Partially remove trunk lid finisher. Refer to INT-33, "Exploded View".
2. Remove back-up lamp assembly nuts.
3. Disconnect the harness connector from the back-up lamp assembly and remove.

INSTALLATION

Installation is in the reverse order of removal.

Bulb Replacement

INFOID:0000000012851442

WARNING:

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

CAUTION:

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

REMOVAL

1. Partially remove trunk lid finisher. Refer to INT-33, "Exploded View".

2. Rotate back-up lamp bulb socket counterclockwise and remove.
3. Remove back-up lamp bulb from bulb socket.

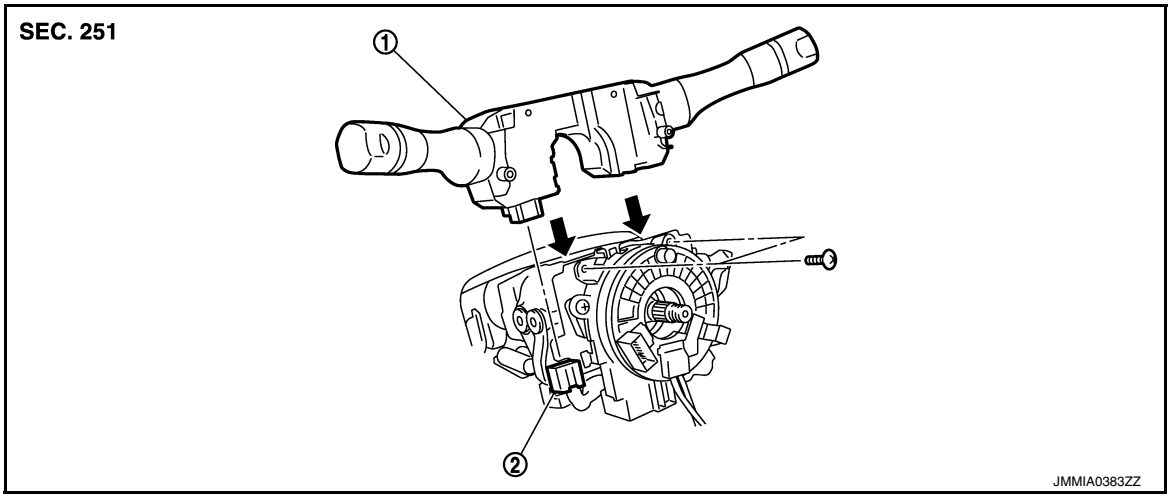
INSTALLATION

Installation is in the reverse order of removal.

COMBINATION SWITCH

Exploded View

INFOID:0000000012591850



1. Combination switch 2. Combination switch harness connector

NOTE:
Shown with the steering wheel removed for clarity only.

Removal and Installation

INFOID:0000000012591851

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-78, "Removal and Installation".
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-16, "SRS Final Check".**

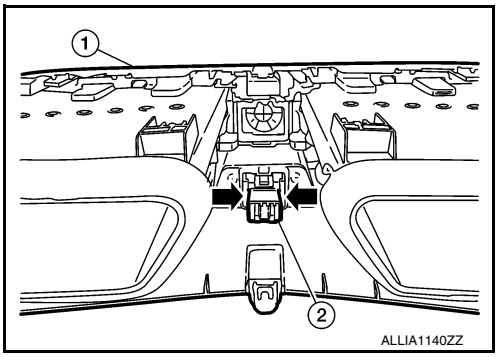
HAZARD SWITCH

Removal and Installation

INFOID:0000000012591852

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.

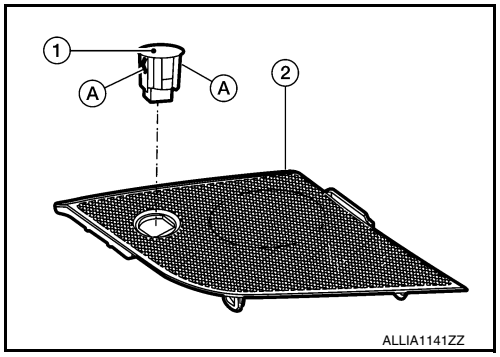
OPTICAL SENSOR

Removal and Installation

INFOID:0000000012591853

REMOVAL

1. Remove the front pillar finisher. Refer to INT-21, "FRONT PILLAR FINISHER : Removal and Installation".
2. Release the front speaker grille (RH) (2) using a suitable tool.
3. Disconnect the harness connector from the optical sensor (1).
4. Release pawls (A) and remove the optical sensor.



INSTALLATION

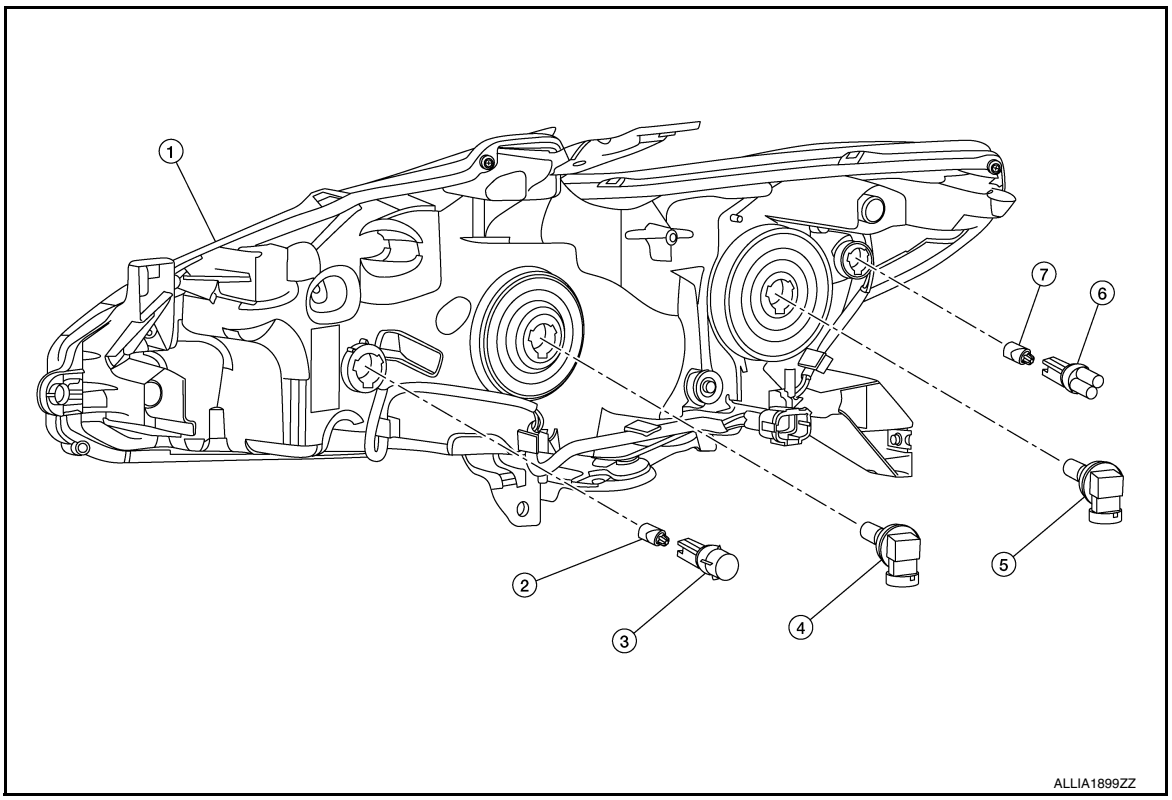
Installation is in the reverse order of removal.

UNIT DISASSEMBLY AND ASSEMBLY

FRONT COMBINATION LAMP

Exploded View

INFOID:0000000012591856



1. Front combination lamp
2. Turn signal/parking lamp bulb
3. Turn signal/parking lamp socket
4. Halogen lamp bulb (high beam)
5. Halogen lamp bulb (low beam)
6. Side marker bulb socket
7. Side marker bulb

Disassembly and Assembly

INFOID:0000000012591857

FRONT COMBINATION LAMP

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-117, "Removal and Installation".
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.
6. Rotate the turn signal/parking bulb socket counterclockwise and remove.
7. Remove the turn signal/parking bulb from the turn signal/parking bulb socket.

Assembly

Assembly is in the reverse order of disassembly.

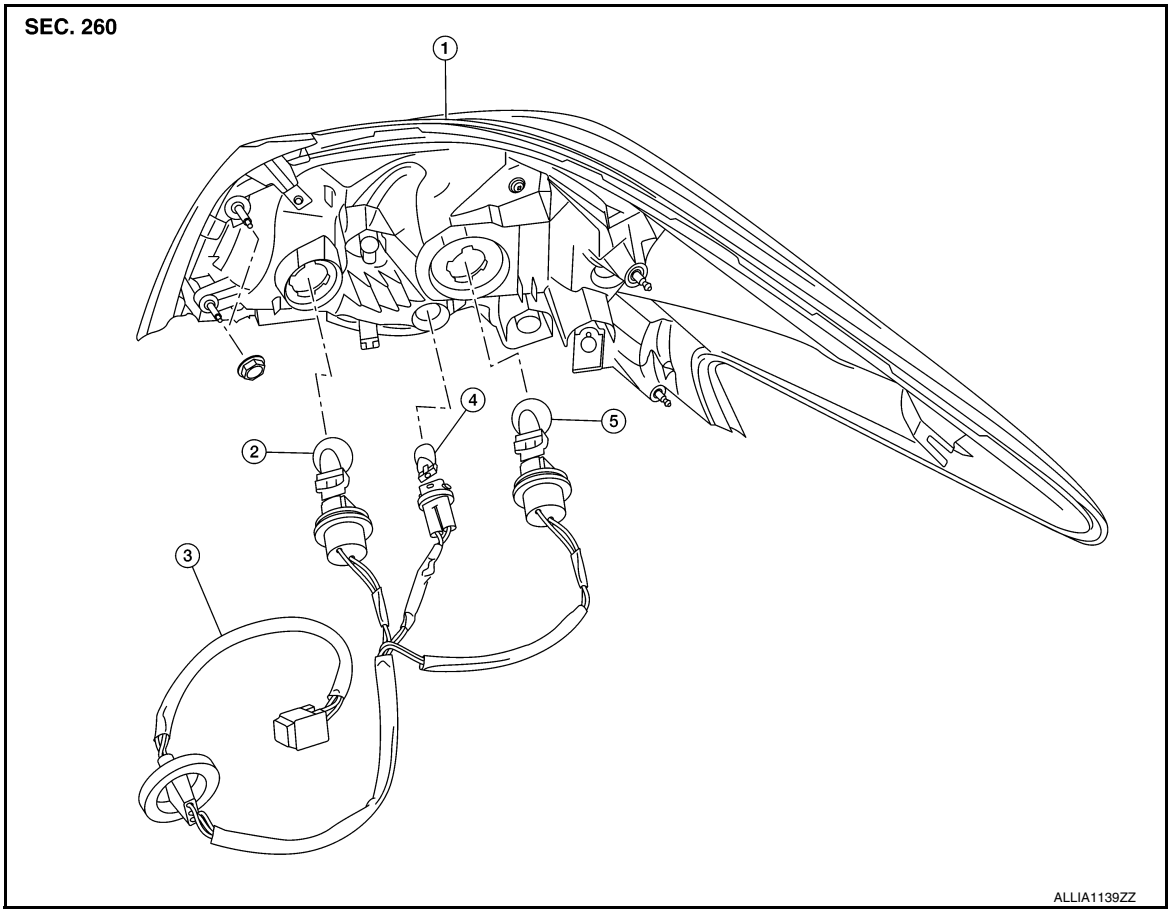
CAUTION:

After installing, be sure to install the bulb sockets securely to ensure watertightness.

REAR COMBINATION LAMP

Exploded View

INFOID:0000000012591858



1. Rear combination lamp
2. Rear turn signal lamp bulb
3. Rear combination lamp harness
4. Side marker lamp bulb
5. Stop/Tail lamp bulb

Disassembly and Assembly

INFOID:0000000012591859

REAR COMBINATION LAMP

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-125, "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 side marker lamp bulb socket counterclockwise to remove from rear combination lamp.
5. Remove the side marker 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.

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Bulb Specifications

INFOID:0000000012591862

Item		Wattage (W)*
Front combination lamp	Low beam	55
	High beam	65
	Side marker lamp	5
	Turn signal/Park lamp	5
Door mirror side turn signal lamp (if equipped)		—
Rear combination lamp	Stop/Tail lamp	21/5
	Turn signal lamp	21
	Side marker lamp	5
Back-up lamp		16
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	—
	Rear spoiler mounted	—

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

PRECAUTION

PRECAUTIONS

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

INFOID:0000000012830888

The Supplemental Restraint System such as “AIR BAG” and “SEAT BELT PRE-TENSIONER”, used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

WARNING:

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

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

WARNING:

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

Precaution for Work

INFOID:0000000012830889

- 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.

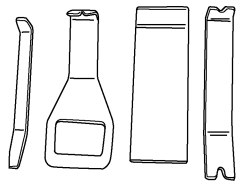
PREPARATION

PREPARATION

Special Service Tool

INFOID:0000000012830890

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

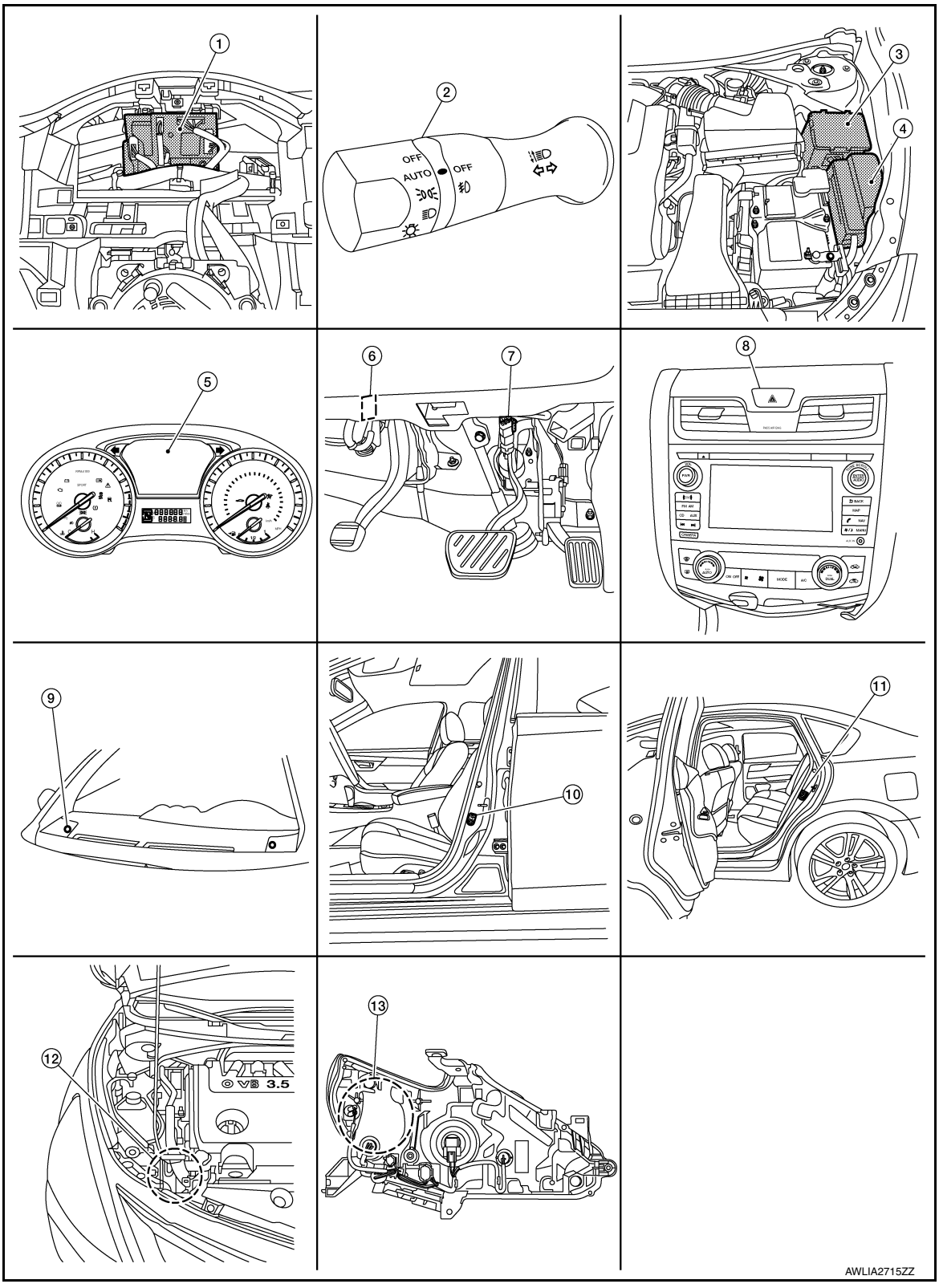
Tool number (TechMate No.) Tool name	Description
— (J-46534) Trim Tool Set  AWJIA0483ZZ	Removing trim components

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000012830891

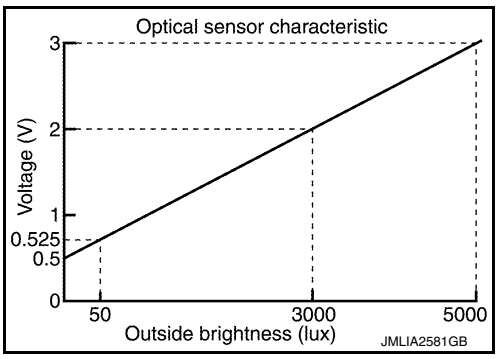


No.	Part	Function
1.	BCM (view with combination meter removed)	• Detects each switch condition by the combination switch reading function. • Judges that the exterior lamps are turned ON according to the vehicle condition. • Requests the headlamp (HI/LO), tail lamp and front fog lamp ON to IPDM E/R (via CAN communication). • Requests high beam indicator lamp ON to the combination meter (via CAN communication). • Judges the outside brightness from the optical sensor signal. • Judges the ON/OFF timing according to the vehicle condition. • Judges the ON/OFF status of the exterior lamp according to the outside brightness and the vehicle condition. • Refer to BCS-5, "BODY CONTROL SYSTEM : Component Parts Location" for detailed installation location.
2.	Combination switch (lighting and turn signal switch)	Refer to BCS-6, "COMBINATION SWITCH READING SYSTEM : Component Parts Location" for detailed installation location.
3.	IPDM E/R (Headlamp high relay, Headlamp low relay, Tail lamp relay and Front fog lamp relay)	• Supplies voltage to the load according to the request from BCM (via CAN communication). • Refer to PCS-5, "Component Parts Location" for detailed installation location.
4.	Fuse, fusible link and relay box(Stop lamp relay)	Transmits power to the stop lamps when the brake pedal is pressed.
5.	Combination meter	Refer to MWI-6, "METER SYSTEM : Component Parts Location".
6.	Parking brake switch	Transmits the parking brake switch signal to the combination meter to operate the daytime running light system.
7.	Stop lamp switch	Transmits power to the stop lamp relay when the brake pedal is pressed to operate stop lamps.
8.	Hazard switch	Refer to EXL-141, "Hazard Switch" for detailed installation location.
9.	Optical sensor	Refer to EXL-140, "Optical Sensor".
10.	Front door switch LH(RH similar)	Transmits the door open signal to the BCM to operate the autolight system.
11.	Rear door switch LH(RH similar)	
12.	Daytime running light relay	• Supplies voltage to the daytime running lamps according to request from IPDM E/R. • Refer to EXL-141, "Daytime Running Light Relay".
13.	LED headlamp control module (View with left front headlamp assembly removed)	LED headlamp control module is integrated into the front combination lamp and turns the LED headlamp ON according to the request from IPDM E/R.

Optical Sensor

INFOID:0000000012830892

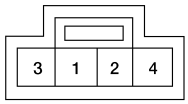
Optical sensor converts the outside brightness (lux) to voltage and transmits the optical sensor signal to BCM.



Hazard Switch

INFOID:0000000012830893

Inputs the hazard switch ON/OFF signal to BCM.



		OFF	ON
2	Hazard switch ON/OFF signal		
1	Ground		
3	Illumination +		
4	Illumination -		

AWLIA2706GB

Daytime Running Light Relay

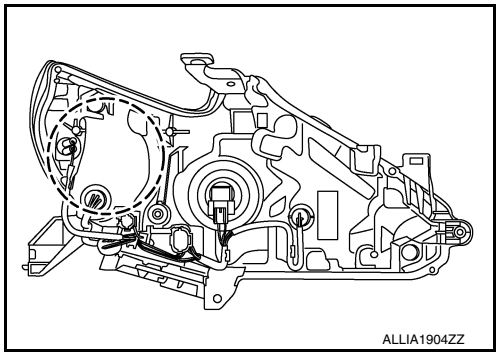
INFOID:0000000012830894

Power is provided to the daytime running light relay according to request from IPDM E/R.

LED Headlamp Control Module

INFOID:0000000012830895

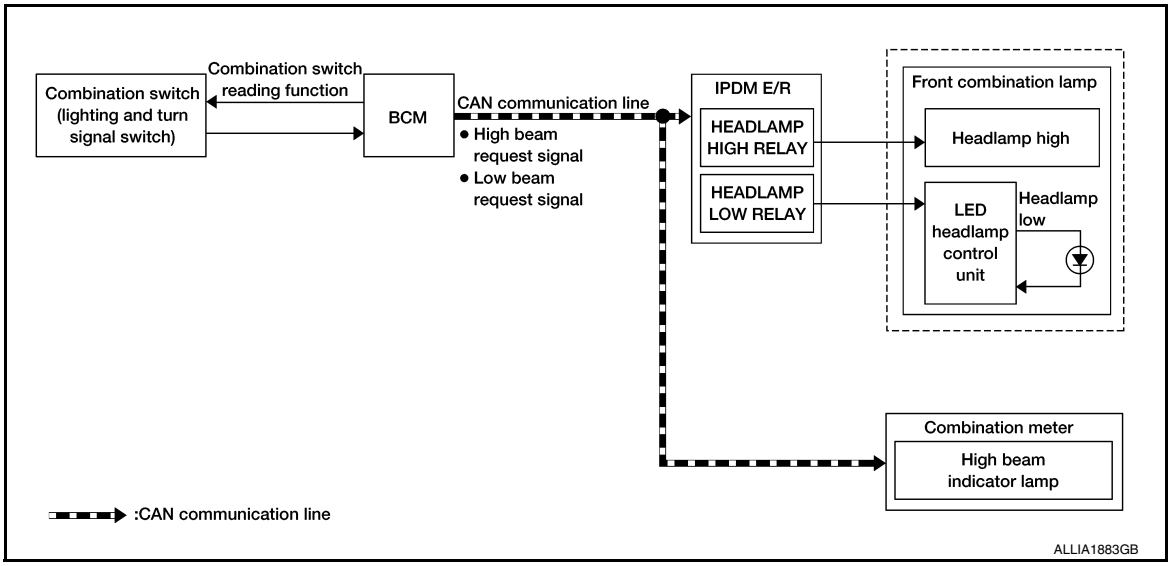
- LED headlamp control module is integrated into the front combination lamp and turns the LED headlamp ON according to the request from IPDM E/R.



SYSTEM
HEADLAMP SYSTEM
HEADLAMP SYSTEM : System Description

INFOID:0000000012830896

SYSTEM DIAGRAM



OUTLINE

Headlamp is controlled by combination switch (lighting and turn signal switch) reading function, headlamp control function of BCM, and relay control function of IPDM E/R.

HEADLAMP (LO) OPERATION

- BCM detects the combination switch (lighting and turn signal switch) condition with the combination switch (lighting and turn signal switch) reading function.
- BCM transmits the low beam request signal to IPDM E/R and the combination meter with CAN communication according to the headlamp (LO) ON condition.

Headlamp (LO) ON condition:
- Lighting switch 2ND
- Lighting switch AUTO with the ignition switch ON (Only when the illumination judgment by auto light system is ON. For details, refer to EXL-143, "AUTO LIGHT SYSTEM : System Description".)
- Lighting switch PASS

- IPDM E/R turns the integrated headlamp low relay ON according to low beam request signal and supplies power supply to LED headlamp control unit.
- LED headlamp control unit turns the headlamp (LO) ON according to the power supply from IPDM E/R.

HEADLAMP (HI) OPERATION

- BCM transmits the high beam request signal to IPDM E/R and the combination meter with CAN communication according to the headlamp (HI) ON condition.

Headlamp (HI) ON condition:
- Lighting switch HI with the lighting switch 2ND
- Lighting switch HI with the lighting switch AUTO and ignition switch ON (Only when the illumination judgment by auto light system is ON and the illumination judgment by high beam assist system is ON. For details, refer to EXL-143, "AUTO LIGHT SYSTEM : System Description".)
- Lighting switch PASS

- Combination meter turns the high beam indicator lamp ON according to the high beam request signal.
- IPDM E/R turns the integrated headlamp high relay ON according to high beam request signal.

EXTERIOR LAMP BATTERY SAVER CONTROL

With the combination switch (lighting and turn signal switch) in the 2ND position and the ignition switch 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.

HEADLAMP WARNING OPERATION

Headlamp warning warns the driver that there is a malfunction in LED headlamp system. Refer to MWI-15, "INFORMATION DISPLAY : System Description".

HEADLAMP SYSTEM : Fail-safe

INFOID:0000000012830897

CAN COMMUNICATION CONTROL

When CAN communication with BCM is impossible, IPDM E/R performs fail-safe control. After CAN communication recovers normally, it also returns to normal control.

If No CAN Communication Is Available With BCM

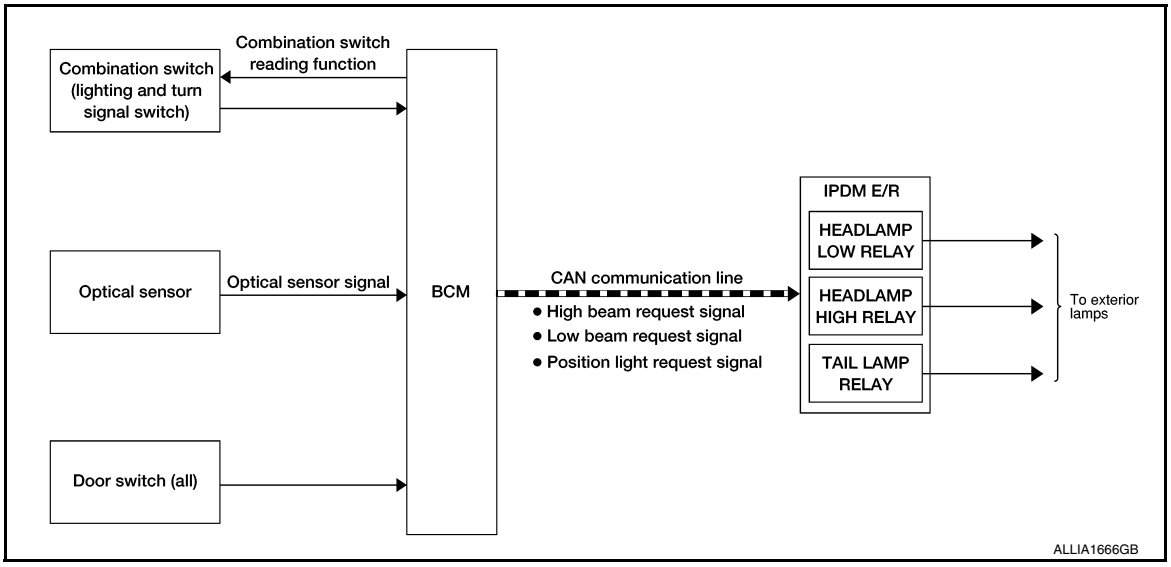
Control part	Fail-safe operation
Headlamp	• Turns ON the headlamp low relay when the ignition switch is turned ON • Turns OFF the headlamp low relay when the ignition switch is turned OFF • Headlamp high relay OFF

AUTO LIGHT SYSTEM

AUTO LIGHT SYSTEM : System Description

INFOID:0000000012830898

SYSTEM DIAGRAM



OUTLINE

• Auto light system is controlled by each function of BCM and IPDM E/R.

Control by BCM:
- Combination switch (lighting and turn signal switch) reading function
- Headlamp control function
- Auto light function
- Delay timer function
- Auto light adjustment system

Control by IPDM E/R:
- Relay control function

• Auto light system has the auto light function and delay timer function.
- Auto light function automatically turns ON/OFF the exterior lamps* and each illumination automatically, depending on the outside brightness.
- When auto light system turns the exterior lamps ON with the ignition switch OFF, delay timer function turns the exterior lamps OFF, depending on the vehicle condition with the auto light function after a certain period of time.

*: Headlamps (LO/HI), parking lamps, side marker lamps and tail lamps. Headlamp (HI) depends on the combination switch (lighting and turn signal switch) condition.

AUTO LIGHT FUNCTION

- BCM detects the combination switch (lighting and turn signal switch) condition with the combination switch (lighting and turn signal switch) reading function.
- BCM supplies voltage to optical sensor when the ignition switch is turned to ON or ACC.
- Optical sensor converts outside brightness (lux) to voltage and transmits the optical sensor signal to BCM.
- BCM judges outside brightness from the optical sensor signal and judges ON/OFF condition of the exterior lamp and each illumination according to the outside brightness.
- BCM transmits each request signal to IPDM E/R and combination meter via CAN communication according to ON/OFF condition of the auto light function.

NOTE:
ON/OFF timing differs based on the sensitivity of the setting. The setting can be set by CONSULT. Refer to BCS-20, "HEADLAMP : CONSULT Function (BCM - HEADLAMP)".

AUTO LIGHT ADJUSTMENT SYSTEM

The auto light adjustment system automatically dims/brightens the display, according to brightness outside thevehicle, when lighting switch 1ST, lighting switch 2ND or lighting switch AUTO is operated. Refer to EXL-143, "AUTO LIGHT SYSTEM : System Description".

DELAY TIMER FUNCTION

BCM turns the exterior lamp OFF depending on the vehicle condition with the auto light function when the ignition switch is turned OFF.

- Turns the exterior lamp OFF 5 minutes after detecting that any door opens (Door switch ON).
- Turns the exterior lamp OFF a certain period of time* after closing all doors (Door switch ON→OFF).
- Turns the exterior lamp OFF with the ignition switch to ACC or the light switch OFF.

*: The preset time is 45 seconds. The timer operating time can be set by CONSULT. Refer to BCS-20, "HEADLAMP : CONSULT Function (BCM - HEADLAMP)".

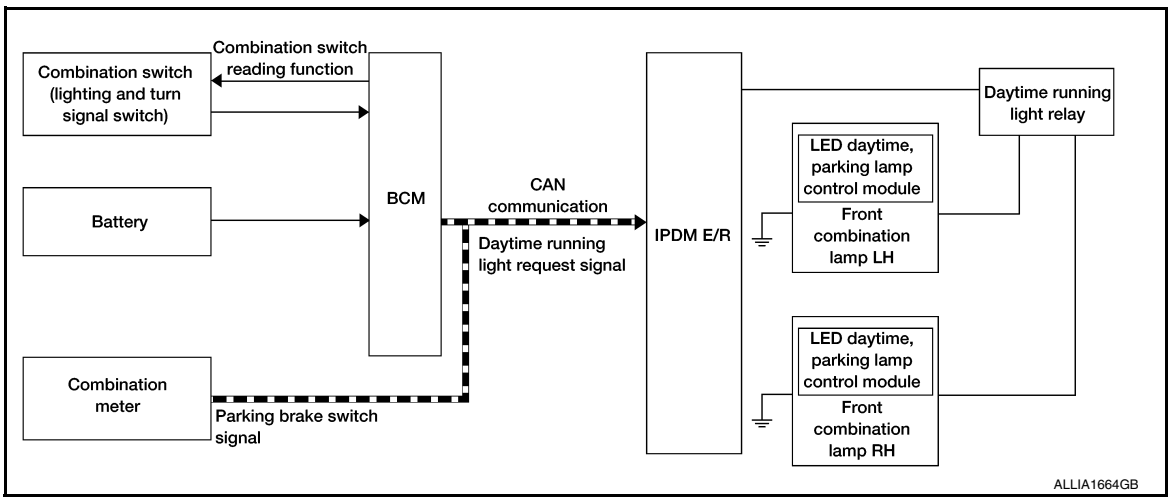
NOTE:
When any position other than the light switch AUTO is set, the auto light system function switches to the exterior lamp battery saver function.

DAYTIME RUNNING LIGHT SYSTEM

DAYTIME RUNNING LIGHT SYSTEM : System Description

INFOID:0000000012830899

SYSTEM DIAGRAM



OUTLINE

- Turns the front combination lamps on through the LED daytime parking lamp control module as the daytime running light.
- Daytime running light is controlled by daytime running light control function and combination switch (lighting and turn signal switch) reading function of BCM and relay control function of IPDM E/R.

DAYTIME RUNNING LIGHT OPERATION

- BCM detects the combination switch (lighting and turn signal switch) condition by the combination switch (lighting and turn signal switch) reading function.
- BCM detects the vehicle condition according to ignition switch.

- BCM detects the parking brake condition by the parking brake switch signal received from combination meter using CAN communication.
- BCM transmits the daytime running light request signal to IPDM E/R using CAN communication according to the daytime running light ON condition.

Daytime running light ON condition:
- Vehicle condition READY
- Lighting switch OFF or 1ST
- Lighting switch AUTO and the auto light function OFF judgment
- Parking brake switch OFF

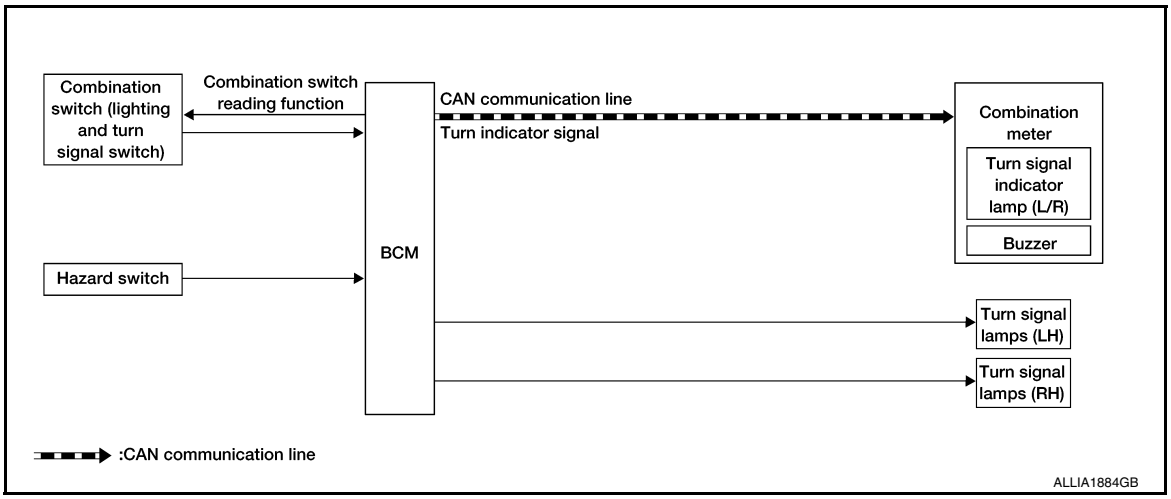
- IPDM E/R controls the daytime running light relay (ground-side) to turn ON according to the daytime running light request signal.
- Power is supplied from the daytime running light relay to front combination lamp RH and LH, and then daytime running lamps are illuminated.

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM : System Description

INFOID:0000000012830900

SYSTEM DIAGRAM



OUTLINE

Turn signal lamp and the hazard warning lamp are controlled by combination switch (lighting and turn signal switch) reading function and the flasher control function of BCM.

TURN SIGNAL LAMP OPERATION

- BCM detects the combination switch (lighting and turn signal switch) condition by the combination switch (lighting and turn signal switch) reading function.
- BCM supplies voltage to the right (left) turn signal lamp circuit when the ignition switch is ON and the turn signal switch is in the right (left) position. BCM blinks the turn signal lamp.

HAZARD WARNING LAMP OPERATION

BCM supplies voltage to both turn signal lamp circuits when the hazard switch is ON. BCM blinks the hazard warning lamp.

TURN SIGNAL INDICATOR LAMP AND TURN SIGNAL OPERATION

- BCM transmits the turn signal indicator lamp signal to the combination meter using CAN communication while the turn signal lamp and the hazard warning lamp are operating.
- Combination meter outputs the turn signal sound with the integrated buzzer while blinking the turn signal indicator lamp according to the turn signal indicator lamp signal.

3-TIME FLASH FUNCTION

- By a short touch of the turn signal lever, BCM blinks the turn signal three times in the selected direction.
- Cancels the operation with a short touch of the turn signal lever in the reverse direction during the 3-time flasher function operation.

HIGH FLASHER OPERATION

- BCM detects the turn signal lamp circuit status from the current value.
- BCM increases the turn signal lamp blinking speed if the bulb or harness open is detected with the turn signal lamp operating.

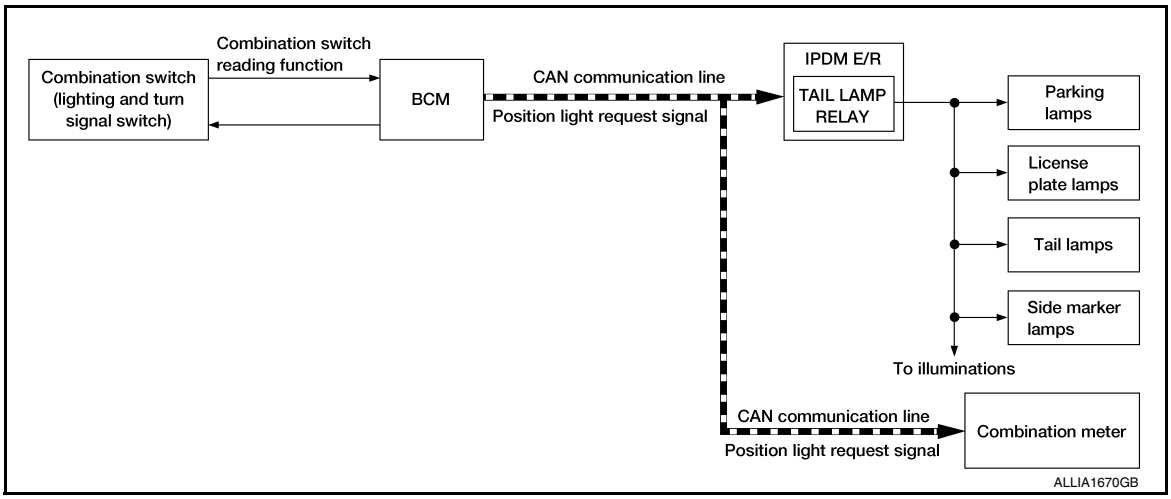
NOTE:
The blinking speed is normal while operating the hazard warning lamp.

PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMP SYSTEM

PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMP SYSTEM : System Description

INFOID:0000000012830901

SYSTEM DIAGRAM



OUTLINE

Parking, license plate, side marker and tail lamps are controlled by combination switch (lighting and turn signal switch) reading function, headlamp control function of BCM, and relay control function of IPDM E/R.

PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMP OPERATION

- BCM detects the combination switch (lighting and turn signal switch) condition by the combination switch (lighting and turn signal switch) reading function.
- BCM transmits the position light request signal to IPDM E/R and the combination meter via CAN communication according to the ON/OFF condition of the parking, license plate, side marker and tail lamps.

Parking, license plate, side marker and tail lamp ON condition:
- Lighting switch 1ST
- Lighting switch 2ND
- Lighting switch AUTO and the auto light function ON judgment
- Lighting switch AUTO with the front fog lamp switch ON and the ignition switch ON

- IPDM E/R turns the integrated tail lamp relay ON and turns the parking, license plate, side marker and tail lamps ON according to the position light request signal.
- Combination meter turns the tail lamp indicator lamp ON according to the position light request signal.

PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMP SYSTEM : Fail-Safe

INFOID:0000000012830902

CAN COMMUNICATION CONTROL

When CAN communication with BCM is impossible, IPDM E/R performs fail-safe control. After CAN communication recovers normally, it also returns to normal control.

If No CAN Communication Is Available With BCM

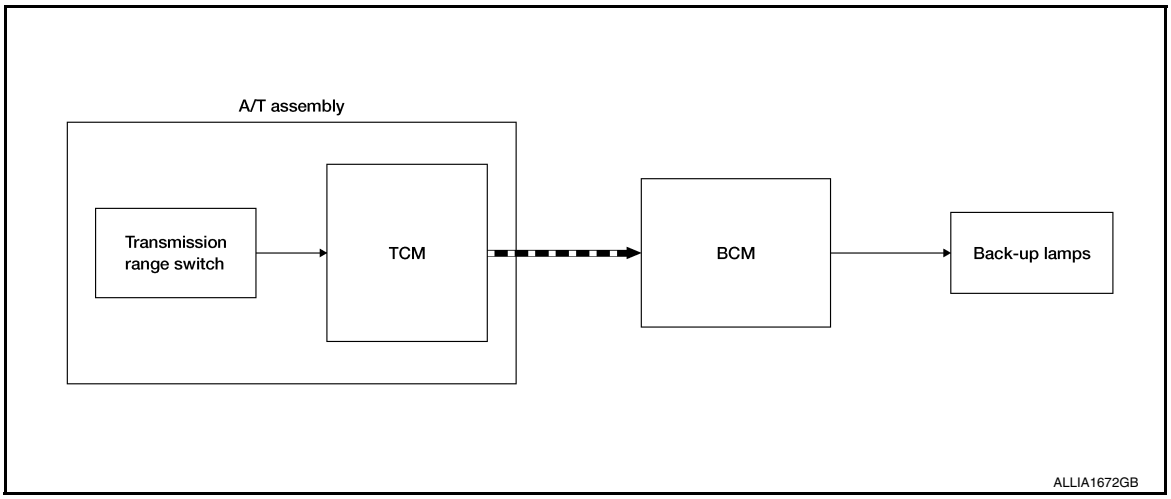
Control part	Fail-safe operation
• Parking lamps • License plate lamps • Illumination • Tail lamps • Side marker lamps	• Turns ON the tail lamp relay when the ignition switch is turned ON • Turns OFF the tail lamp relay when the ignition switch is turned OFF

BACK-UP LAMP SYSTEM

BACK-UP LAMP SYSTEM : System Description

INFOID:0000000012830903

SYSTEM DIAGRAM



OUTLINE

Back-up lamp is controlled by back-up lamp control function of TCM.

BACK-UP LAMP OPERATION

- TCM detects the shift selector lever position status from transmission range switch.
- TCM sends request signal via CAN communication and turns the back-up lamps ON when back-up lamp conditions are satisfied.

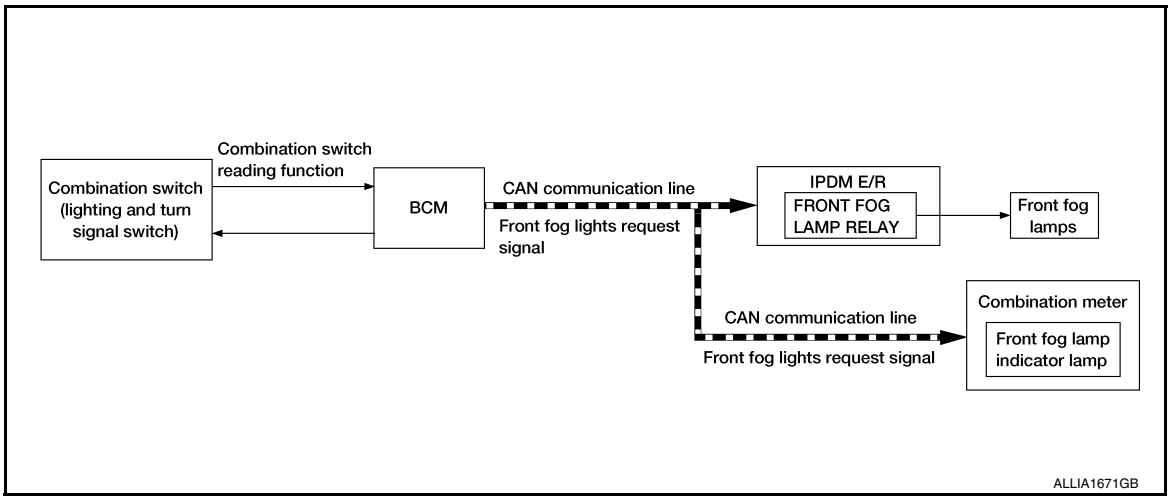
Back-up lamp ON condition:
- Ignition switch ON
- Shift selector lever position R

FRONT FOG LAMP SYSTEM

FRONT FOG LAMP SYSTEM : System Description

INFOID:0000000012830904

SYSTEM DIAGRAM



OUTLINE

Front fog lamp is controlled by combination switch (lighting and turn signal switch) reading function, front fog lamp control function of BCM, and relay control function of IPDM E/R.

FRONT FOG LAMP OPERATION

- BCM detects the combination switch (lighting and turn signal switch) condition by the combination switch (lighting and turn signal switch) reading function.
- BCM transmits the front fog lights request signal to IPDM E/R and the combination meter via CAN communication according to the front fog lamp ON condition.

Front fog lamp ON condition:
- Front fog lamp switch ON, and any of the following conditions are satisfied (except for the high beam ON):
- Lighting switch 2ND
- Lighting switch AUTO and the ignition switch ON

IPDM E/R turns the integrated front fog lamp relay ON and turns the front fog lamp ON according to the front fog lights request signal.
Combination meter turns the front fog lamp indicator lamp ON according to the front fog lights request signal.

FRONT FOG LAMP SYSTEM : Fail-Safe

INFOID:0000000012830905

CAN COMMUNICATION CONTROL

When CAN communication with BCM is impossible, IPDM E/R performs fail-safe control. After CAN communication recovers normally, it also returns to normal control.

If No CAN Communication Is Available With BCM

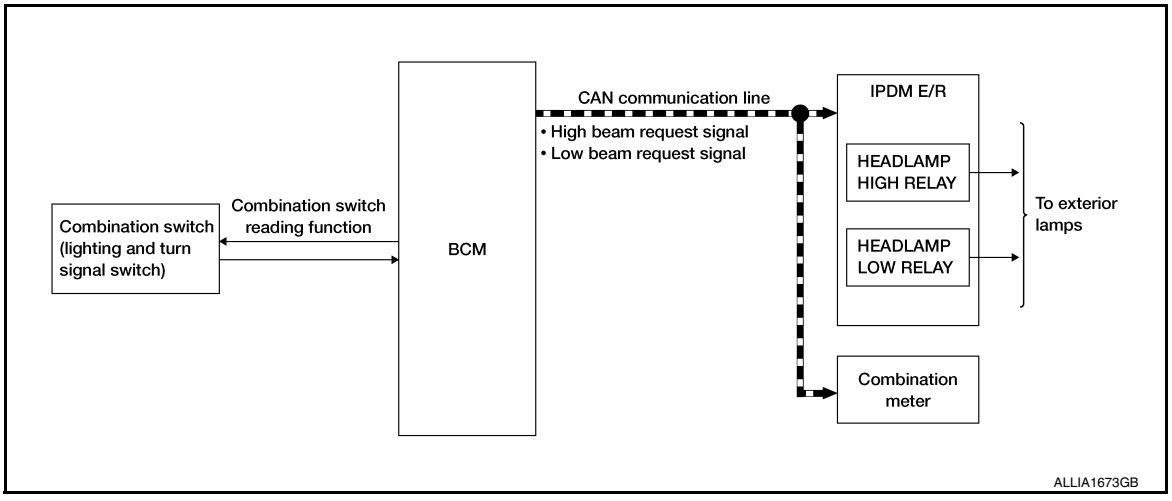
Control part	Fail-safe operation
Front fog lamp	Front fog lamp relay OFF

EXTERIOR LAMP BATTERY SAVER SYSTEM

EXTERIOR LAMP BATTERY SAVER SYSTEM : System Description

INFOID:0000000012830906

SYSTEM DIAGRAM



OUTLINE

- Exterior lamp battery saver system is controlled by each function of BCM and IPDM E/R.

Control by BCM:
- Combination switch (lighting and turn signal switch) reading function
- Exterior lamp battery saver function

Control by IPDM E/R:
- Relay control function
- BCM turns the exterior lamp OFF* according to the vehicle status when ignition switch is turned OFF while exterior lamp is ON to prevent battery discharge.

*: Headlamp (HI/LO).

EXTERIOR LAMP BATTERY SAVER ACTIVATION

- BCM activates the timer and turns the exterior lamp OFF 45 seconds after the ignition switch is turned from ON→OFF with the exterior lamps ON.
- When in any of following conditions (after the exterior lamp battery saver is activated), exterior lamps can be turned ON:
- Ignition switch is turned from OFF→ACC/ON.
- Lighting switch is changed.

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

INFOID:0000000012868574

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

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

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

SYSTEM APPLICATION
BCM can perform the following functions.

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

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

HEAD LAMP

HEAD LAMP : CONSULT Function (BCM - HEADLAMP)

INFOID:0000000012868575

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.
OPTICAL SENSOR [On/Off]	Indicates condition of optical sensor.

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:0000000012868747

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 unlock signal from Intelligent Key.
RKE-PANIC [On/Off]	Indicates condition of panic alarm signal from Intelligent Key.

ACTIVE TEST

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

WORK SUPPORT

Support Item	Setting	Description
3-TIME FLASHER SETTING	On	3-Time flasher setting ON.
	Off*	3-Time flasher setting OFF.

* : Initial setting

INT LAMP

INT LAMP : CONSULT Function (BCM - INT LAMP)

INFOID:0000000012868748

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

DATA MONITOR

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

ACTIVE TEST

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

WORK SUPPORT

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

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

Support Item	Setting	Description
FOG LAMP OVERRIDE	On*	Fog lamp override function ON.
	Off	Fog lamp override function OFF.

* : Initial setting

DOOR LOCK

DOOR LOCK : CONSULT Function (BCM - DOOR LOCK)

INFOID:0000000012868749

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

SELF DIAGNOSTIC RESULT

Refer to BCS-52, "DTC Index".

DATA MONITOR

Monitor Item [Unit]	Description
REQ SW-DR [On/Off]	Indicates condition of door request switch LH.
REQ SW-AS [On/Off]	Indicates condition of door request switch RH.
REQ SW-BD/TR [On/Off]	Indicates condition of trunk opener request switch.
DOOR SW-DR [On/Off]	Indicates condition of front door switch LH.
DOOR SW-AS [On/Off]	Indicates condition of front door switch RH.
DOOR SW-RR [On/Off]	Indicates condition of rear door switch RH.
DOOR SW-RL [On/Off]	Indicates condition of rear door switch LH.
DOOR SW-BK [On/Off]	Indicates condition of trunk switch.
CDL LOCK SW [On/Off]	Indicates condition of lock signal from door lock and unlock switch.
CDL UNLOCK SW [On/Off]	Indicates condition of unlock signal from door lock and unlock switch.
KEY CYL LK-SW [On/Off]	Indicates condition of lock signal from door key cylinder switch.
KEY CYL UN-SW [On/Off]	Indicates condition of unlock signal from door key cylinder switch.

ACTIVE TEST

Test Item	Description
DOOR LOCK	This test is able to check door lock operation [ALL LOCK/ALL UNLK].

WORK SUPPORT

Support Item	Setting	Description
DOOR LOCK-UNLOCK SET	On*	Automatic door locks function ON.
	Off	Automatic door locks function OFF.
AUTO UNLOCK TYPE	MODE2	Driver door only unlocks automatically.
	MODE1*	All doors unlock automatically.
AUTO LOCK FUNCTION	MODE3	This mode is not used.
	MODE2	Doors lock automatically when shifted out of P (park).
	MODE1*	Doors lock automatically when vehicle speed reaches 24 km/h (15 mph).
	Off	—

Support Item	Setting	Description
AUTO UNLOCK FUNCTION	MODE3	This mode is not used.
	MODE2	Doors unlock automatically when shifted into P (park).
	MODE1*	Doors unlock automatically when ignition is switched from ON to OFF.
	Off	—

* : Initial setting

DIAGNOSIS SYSTEM (IPDM E/R)

Diagnosis Description

INFOID:0000000012868750

AUTO ACTIVE TEST

Description

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

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

Operation Procedure

CAUTION:

Do not start the engine.

NOTE:

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

NOTE:

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

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

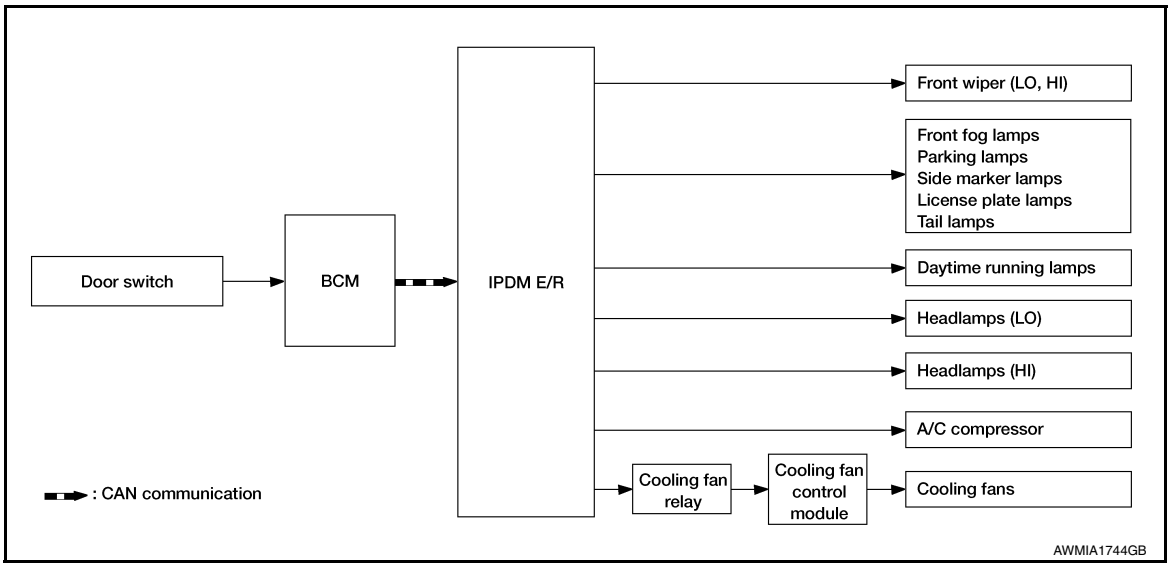
Inspection in Auto Active Test Mode

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

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

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

Concept of auto active test



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

Diagnosis chart in auto active test mode

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

CONSULT Function (IPDM E/R)

INFOID:0000000012868751

CAUTION:

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

APPLICATION ITEM

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

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

ECU IDENTIFICATION

The IPDM E/R part number is displayed.

SELF DIAGNOSTIC RESULT

Refer to PCS-21, "DTC Index".

DATA MONITOR

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

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

ACTIVE TEST

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

CAN DIAG SUPPORT MNTR

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

ECU DIAGNOSIS INFORMATION

BCM, IPDM E/R

List of ECU Reference

INFOID:0000000012830914

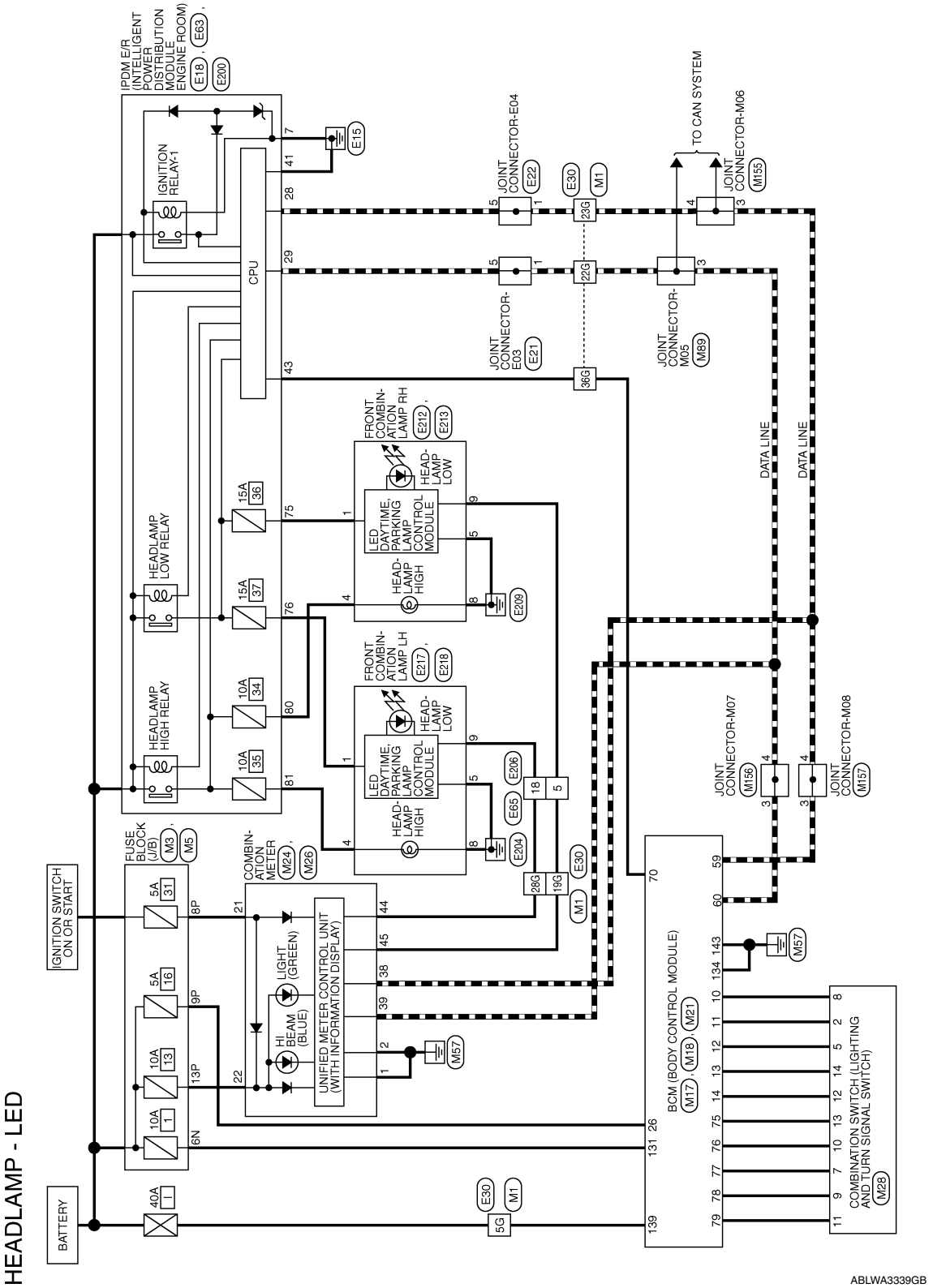
ECU	Reference
BCM	BCS-31, "Reference Value"
	BCS-50, "Fail Safe"
	BCS-51, "DTC Inspection Priority Chart"
	BCS-52, "DTC Index"
IPDM E/R	PCS-13, "Reference Value"
	PCS-20, "Fail Safe"
	PCS-21, "DTC Index"

WIRING DIAGRAM

HEADLAMP

Wiring Diagram

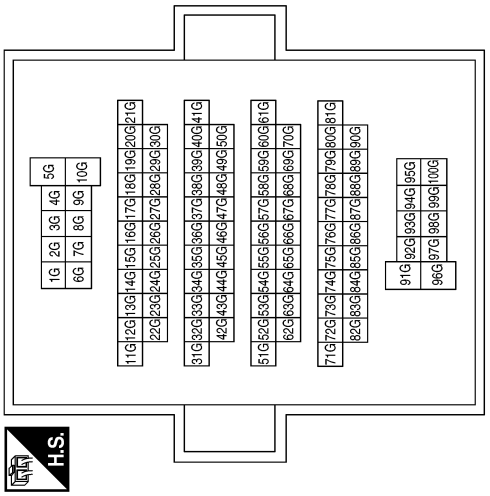
INFOID:0000000012868536



HEADLAMP CONNECTORS - LED

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

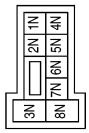
H.S.



Terminal No.	Color of Wire	Signal Name
5G	W	–
19G	P	–
22G	L	–
23G	P	–
28G	BG	–
36G	G	–

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

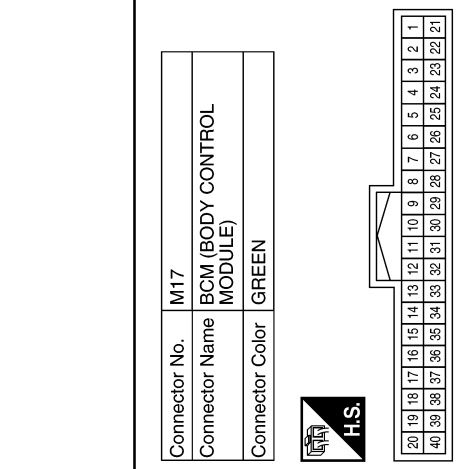
H.S.



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
26	Y	SHORTING IN PIN INPUT

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

H.S.

Terminal No.	Color of Wire	Signal Name
8P	BR	–
9P	Y	–
13P	G	–

ABLIA8270GB

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.	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.	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

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	–

Connector No.	M26
Connector Name	COMBINATION METER
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
44	W	LED FAIL DETECTOR LH
45	BG	LED FAIL DETECTOR RH

ABLIA8271GB

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

H.S.

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

Connector No.	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.

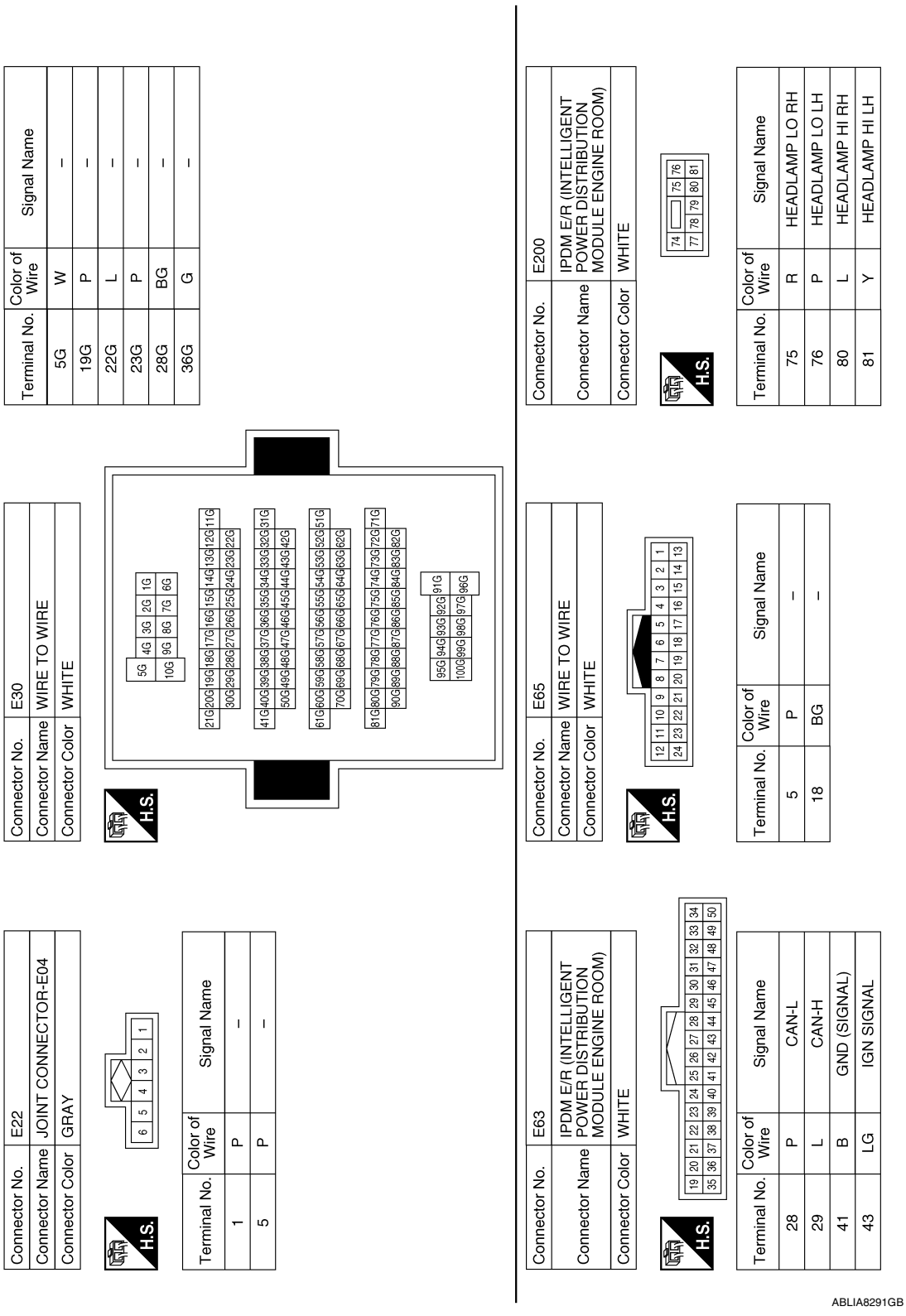
Terminal No.	Color of Wire	Signal Name
7	B	GND (POWER)

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

H.S.

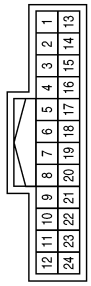
Terminal No.	Color of Wire	Signal Name
1	L	–
5	L	–

ABLIA8290GB


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 W –
19G P –
22G L –
23G P –
28G BG –
36G G –
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. E65
Connector Name WIRE TO WIRE
Connector Color WHITE
H.S.
12 11 10 9 8 7 6 5 4 3 2 1
24 23 22 21 20 19 18 17 16 15 14 13
Terminal No. Color of Wire Signal Name
5 P –
18 BG –
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
ABLIA8291GB

Connector No.	E206
Connector Name	WIRE TO WIRE
Connector Color	WHITE

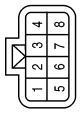
H.S.



Terminal No.	Color of Wire	Signal Name
5	P	–
18	BG	–

Connector No.	E212
Connector Name	FRONT COMBINATION LAMP RH
Connector Color	GRAY

H.S.



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

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

H.S.

Terminal No.	Color of Wire	Signal Name
9	P	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
1	P	–
4	Y	–
5	B	–
8	B	–

Connector No.	E218
Connector Name	FRONT COMBINATION LAMP LH
Connector Color	BLACK

H.S.

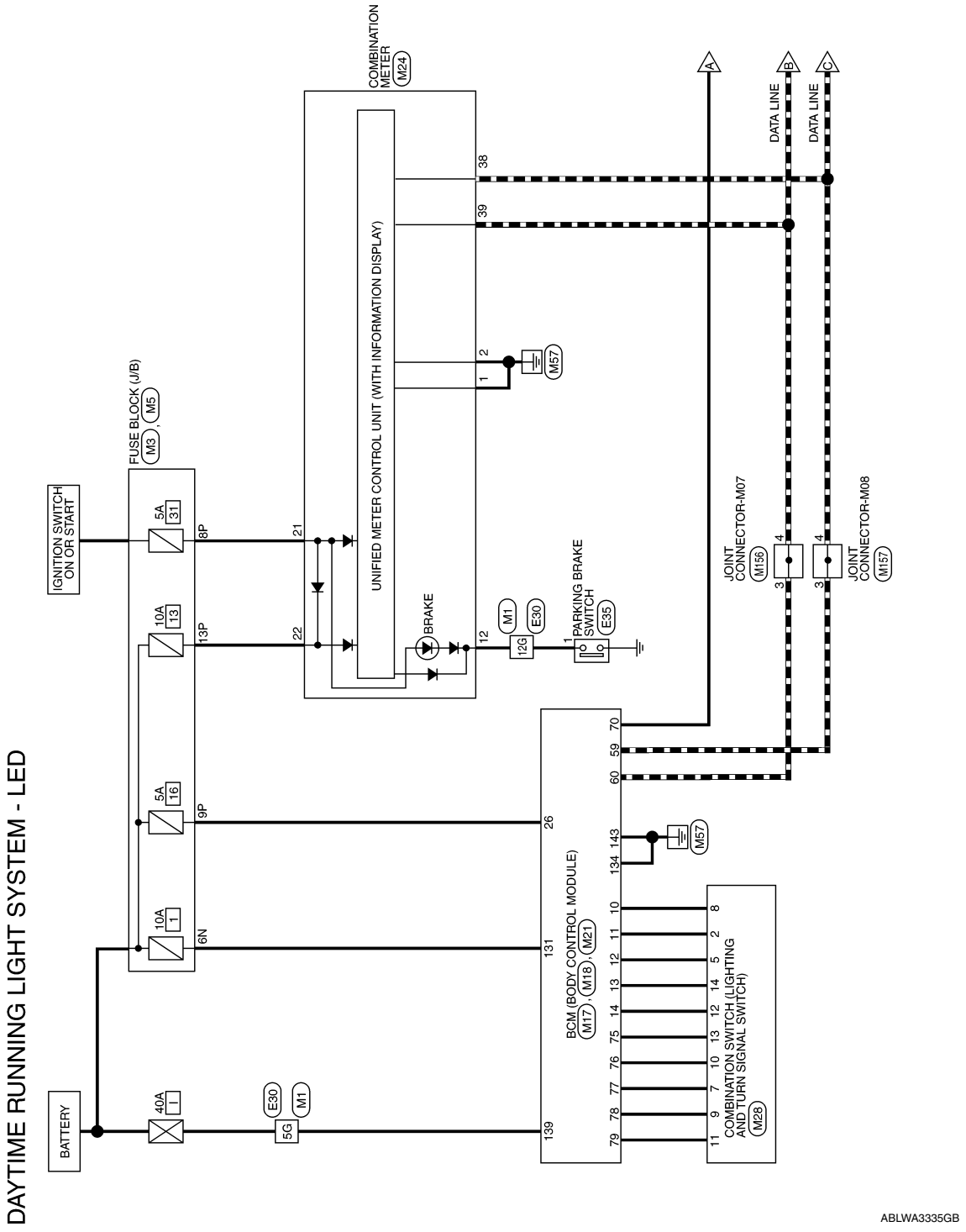
Terminal No.	Color of Wire	Signal Name
9	BG	–

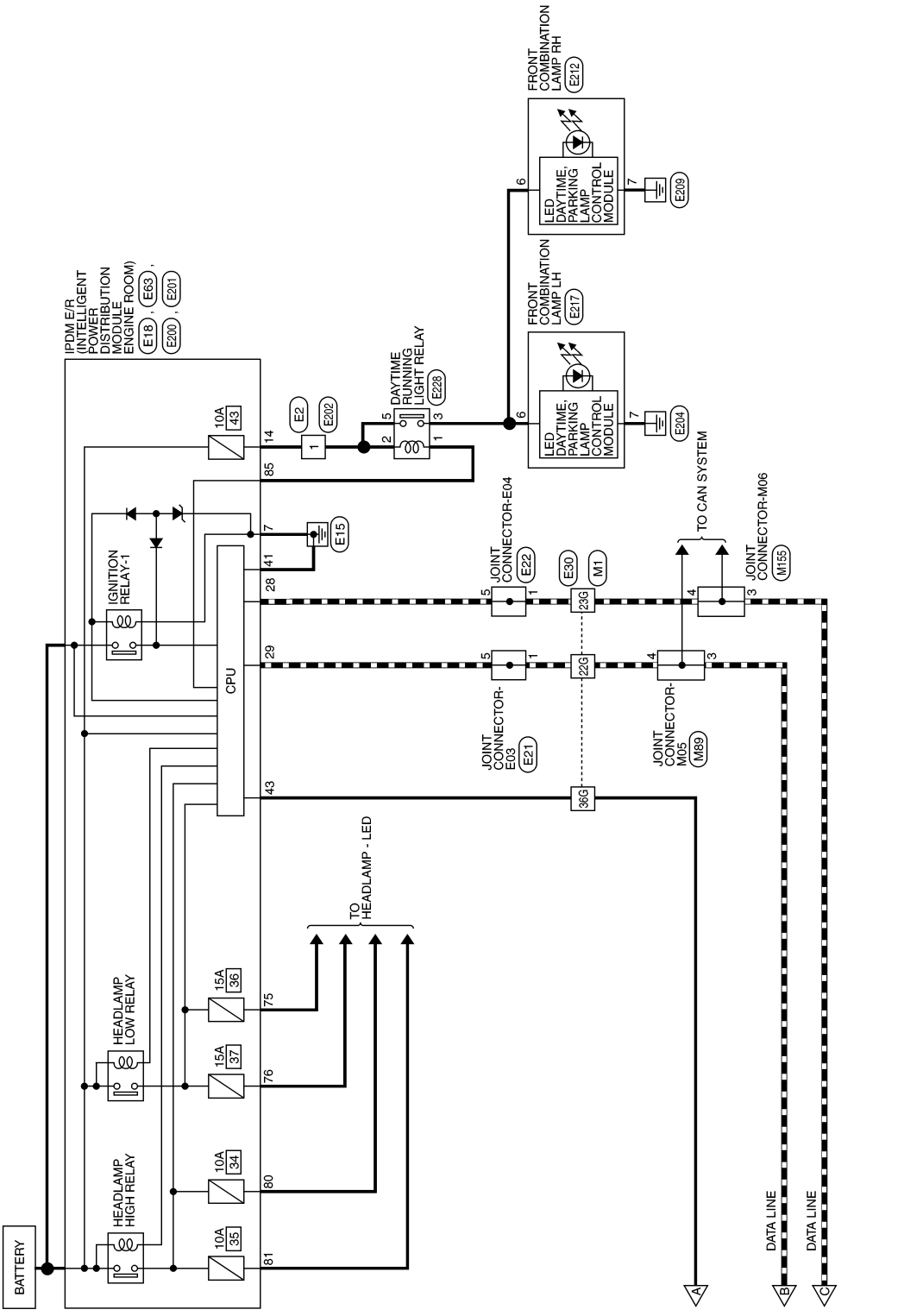
ABLIA8292GB

DAYTIME RUNNING LIGHT SYSTEM

Wiring Diagram

INFOID:0000000012868537



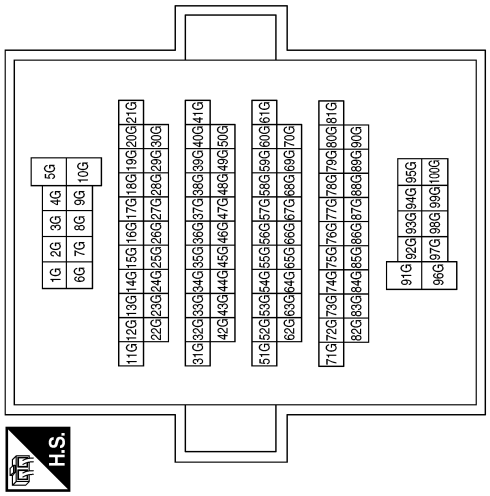


ABLWA3336GB

DAYTIME RUNNING LIGHT SYSTEM CONNECTORS - LED

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

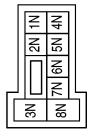
H.S.



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

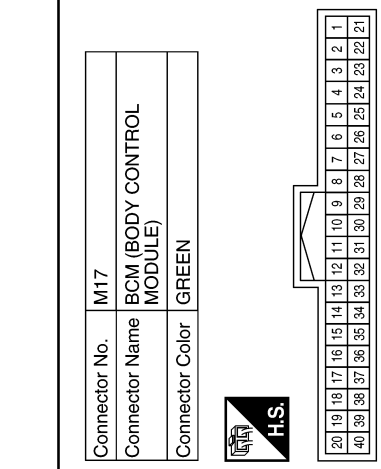
H.S.



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

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

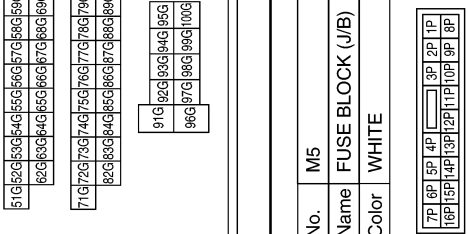
H.S.



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
26	Y	SHORTING IN PIN INPUT

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

H.S.



Terminal No.	Color of Wire	Signal Name
8P	BR	–
9P	Y	–
13P	G	–

ABLIA8265GB

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	–

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

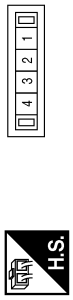
Terminal No.	Color of Wire	Signal Name
3	L	–
4	L	–

ABLIA5155GB

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

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

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

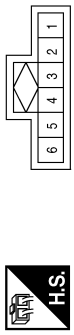


Terminal No.	Color of Wire	Signal Name
3	L	–
4	L	–

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

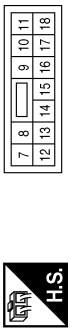
Terminal No.	Color of Wire	Signal Name
3	P	–
4	P	–

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



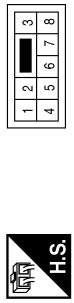
Terminal No.	Color of Wire	Signal Name
1	L	–
5	L	–

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



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

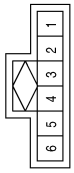


Terminal No.	Color of Wire	Signal Name
1	Y	–

ABLIA8313GB

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

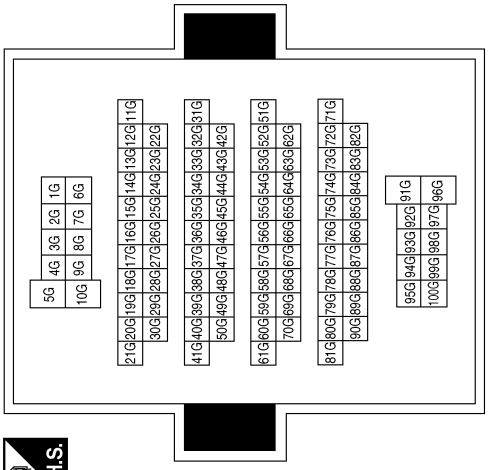
H.S.



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

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

H.S.



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

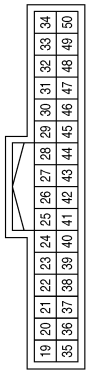
Connector No.	E35
Connector Name	PARKING BRAKE SWITCH
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
1	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

ABLIA8314GB

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
85	V	DTRL RLY

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

H.S.

Terminal No.	Color of Wire	Signal Name
1	SB	–

Connector No.	E212
Connector Name	FRONT COMBINATION LAMP RH
Connector Color	GRAY

H.S.

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

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

H.S.

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

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

H.S.

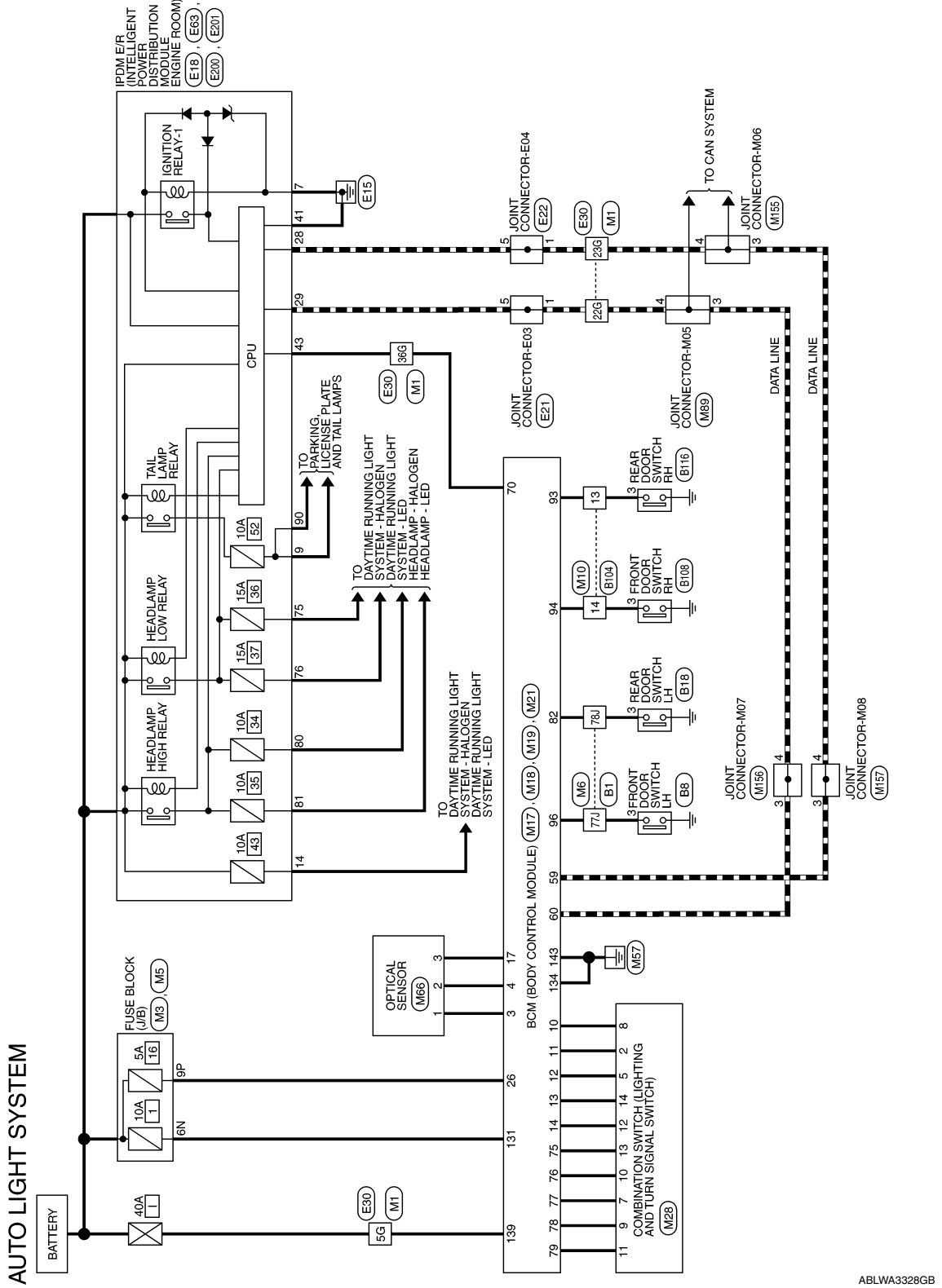
Terminal No.	Color of Wire	Signal Name
1	V	–
2	SB	–
3	LG	–
5	SB	–

ABLIA8266GB

AUTO LIGHT SYSTEM

Wiring Diagram

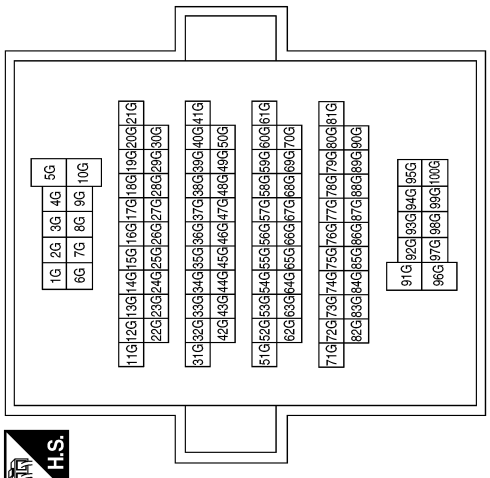
INFOID:0000000012868538



AUTO LIGHT SYSTEM CONNECTORS

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

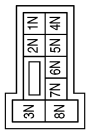
H.S.



Terminal No.	Color of Wire	Signal Name
5G	W	–
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.	M5
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

H.S.

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

ABLIA8296GB

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
26	Y	SHORTING IN PIN INPUT

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.	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	–

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.	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

ABLIA8297GB

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

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	–

ABLIA8298GB

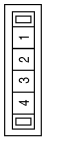
Connector No.	M156
Connector Name	JOINT CONNECTOR-M07
Connector Color	WHITE

H.S.

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

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

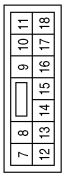
H.S.



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

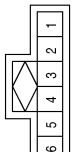
H.S.



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

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

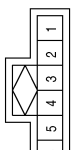
H.S.



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	–

ABLIA8299GB

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.	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.	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.	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

ABLIA8300GB

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

H.S.

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

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

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

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

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

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

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.

1	2	3	4

Terminal No.	Color of Wire	Signal Name
3	L	–

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

H.S.

1	2	3	4

Terminal No.	Color of Wire	Signal Name
3	LG	–

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

H.S.

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

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

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

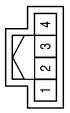
H.S.

1	2	3	4

Terminal No.	Color of Wire	Signal Name
3	L	–

ABLIA8301GB

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



Terminal No.	Color of Wire	Signal Name
3	V	–

ABLIA8302GB

FRONT FOG LAMP

Wiring Diagram

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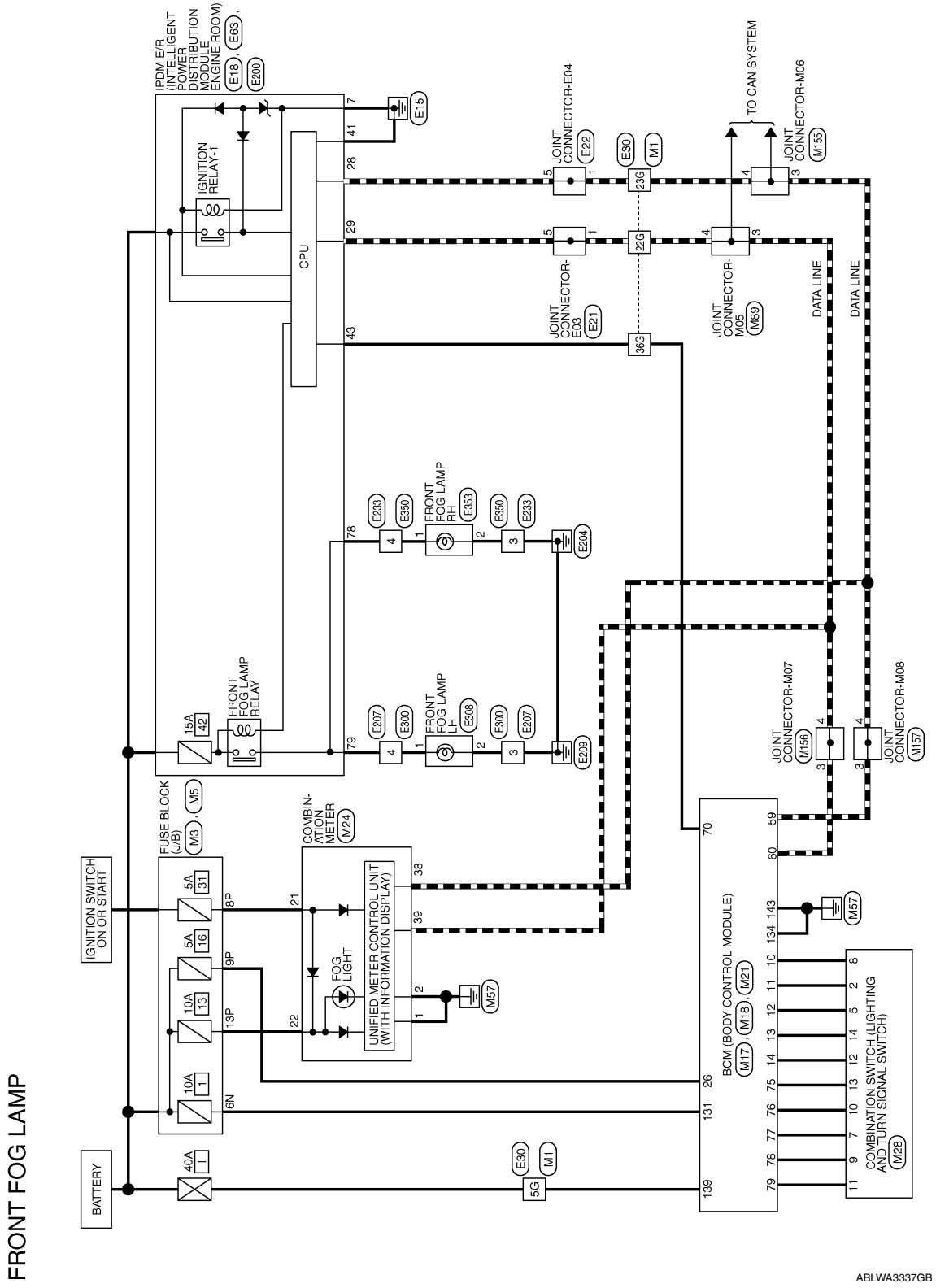
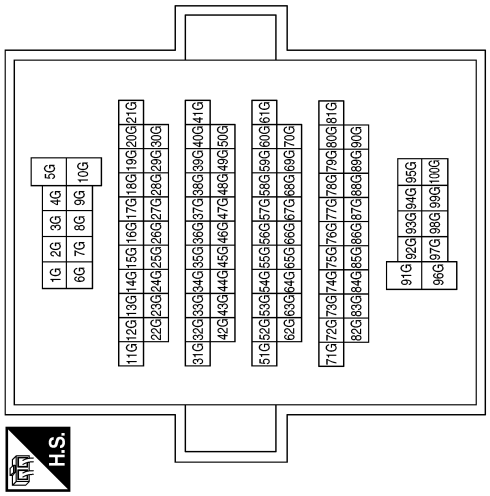


FRONT FOG LAMP CONNECTORS

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

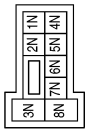
H.S.



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

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

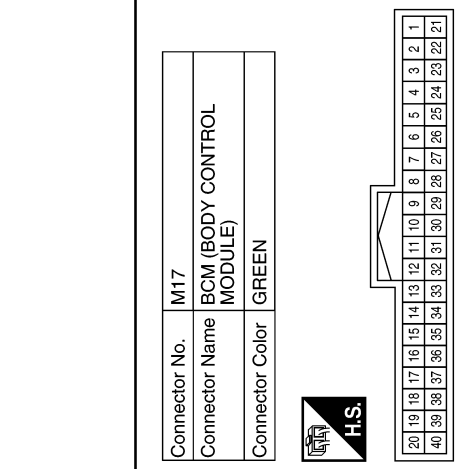
H.S.



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

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

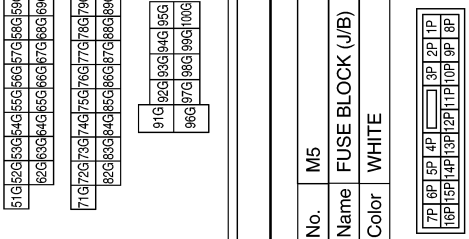
H.S.



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
26	Y	SHORTING IN PIN INPUT

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

H.S.



Terminal No.	Color of Wire	Signal Name
8P	BR	–
9P	Y	–
13P	G	–

ABLIA8304GB

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.

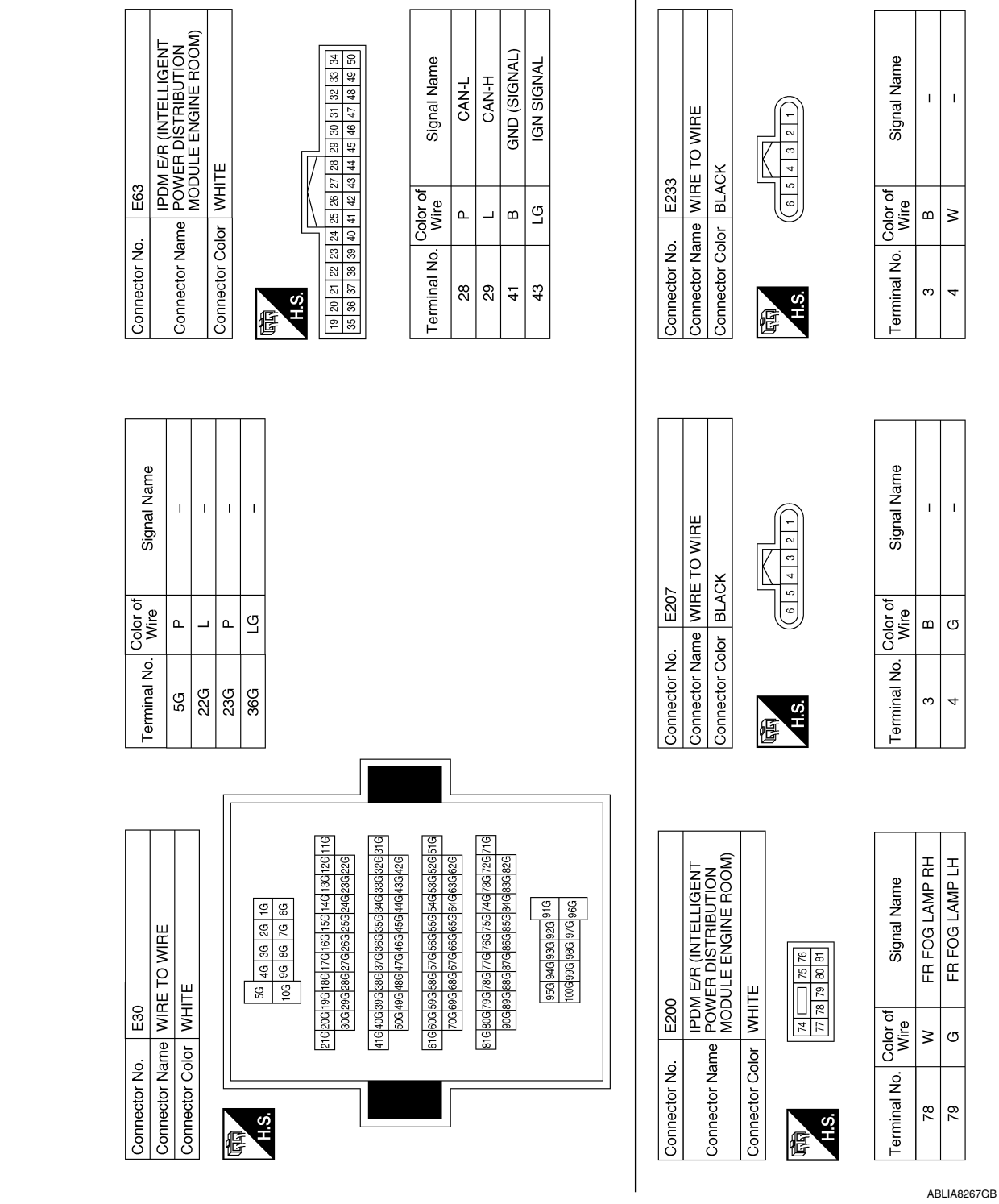
Terminal No.	Color of Wire	Signal Name
1	L	–
5	L	–

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

H.S.

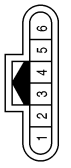
Terminal No.	Color of Wire	Signal Name
1	P	–
5	P	–

ABLIA8315GB


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. 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
78 | W | FR FOG LAMP RH
79 | G | FR FOG LAMP LH
Connector No. E207
Connector Name WIRE TO WIRE
Connector Color BLACK
H.S.
6 5 4 3 2 1
Terminal No. | Color of Wire | Signal Name
3 | B | –
4 | G | –
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
3 | B | –
4 | W | –
ABLIA8267GB

Connector No.	E300
Connector Name	WIRE TO WIRE
Connector Color	BLACK

H.S.



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

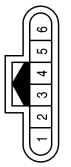
Connector No.	E308
Connector Name	FRONT FOG LAMP LH
Connector Color	BLACK

H.S.

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

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

H.S.



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

Connector No.	E353
Connector Name	FRONT FOG LAMP RH
Connector Color	BLACK

H.S.

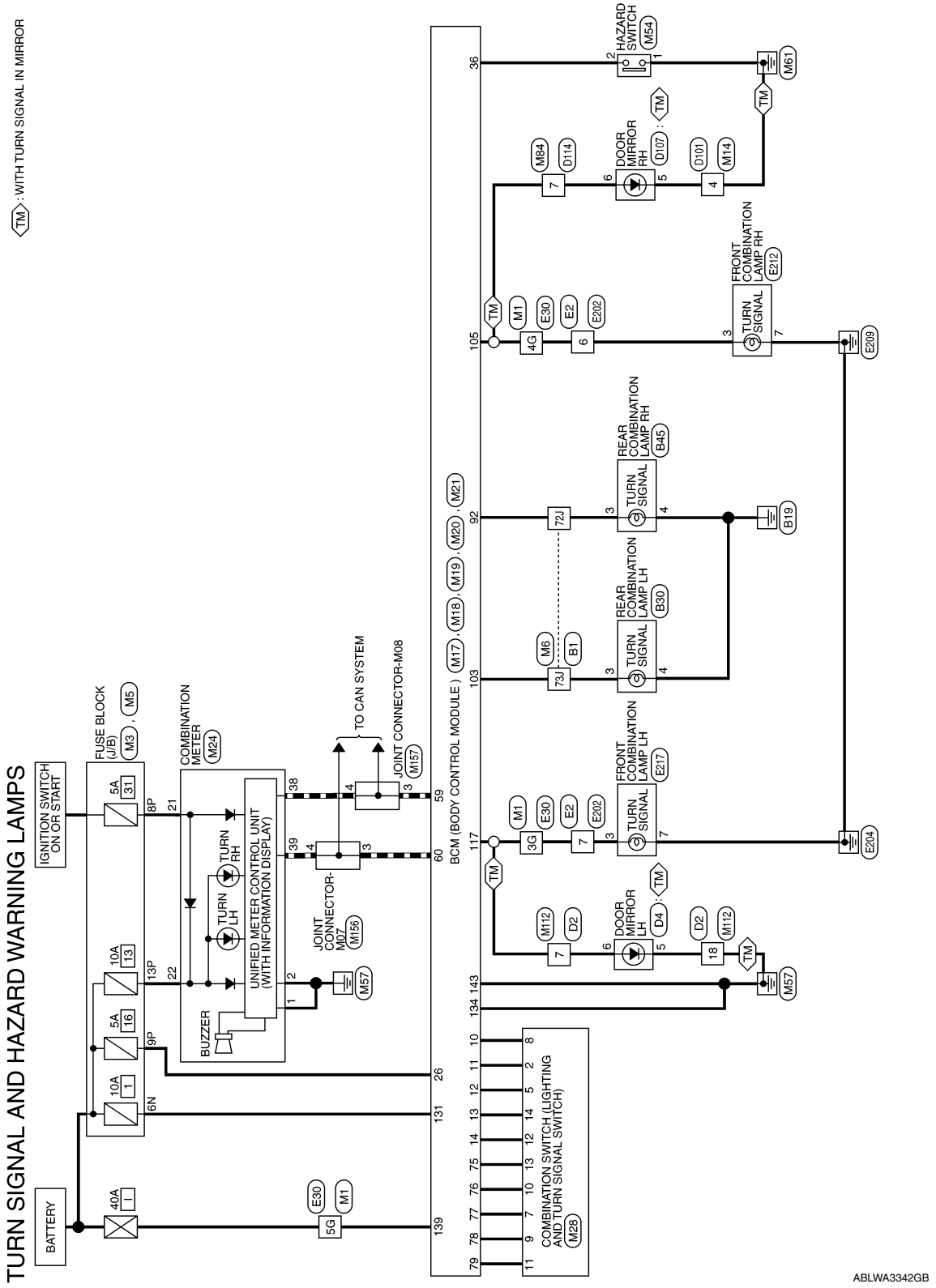
Terminal No.	Color of Wire	Signal Name
1	W	–
2	B	–

ABLIA8268GB

TURN SIGNAL AND HAZARD WARNING LAMPS

Wiring Diagram

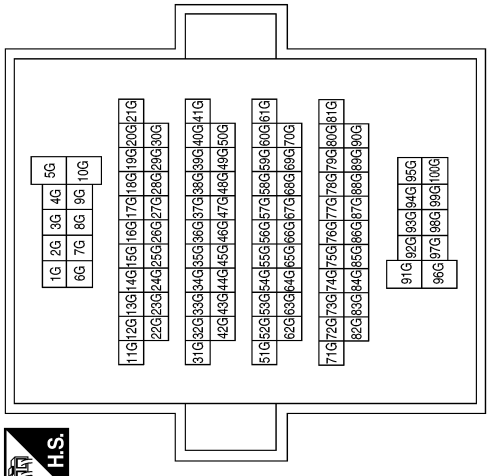
INFOID:0000000012868540



TURN SIGNAL AND HAZARD WARNING LAMPS CONNECTORS

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

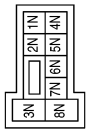
H.S.



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.



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

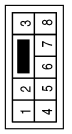
Connector No.	M5
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
8P	BR	–
9P	Y	–
13P	G	–

ABLIA8276GB

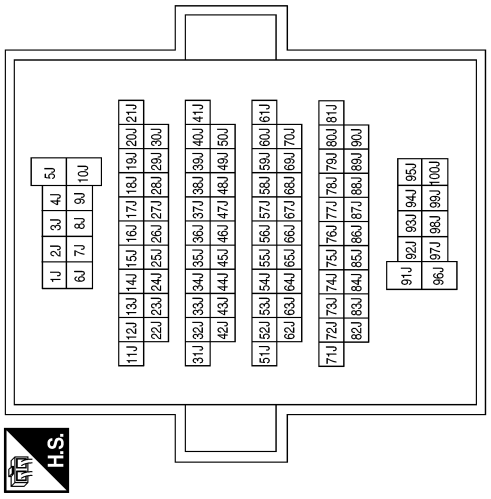
Connector No.	M14
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
4	GR	–

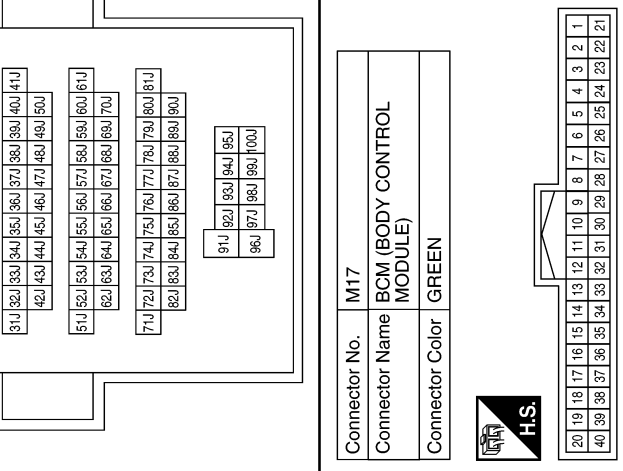
Connector No.	M6
Connector Name	WIRE TO WIRE
Connector Color	GRAY

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



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

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



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

ABLIA8277GB

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.

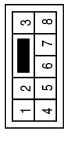
4	3	2	1

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

ABLIA5165GB

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

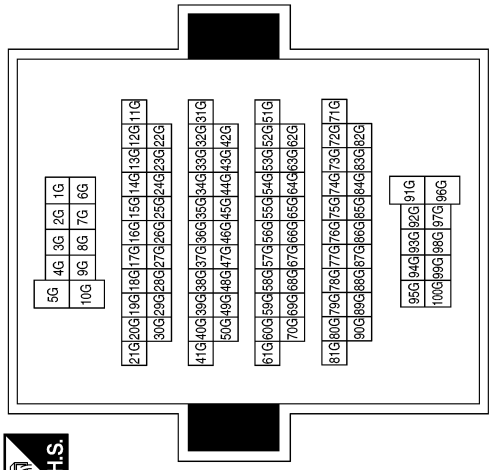
H.S.



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

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

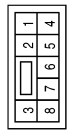
H.S.



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

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

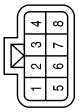
H.S.



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

Connector No.	E212
Connector Name	FRONT COMBINATION LAMP RH
Connector Color	GRAY

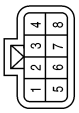
H.S.



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

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

H.S.



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

ABLIA8278GB

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

H.S.

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

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

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.

4	3	2	1

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

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

H.S.

4	3	2	1

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

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

H.S.

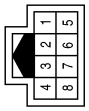
12	11	10	9	8	7	6	5	4	3	2	1
24	23	22	21	20	19	18	17	16	15	14	13

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

ABLIA8294GB

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

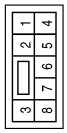
H.S.



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

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

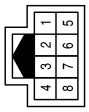
H.S.



Terminal No.	Color of Wire	Signal Name
4	B	–

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

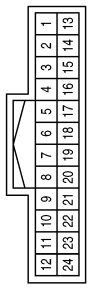
H.S.



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	–

ABLIA8295GB

PARKING, LICENSE PLATE AND TAIL LAMPS

Wiring Diagram

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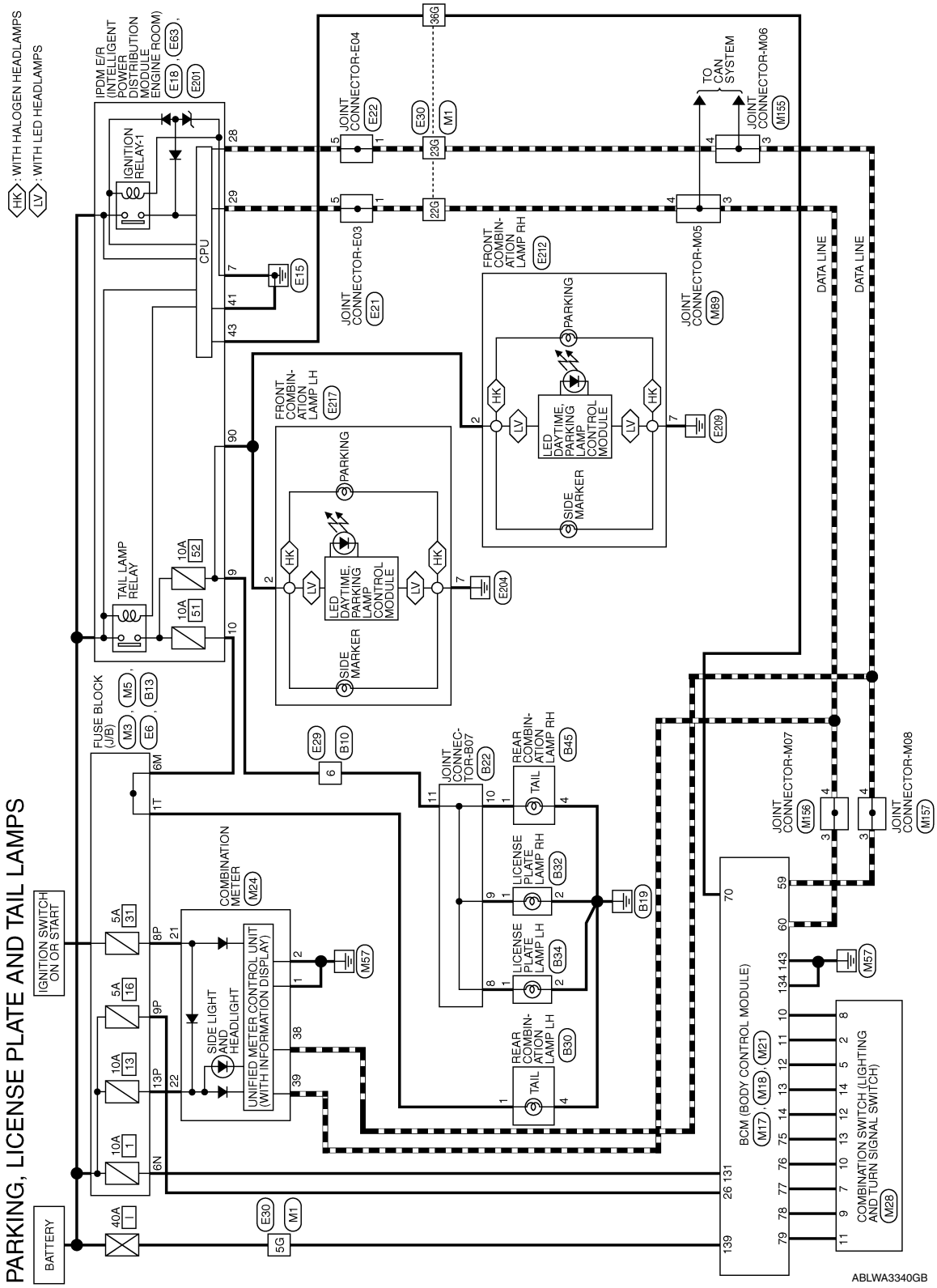


PARKING, LICENSE PLATE AND TAIL LAMPS CONNECTORS

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
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
26	Y	SHORTING IN PIN INPUT

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	–
9P	Y	–
13P	G	–

ABLIA8272GB

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	–
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	–

ABLIA8317GB

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

ABLIA8318GB

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.	E212
Connector Name	FRONT COMBINATION LAMP RH
Connector Color	GRAY

H.S.

1	2	3	4
5	6	7	8

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

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

H.S.

1	2	3	4
5	6	7	8

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

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
6	SB	–

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

H.S.

2T		1T
6T	5T	4T	3T

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

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

H.S.

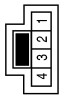
12	11	10	9	8	7	6	5	4	3	2	1

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

ABLIA8273GB

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

H.S.



Terminal No.	Color of Wire	Signal Name
1	V	–
4	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	–

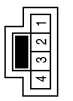
Connector No.	B34
Connector Name	LICENSE PLATE LAMP LH
Connector Color	BROWN

H.S.

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

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

H.S.



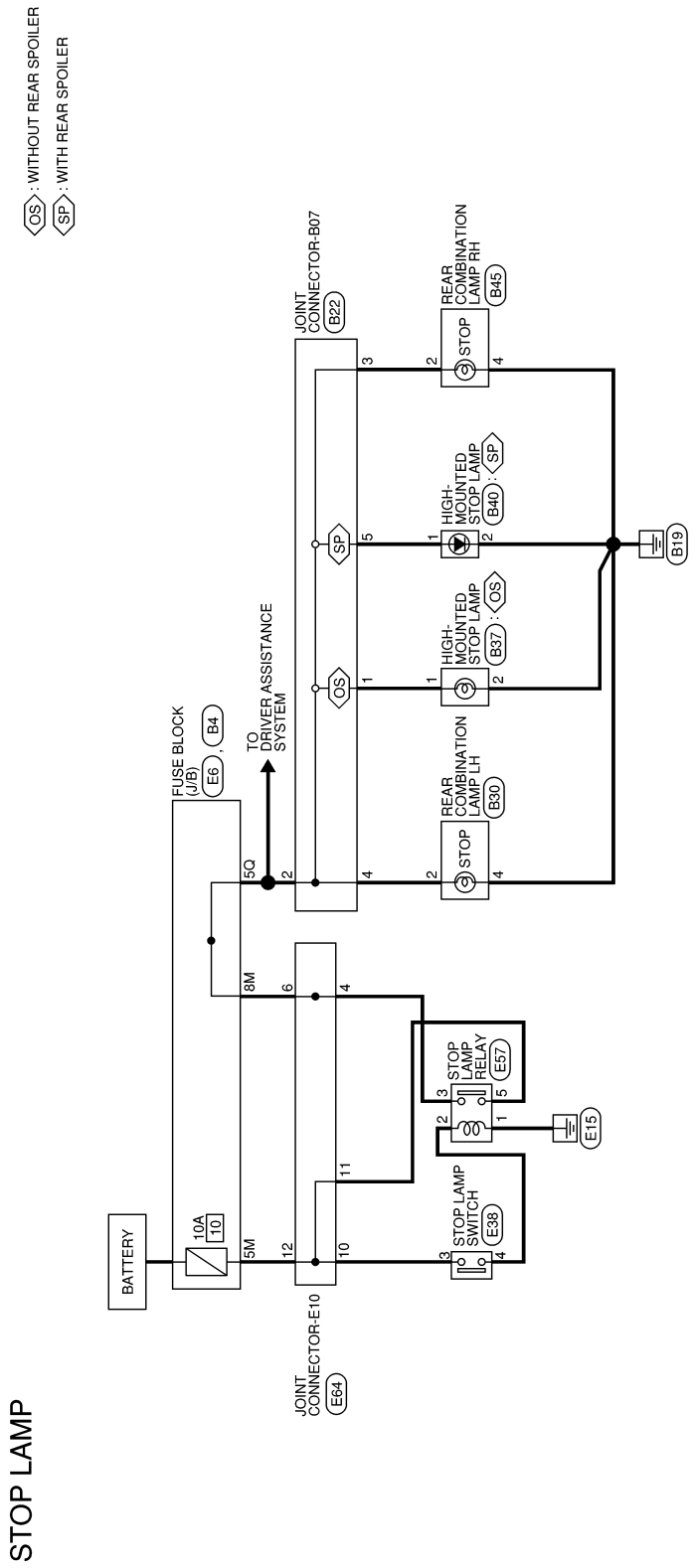
Terminal No.	Color of Wire	Signal Name
1	SB	–
4	B	–

ABLIA8293GB

STOP LAMP

Wiring Diagram

INFOID:0000000012868542

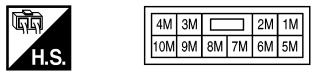


STOP LAMP

ABLWA3341GB

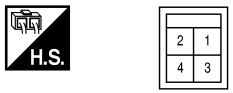
STOP LAMP CONNECTORS

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



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

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

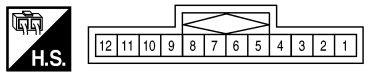


Terminal No.	Color of Wire	Signal Name
3	G	–
4	R	–

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

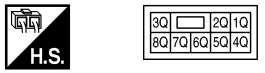
Terminal No.	Color of Wire	Signal Name
1	B	–
2	R	–
3	W	–
5	G	–

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



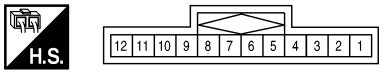
Terminal No.	Color of Wire	Signal Name
4	W	–
6	W	–
10	G	–
11	G	–
12	G	–

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



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

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



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

ABLIA8274GB

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

H.S.

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

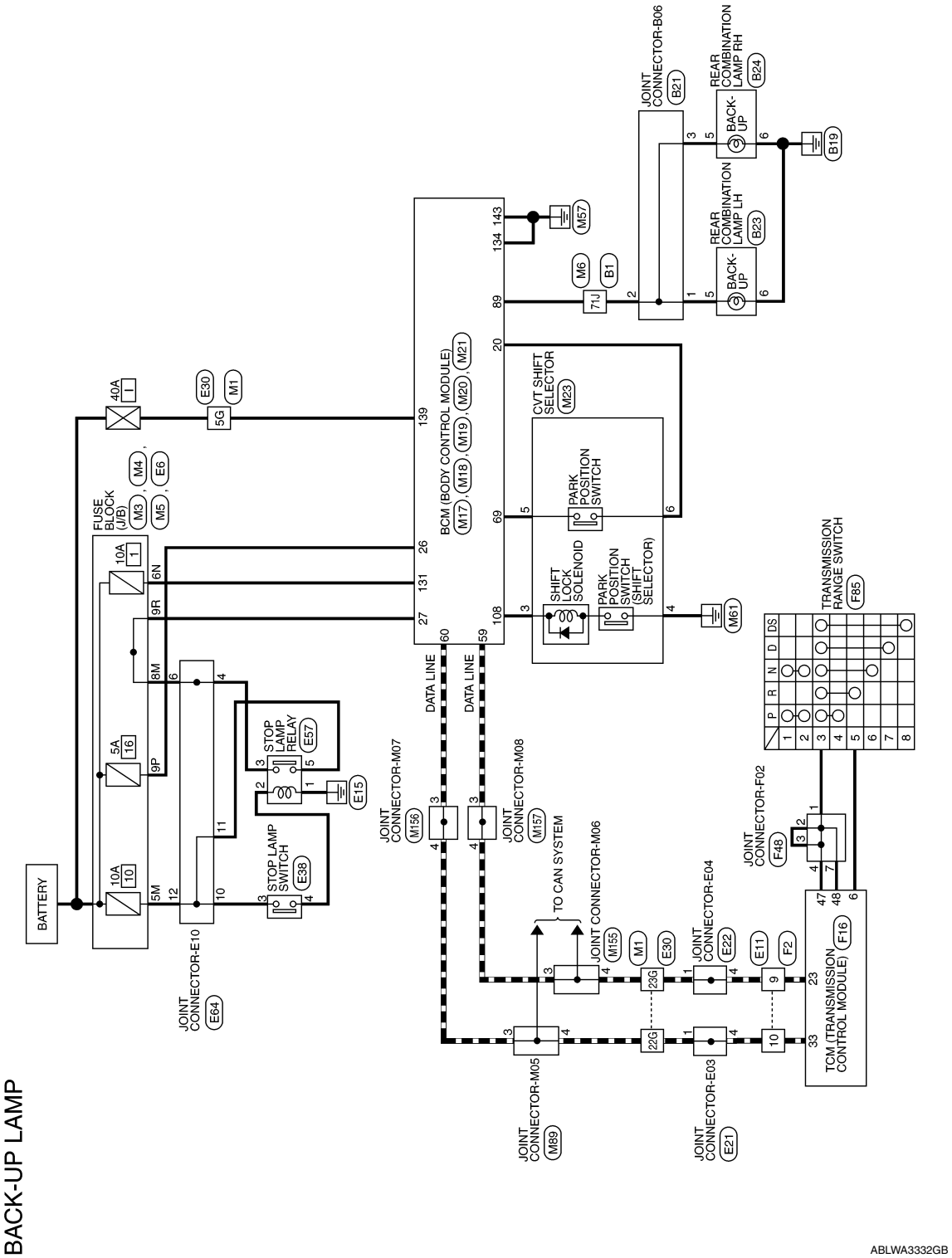
Terminal No.	Color of Wire	Signal Name
2	L	–
4	B	–

ABLIA8275GB

BACK-UP LAMP

Wiring Diagram

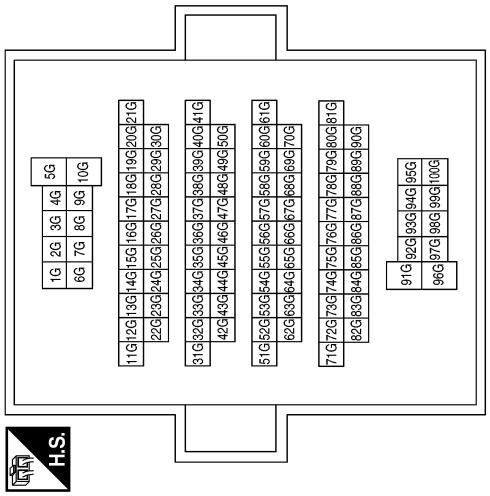
INFOID:0000000012868543



BACK-UP LAMP CONNECTORS

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

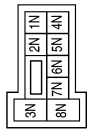
H.S.



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

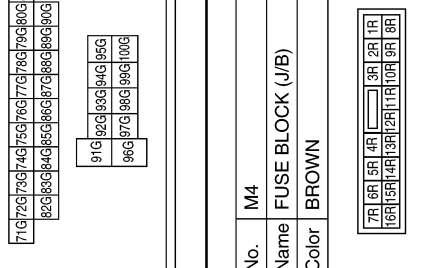
H.S.



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

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

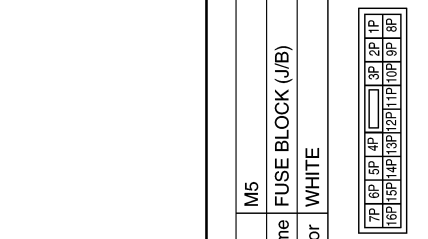
H.S.



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

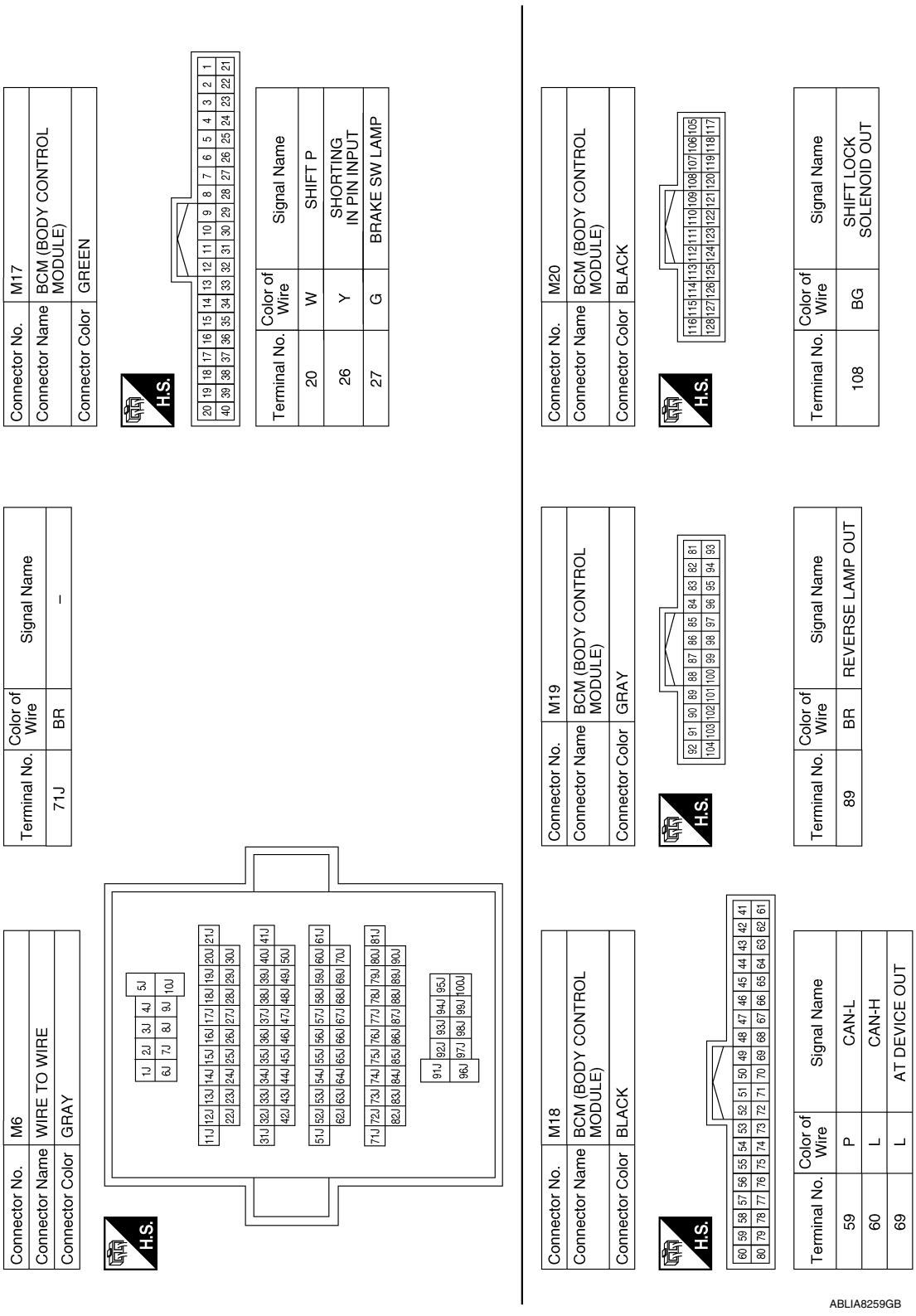
Connector No.	M5
Connector Name	FUSE BLOCK (J/B)
Connector Color	WHITE

H.S.



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

ABLIA8303GB


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
26 | Y | SHORTING IN PIN INPUT
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
89 | 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
ABLIA8259GB

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.	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	–

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	–

ABLIA3720GB

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

H.S.

2	1
4	3

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

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

H.S.

3		1
	5	
2		

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	BLUE

H.S.

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

Terminal No.	Color of Wire	Signal Name
4	W	–
6	W	–
10	G	–
11	G	–
12	G	–

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

H.S.

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

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

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

H.S.

31	32	33	34	35	36	37	38	39	40	47	48
21	22	23	24	25	26	27	28	29	30	45	46
11	12	13	14	15	16	17	18	19	20	43	44
1	2	3	4	5	6	7	8	9	10	41	42

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

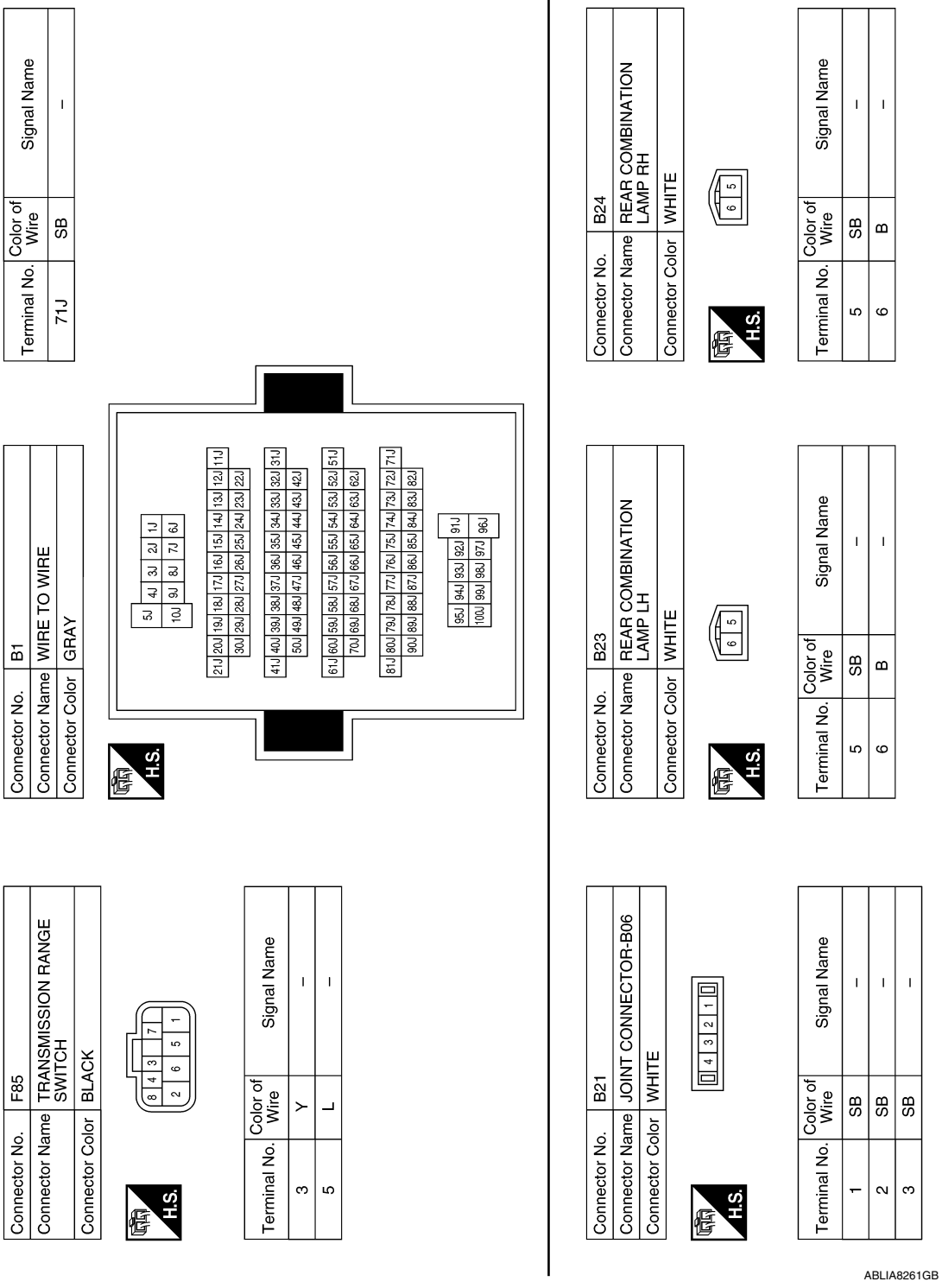
Connector No.	F48
Connector Name	JOINT CONNECTOR-F02
Connector Color	BLACK

H.S.

5	4	3	2	1
10	9	8	7	6

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

ABLIA8260GB


Connector No. F85
Connector Name TRANSMISSION RANGE SWITCH
Connector Color BLACK
H.S.
Terminal No. Color of Wire Signal Name
3 Y –
5 L –
Connector No. B1
Connector Name WIRE TO WIRE
Connector Color GRAY
H.S.
Terminal No. Color of Wire Signal Name
71J SB –
Connector No. B21
Connector Name JOINT CONNECTOR-B06
Connector Color WHITE
H.S.
Terminal No. Color of Wire Signal Name
1 SB –
2 SB –
3 SB –
Connector No. B23
Connector Name REAR COMBINATION LAMP LH
Connector Color WHITE
H.S.
Terminal No. Color of Wire Signal Name
5 SB –
6 B –
Connector No. B24
Connector Name REAR COMBINATION LAMP RH
Connector Color WHITE
H.S.
Terminal No. Color of Wire Signal Name
5 SB –
6 B –
ABLIA8261GB

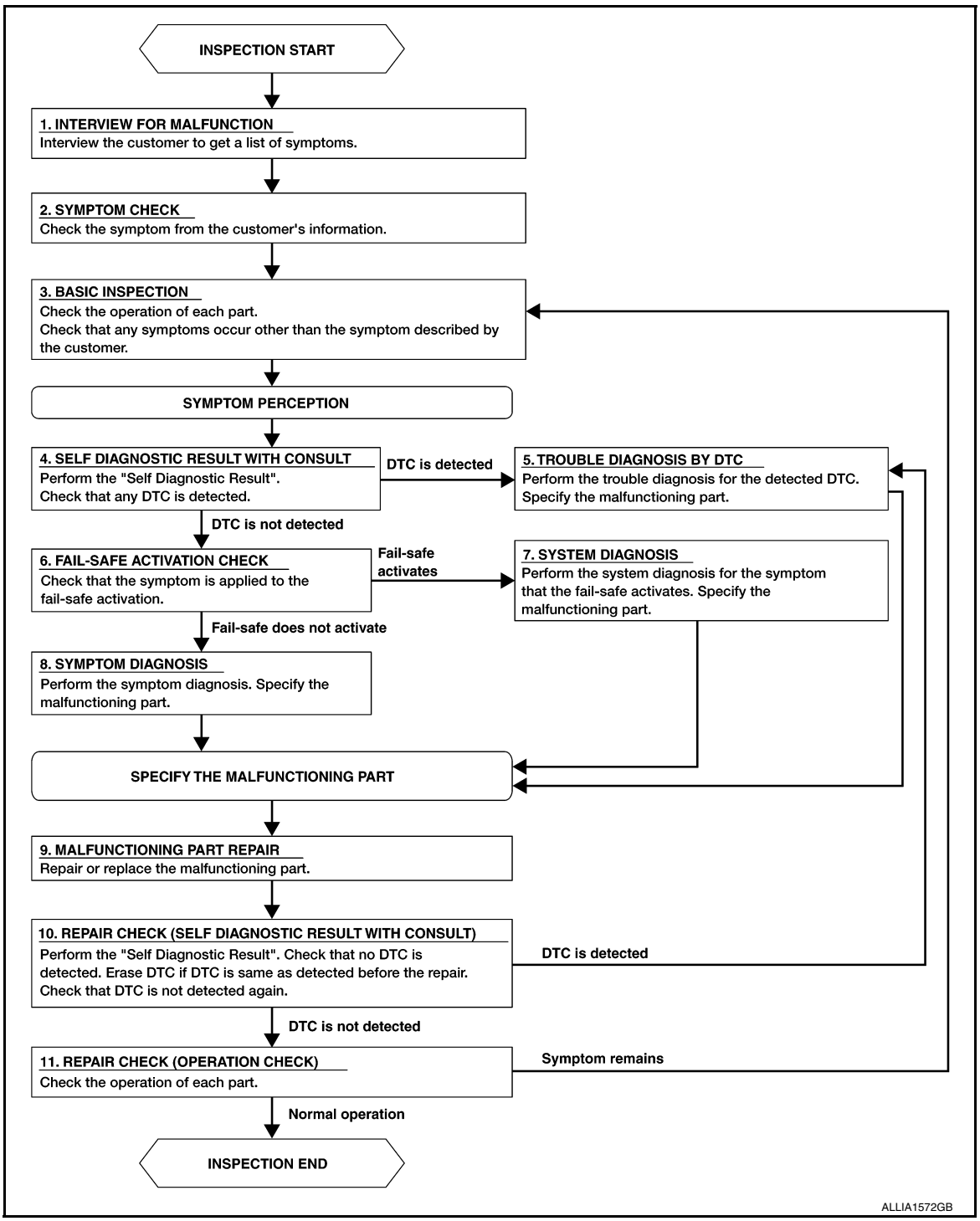
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:0000000012830923

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 any concerns that occur other than those mentioned in the customer interview.

>> GO TO 4.

4.SELF DIAGNOSTIC RESULT WITH CONSULT

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

Is any DTC detected?

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

5.TROUBLE DIAGNOSIS BY DTC

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

>> GO TO 9.

6.FAIL-SAFE ACTIVATION CHECK

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

Does the fail-safe activate?

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

7.SYSTEM DIAGNOSIS

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

>> GO TO 9.

8.SYMPTOM DIAGNOSIS

Perform the symptom diagnosis. Specify the malfunctioning part.

>> GO TO 9.

9.MALFUNCTIONING PART REPAIR

Repair or replace the malfunctioning part.

>> GO TO 10.

10.REPAIR CHECK (SELF DIAGNOSTIC RESULT WITH CONSULT)

Perform the “Self Diagnostic Result”. Verify that no DTCs are detected. Erase all DTCs detected prior to the repair. Verify that DTC is not detected again.

Is any DTC detected?

YES >> GO TO 5.
NO >> GO TO 11.

11. REPAIR CHECK (OPERATION CHECK)

Check the operation of each part.

Does it operate normally?

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

LED HEADLAMP OPERATION INSPECTION

Work Procedure

INFOID:0000000012830924

1.CHECK START

1. In the cool LED status (wait for more than 10 minutes after turning headlamp OFF), turn ON and turn OFF headlamp several times. Check that headlamp operates normally each time.
2. In the cool LED status, turn headlamp ON, wait until headlamp enters the stable status (approximately 5 minutes after turning headlamp ON) and then check that headlamp operates normally without blinking or flickering.
3. In the warm LED status (turn headlamp ON for more than 15 minutes and wait for 1 minute after turning OFF), turn ON and turn OFF the headlamp several times. Check that headlamp operates normally each time.
4. Turn headlamp ON for approximately 30 minutes and then check that headlamp operates normally without difference in brightness between LH and RH, blinking or flickering.

Is the inspection result normal?

YES >> Inspection End.
NO >> Refer to EXL-242, "Symptom Table".

DTC/CIRCUIT DIAGNOSIS

HEADLAMP (HI) CIRCUIT

Component Function Check

INFOID:0000000012830925

1.CHECK HEADLAMP (HI) OPERATION

With CONSULT
1. Select “EXTERNAL LAMPS” in “Active Test” mode of “IPDM E/R”.
2. While operating the test items, check that the headlamp (HI) blinks.

Hi : Headlamp (HI) blinks (ON/OFF is repeated 1 second each.)
Off : Headlamp (HI) OFF

Without CONSULT
1. Start IPDM E/R auto active test. Refer to PCS-9, "Diagnosis Description".
2. Check that the headlamp (HI) blinks.

Is the inspection result normal?

YES >> Headlamp (HI) circuit is normal.
NO >> Refer to EXL-217, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012830926

Regarding Wiring Diagram information, refer to EXL-161, "Wiring Diagram".

1.CHECK HEADLAMP (HI) FUSE

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

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

Is the inspection result normal?

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

2.CHECK HEADLAMP (HI) OUTPUT VOLTAGE

With CONSULT
1. Disconnect applicable front combination lamp connector.
2. Turn ignition switch ON.
3. Select “EXTERNAL LAMPS” in “Active Test” mode of “IPDM E/R”.
4. While operating the test items, check voltage between applicable front combination lamp harness connector and ground.

(+)			(-)	Test item		Voltage (Approx.)
Front combination lamp						
Connector		Terminal				
RH	E212	4	Ground	EXTERNAL LAMPS	Hi	Battery voltage
					Off	0
LH	E217				Hi	Battery voltage
					Off	0

Is the inspection result normal?

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

3. CHECK HEADLAMP (HI) POWER SUPPLY CIRCUIT

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

Front combination lamp			IPDM E/R		Continuity
Connector		Terminal	Connector	Terminal	
RH	E212	4	E200	80	Yes
LH	E217			81	

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-47, "Removal and Installation".
NO >> Repair or replace harness.

4. CHECK FRONT COMBINATION LAMP (HI) GROUND CIRCUIT

Check continuity between the front combination lamp harness connector terminal 8 and ground.

Front combination lamp			—	Continuity
Connector		Terminal		
RH	E212	8	Ground	Yes
LH	E217			

Is the inspection result normal?

YES >> Replace the headlamp bulb. Refer to EXL-254, "Bulb Replacement".
NO >> Repair or replace the harness or connector.

HEADLAMP (LO) CIRCUIT

Component Function Check

INFOID:0000000012830927

1.CHECK HEADLAMP (LO) OPERATION

With CONSULT
1. Select “EXTERNAL LAMPS” in “Active Test” mode of “IPDM E/R”.
2. While operating the test items, check that the headlamp (LO) is turned ON.

Lo : Headlamp (LO) ON
Off : Headlamp (LO) OFF

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

Is the inspection result normal?

YES >> Headlamp (LO) circuit is normal.
NO >> Refer to EXL-219, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012830928

Regarding Wiring Diagram information, refer to EXL-161, "Wiring Diagram".

1.CHECK HEADLAMP (LO) FUSE

1. Turn 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)		37	

Is the inspection result normal?

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

2.CHECK HEADLAMP (LO) OUTPUT VOLTAGE

With CONSULT
1. Disconnect applicable front combination lamp connector.
2. Turn ignition switch ON.
3. Select “EXTERNAL LAMPS” in “Active Test” mode of “IPDM E/R”.
4. While operating the test items, check voltage between applicable front combination lamp harness connector and ground.

(+)			(-)	Test item		Voltage (Approx.)
Front combination lamp						
Connector		Terminal				
RH	E212	1	Ground	EXTERNAL LAMPS	Lo	Battery voltage
					Off	0
LH	E217				Lo	Battery voltage
					Off	0

Is the inspection result normal?

YES >> Perform the LED headlamp diagnosis. Refer to EXL-223, "Diagnosis Procedure".
NO >> GO TO 3.

3.CHECK HEADLAMP (LO) POWER SUPPLY CIRCUIT

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

Front combination lamp			IPDM E/R		Continuity
Connector		Terminal	Connector	Terminal	
RH	E212	1	E200	75	Yes
LH	E217			76	

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-47, "Removal and Installation".
NO >> Repair or replace harness.

DAYTIME RUNNING LIGHT RELAY CIRCUIT

Component Function Check

INFOID:0000000012830929

1.CHECK DAYTIME RUNNING LIGHT OPERATION

CONSULT
1. Select “EXTERNAL LAMPS” in “Active Test” mode of “IPDM E/R”.
2. While operating the test items, check daytime running light operation.

On : EXTERNAL LAMPS Hi
Off : EXTERNAL LAMPS Off

Is the inspection result normal?

YES >> Daytime running light relay circuit is normal.
NO >> Refer to EXL-221, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012830930

Regarding Wiring Diagram information, refer to EXL-167, "Wiring Diagram".

1.CHECK DAYTIME RUNNING LIGHT RELAY FUSE

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

Unit	Fuse No.	Capacity
Daytime running light relay	43	10 A

Is the inspection result normal?

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

2.CHECK DAYTIME RUNNING LIGHT RELAY POWER SUPPLY

1. Remove daytime running light relay.
2. Check voltage between daytime running light relay harness connector and ground.

(+)		(–)	Voltage (Approx.)
Daytime running light relay			
Connector	Terminal		
E228	2	Ground	Battery voltage
	5		

Is the inspection result normal?

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

3.CHECK DAYTIME RUNNING LIGHT RELAY

Check daytime running light relay. Refer to EXL-222, "Component Inspection".

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace daytime running light relay.

4.CHECK DAYTIME RUNNING LIGHT RELAY CONTROL SIGNAL OUTPUT

CONSULT
1. Install daytime running light relay.
2. Turn ignition switch ON.

3. Select “EXTERNAL LAMPS” in “Active Test” mode of “IPDM E/R”.
4. While operating the test item, check voltage between IPDM E/R harness connector and ground.

(+)		(–)	Test item		Voltage (Approx.)
IPDM E/R					
Connector	Terminal				
E18	14	Ground	EXTERNAL LAMPS	On	0 V
				Off	Battery voltage

Is the inspection result normal?

YES >> Daytime running light relay circuit is OK.
NO-1 (Fixed at 0 V)>>GO TO 5.
NO-2 (Fixed at battery voltage) >>Replace IPDM E/R. Refer to PCS-47, "Removal and Installation".

5.CHECK DAYTIME RUNNING LIGHT RELAY CONTROL SIGNAL CIRCUIT (OPEN)

1. Turn ignition switch OFF.
2. Remove daytime running light relay.
3. Disconnect IPDM E/R harness connector.
4. Check continuity between IPDM E/R harness connector and daytime running light relay harness connector.

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

Is the inspection result normal?

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

6.CHECK DAYTIME RUNNING LIGHT RELAY CONTROL SIGNAL CIRCUIT (SHORT)

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

IPDM E/R		Ground	Continuity
Connector	Terminal		
E201	85		No

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-47, "Removal and Installation".
NO >> Repair or replace harness.

Component Inspection

INFOID:0000000012830931

1.CHECK DAYTIME RUNNING LIGHT RELAY

1. Turn ignition switch OFF.
2. Remove daytime running light relay.
3. Apply battery voltage to daytime running light relay between terminals 1 and 2.
4. Check continuity between daytime running light relay terminals.

Daytime running light relay		Condition		Continuity
Terminals				
5	3	Voltage	Applied	Yes
			Not applied	No

Is the inspection result normal?

YES >> Daytime running light relay is normal.
NO >> Replace daytime running light relay.

LED HEADLAMP

Diagnosis Procedure

INFOID:0000000012830932

Regarding Wiring Diagram information, refer to EXL-161, "Wiring Diagram".

1.CHECK HEADLAMP (LO) GROUND CIRCUIT

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

Front combination lamp			Ground	Continuity
Connector		Terminal		
RH	E212	5		Yes
LH	E217			

Is the inspection result normal?

YES >> GO TO 2.
NO >> Repair or replace harness.

2.CHECK LED HEADLAMP CONTROL MODULE

Install the normal LED headlamp control module to the applicable headlamp. Check that the lighting switch is turned ON. Refer to EXL-141, "LED Headlamp Control Module".

Is the headlamp turned ON?

YES >> Replace LED headlamp control module. Refer to EXL-254, "Removal and Installation".
NO >> GO TO 3.

3.CHECK HEADLAMP

Install the normal headlamp to the applicable headlamp. Check that the headlamp is turned ON. Refer to EXL-223, "Diagnosis Procedure".

Is the headlamp turned ON?

YES >> Replace headlamp. Refer to EXL-254, "Removal and Installation".
NO >> LED headlamp is normal. Check headlamp control system.

PARKING LAMP CIRCUIT

Component Function Check

INFOID:0000000012830933

1.CHECK PARKING LAMP OPERATION

CONSULT
1. Select “EXTERNAL LAMPS” in “Active Test” mode of “IPDM E/R”.
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-224, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012830934

Regarding Wiring Diagram information, refer to EXL-196, "Wiring Diagram".

1.CHECK PARKING LAMP FUSE

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

Unit	Location	Fuse No.	Capacity
• Parking lamps • Side marker lamps	IPDM E/R	52	10A

Is the inspection result normal?

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

2.CHECK PARKING LAMP CIRCUIT

1. Disconnect the following connectors:
- IPDM E/R
- Front combination lamps
- Rear combination lamps
2. Check continuity between IPDM E/R harness connector and ground.

IPDM E/R		Ground	Continuity
Connector	Terminal		
E201	90		No

Is the inspection result normal?

YES >> Replace fuse. (Replace IPDM E/R if blown fuse is found again.)
NO >> Replace the blown fuse after repairing the affected circuit.

3.CHECK PARKING LAMP

Check applicable LED lamp.

Is the inspection result normal?

YES >> GO TO 4.
NO >> Replace applicable LED lamp.

4.CHECK PARKING LAMP OUTPUT VOLTAGE

CONSULT
1. Disconnect front combination lamp connector.

2. Turn ignition switch ON.
3. Select “EXTERNAL LAMPS” in “Active Test” mode of “IPDM E/R”.
4. While operating the test items, check voltage between IPDM E/R harness connector and ground.

(+)		(−)	Test item		Voltage (Approx.)
IPDM E/R					
Connector	Terminal				
E201	90	Ground	EXTERNAL LAMPS	TAIL	Battery voltage
				Off	0 V

Is the inspection result normal?

YES >> GO TO 5.
NO >> Replace IPDM E/R. Refer to PCS-47, "Removal and Installation".

5. CHECK PARKING LAMP POWER SUPPLY CIRCUIT

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

Front combination lamp			IPDM E/R		Continuity
Connector		Terminal	Connector	Terminal	
RH	E212	2	E201	90	Yes
LH	E217				

Is the inspection result normal?

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

6. CHECK PARKING LAMP GROUND CIRCUIT

Check continuity between front combination lamp harness connector and ground.

Front combination lamp			Ground	Continuity
Connector		Terminal		
RH	E212	7		Yes
LH	E217			

Is the inspection result normal?

YES >> Check corresponding lamp socket and harness. Repair or replace if necessary.
NO >> Repair or replace harness.

FRONT SIDE MARKER LAMP CIRCUIT

Component Function Check

INFOID:0000000012830935

1.CHECK PARKING LAMP OPERATION

Check that the parking lamp is turned ON.

Is the inspection result normal?

YES >> GO TO 2.
NO >> Check parking lamp circuit. Refer to EXL-224, "Component Function Check".

2.CHECK FRONT SIDE MARKER LAMP OPERATION

CONSULT

1. Select “EXTERNAL LAMPS” in “Active Test” mode of “IPDM E/R”.
2. While operating the test items, check that the front side marker lamp is turned ON.

TAIL : Front side marker lamp ON
Off : Front side marker lamp OFF

Is the inspection result normal?

YES >> Front side marker lamp circuit is normal.
NO >> Refer to EXL-226, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012830936

Regarding Wiring Diagram information, refer to EXL-196, "Wiring Diagram".

1.CHECK FRONT SIDE MARKER LAMP BULB

Check applicable lamp bulb.

Is the inspection result normal?

YES >> GO TO 2.
NO >> Replace bulb. Refer to EXL-254, "Bulb Replacement".

2.CHECK FRONT SIDE MARKER LAMP POWER SUPPLY CIRCUIT

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

Front combination lamp			IPDM E/R		Continuity
Connector		Terminal	Connector	Terminal	
RH	E212	2	E201	90	Yes
LH	E217				

Is the inspection result normal?

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

3.CHECK FRONT SIDE MARKER LAMP GROUND CIRCUIT

Check continuity between front side marker lamp harness connector and ground.

Front combination lamp			Ground	Continuity
Connector		Terminal		
RH	E212	7		Yes
LH	E217			

Is the inspection result normal?

YES >> Check corresponding bulb socket and harness. Repair or replace if necessary.
NO >> Repair or replace harness.

TAIL LAMP CIRCUIT

Component Function Check

INFOID:0000000012830937

1.CHECK TAIL LAMP OPERATION

CONSULT
1. Select “EXTERNAL LAMPS” in “Active Test” mode of “IPDM E/R”.
2. While operating the test items, check that the tail lamp is turned ON.

TAIL : Tail lamp ON
Off : Tail lamp OFF

Is the inspection result normal?

YES >> Tail lamp circuit is normal.
NO >> Refer to EXL-228, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012830938

Regarding Wiring Diagram information. Refer to EXL-196, "Wiring Diagram".

1.CHECK PARKING LAMP OPERATION

Check that the parking lamp is turned ON.

Is the inspection result normal?

YES [When tail lamp RH or LH does not turn ON]>>GO TO 2.
NO >> Check parking lamp circuit. Refer to EXL-224, "Component Function Check".

2.CHECK TAIL LAMP FUSE

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

Unit	Location	Fuse No.	Capacity
Tail lamp RH	IPDM E/R	52	10A
Tail lamp LH		51	

Is the inspection result normal?

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

3.CHECK TAIL LAMP OUTPUT VOLTAGE

CONSULT
1. Disconnect rear combination lamp RH or LH connector.
2. Turn ignition switch ON.
3. Select “EXTERNAL LAMPS” in “Active Test” mode of “IPDM E/R”.
4. While operating the test items, check voltage between applicable rear combination lamp harness connector and ground.

(+)			(–)	Test item		Voltage (Approx.)
Rear combination lamp						
Connector		Terminal				
RH	B45	1	Ground	EXTERNAL LAMPS	TAIL	Battery voltage
					Off	0 V
LH	B30				TAIL	Battery voltage
					Off	0 V

Is the inspection result normal?

YES >> GO TO 6.
NO >> GO TO 4.

4. CHECK TAIL LAMP POWER SUPPLY CIRCUIT (SHORT)

1. Disconnect IPDM E/R connector and rear combination lamp RH or LH connector.
2. Check continuity between IPDM E/R harness connector and ground.

(+)		(–)	Continuity
IPDM E/R			
Connector	Terminal		
E18	9	Ground	No
	10		

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace harness.

5. CHECK TAIL LAMP POWER SUPPLY CIRCUIT (OPEN)

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

Rear combination lamp			IPDM E/R		Continuity
Connector		Terminal	Connector	Terminal	
RH	B45	1	E18	9	Yes
LH	B30			10	

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-47, "Removal and Installation".
NO >> Repair or replace harness.

6. CHECK TAIL LAMP GROUND CIRCUIT

Check continuity between rear combination lamp harness connector and ground.

Rear combination lamp			Ground	Continuity
Connector		Terminal		
RH	B45	4		Yes
LH	B30			

Is the inspection result normal?

YES >> Replace rear combination lamp. Refer to EXL-262, "Removal and Installation".
NO >> Repair or replace harness.

LICENSE PLATE LAMP CIRCUIT

Component Function Check

INFOID:0000000012830939

1.CHECK TAIL LAMP LH OPERATION

Check that the tail lamp LH is turned ON.

Is the inspection result normal?

YES >> GO TO 2.
NO >> Check tail lamp circuit. Refer to EXL-228, "Component Function Check".

2.CHECK LICENSE PLATE LAMP OPERATION

CONSULT
1. Select “EXTERNAL LAMPS” in “Active Test” mode of “IPDM E/R”.
2. While operating the lighting switch, check that the license plate lamp is turned ON.

TAIL : License plate lamp ON
Off : License plate lamp OFF

Is the inspection result normal?

YES >> License plate lamp circuit is normal.
NO >> Refer to EXL-230, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012830940

Regarding Wiring Diagram information, refer to EXL-196, "Wiring Diagram".

1.CHECK LICENSE PLATE LAMP BULB

Check the applicable lamp bulb.

Is the inspection result normal?

YES >> GO TO 2.
NO >> Replace bulb. Refer to EXL-261, "Removal and Installation".

2.CHECK LICENSE PLATE LAMP POWER SUPPLY CIRCUIT

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

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

Is the inspection result normal?

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

3.CHECK LICENSE PLATE LAMP GROUND CIRCUIT

Check continuity between license plate lamp harness connector and ground.

License plate lamp			Ground	Continuity
Connector		Terminal		
RH	B32	2		Yes
LH	B34			

Is the inspection result normal?

YES >> Check corresponding bulb socket and harness. Repair or replace if necessary.
NO >> Repair or replace harness.

FRONT FOG LAMP CIRCUIT

Component Function Check

INFOID:0000000012830941

1.CHECK FRONT FOG LAMP OPERATION

CONSULT
1. Select “EXTERNAL LAMPS” in “Active Test” mode of “IPDM E/R”.
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-232, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012830942

Regarding Wiring Diagram information, refer to EXL-182, "Wiring Diagram".

1.CHECK FRONT FOG LAMP FUSE

1. Turn 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 inspection result normal?

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

2.CHECK FRONT FOG LAMP OUTPUT VOLTAGE

CONSULT
1. Disconnect front fog lamp connector.
2. Turn ignition switch ON.
3. Select “EXTERNAL LAMPS” in “Active Test” mode of “IPDM E/R”.
4. While operating the test items, check the voltage between front fog lamp harness connector and ground.

(+)			(–)	Test item		Voltage (Approx.)
Front fog lamp						
Connector		Terminal				
RH	E353	1	Ground	EXTERNAL LAMPS	Fog	Battery voltage
					Off	0 V
LH	E308	1			Fog	Battery voltage
					Off	0 V

Is the inspection result normal?

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

3.CHECK FRONT FOG LAMP POWER SUPPLY CIRCUIT (SHORT)

1. Disconnect applicable front fog lamp connector and IPDM E/R connector.
2. Check continuity between IPDM E/R harness connector and ground.

IPDM E/R		Ground	Continuity
Connector	Terminal		
E200	78		No
	79		

Is the inspection result normal?

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

4. CHECK FRONT FOG LAMP POWER SUPPLY CIRCUIT (OPEN)

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

Front fog lamp			IPDM E/R		Continuity
Connector		Terminal	Connector	Terminal	
RH	E353	1	E200	78	Yes
LH	E308	1		79	

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-47, "Removal and Installation".
NO >> Repair or replace harness.

5. CHECK FRONT FOG LAMP GROUND CIRCUIT

Check continuity between front fog lamp harness connector and ground.

Front fog lamp			Ground	Continuity
Connector		Terminal		
RH	E353	2		Yes
LH	E308	2		

Is the inspection result normal?

YES >> Replace bulb. Refer to EXL-256, "Removal and Installation".
NO >> Repair or replace harness.

TURN SIGNAL LAMP CIRCUIT

Component Function Check

INFOID:0000000012830943

1.CHECK TURN SIGNAL LAMP

CONSULT
1. Select "FLASHER" in “Active Test” mode of “BCM”.
2. While operating the test items, check that the turn signal lamp blinks.

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

Is the inspection result normal?

YES >> Turn signal lamp circuit is normal.
NO >> Refer to EXL-234, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012830944

Regarding Wiring Diagram information, refer to EXL-188, "Wiring Diagram".

1.CHECK TURN SIGNAL LAMP BULB

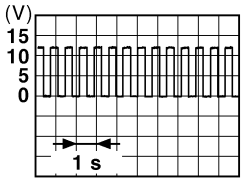
Check the applicable lamp bulb to be sure the proper bulb standard is in use and the bulb is not open.

Is the bulb OK?

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

2.CHECK TURN SIGNAL LAMP OUTPUT VOLTAGE

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

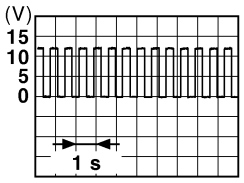
Front combination lamp			(–)	Voltage
Connector		Terminal		
LH	E217	3	Ground	
RH	E212			

PKID0926E

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

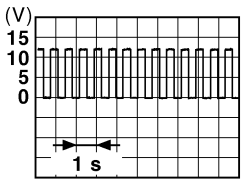
With turn signal in mirror

Door mirror		(–)	Voltage
Connector	Terminal		

LH	D4	6	Ground	
RH	D107			

PKID0926E

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

Rear combination lamp			(–)	Voltage
Connector		Terminal		
LH	B30	3	Ground	
RH	B45			

PKID0926E

Is the inspection result normal?

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

3. CHECK TURN SIGNAL LAMP POWER SUPPLY CIRCUIT

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

Front combination lamp			BCM		Continuity
Connector		Terminal	Connector	Terminal	
LH	E217	3	M20	117	Yes
RH	E212			105	

4. Check continuity between the BCM harness connector and the door mirror harness connector.

With turn signal in mirror

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

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

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

Is the inspection result normal?

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

4. CHECK TURN SIGNAL LAMP GROUND CIRCUIT

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

Front combination lamp			—	Continuity
Connector		Terminal		
LH	E217	7	Ground	Yes
RH	E212			

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

With turn signal in mirror

Door mirror lamp			—	Continuity
Connector		Terminal		
LH	D4	5	Ground	Yes
RH	D107			

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

Rear combination lamp			—	Continuity
Connector		Terminal		
LH	B30	4	Ground	Yes
RH	B45			

Is the inspection result normal?

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

OPTICAL SENSOR

Component Function Check

INFOID:0000000012830945

1.CHECK OPTICAL SENSOR SIGNAL WITH CONSULT

CONSULT
1. Turn ignition switch ON.
2. Select “HEADLAMP” in “Data Monitor” mode of “BCM”.
3. Turn lighting switch to AUTO.
4. With the optical sensor illuminating, check the monitor status.

Monitor item	Condition		Voltage (Approx.)
OPTISEN (DTCT)	Optical sensor	When illuminating	3.1 V or more *
		When shutting off light	0.6 V or less

*: Illuminate 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-237, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012830946

Regarding Wiring Diagram information, refer to EXL-174, "Wiring Diagram".

1.CHECK OPTICAL SENSOR POWER SUPPLY INPUT

1. Turn ignition switch ON.
2. Turn lighting switch to AUTO.
3. Check voltage between optical sensor harness connector and ground.

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

Is the inspection result normal?

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

2.CHECK OPTICAL SENSOR GROUND INPUT

Check voltage between optical sensor harness connector and ground.

(+)		(–)	Voltage (Approx.)
Optical sensor			
Connector	Terminal		
M66	3	Ground	0 V

Is the inspection result normal?

YES >> GO TO 3.
NO >> GO TO 6.

3.CHECK OPTICAL SENSOR SIGNAL OUTPUT

While illuminating the optical sensor, check voltage between optical sensor harness connector and ground.

(+)		(–)	Condition		Voltage (Approx.)
Optical sensor					
Connector	Terminal				
M66	2	Ground	Optical sensor	When illuminating	3.1 V or more *
				When shutting off light	0.6 V or less

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

Is the inspection result normal?

YES >> GO TO 7.
NO >> Replace the optical sensor. Refer to EXL-268, "Removal and Installation".

4. CHECK OPTICAL SENSOR (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	1	M17	3	Yes

Is the inspection result normal?

YES >> GO TO 5.
NO >> Repair or replace harness.

5. CHECK OPTICAL SENSOR (SHORT) CIRCUIT

Check continuity between optical sensor harness connector and ground.

Optical sensor		Ground	Continuity
Connector	Terminal		
M66	1		No

Is the inspection result normal?

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

6. CHECK OPTICAL SENSOR GROUND 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	3	M17	17	Yes

Is the inspection result normal?

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

7. CHECK OPTICAL SENSOR SIGNAL CIRCUIT (OPEN)

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

Is the inspection result normal?

YES >> GO TO 8.
NO >> Repair or replace harness.

8. CHECK OPTICAL SENSOR CIRCUIT (SHORT)

Check continuity between optical sensor harness connector and ground.

Optical sensor		Ground	Continuity
Connector	Terminal		
M66	2		No

Is the inspection result normal?

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

HAZARD SWITCH

Component Function Check

INFOID:0000000012830947

1.CHECK HAZARD SWITCH SIGNAL WITH CONSULT

CONSULT
1. Turn ignition switch ON.
2. Select “FLASHER” in “Data Monitor” mode of “BCM”.
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-240, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012830948

Regarding Wiring Diagram information, refer to EXL-188, "Wiring Diagram".

1.CHECK HAZARD SWITCH SIGNAL INPUT

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

(+)		(–)	Voltage (Approx.)
Hazard switch			
Connector	Terminal		
M54	2	Ground	Battery voltage

Is the inspection result normal?

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

2.CHECK HAZARD SWITCH SIGNAL CIRCUIT (OPEN)

1. Disconnect BCM connector.
2. Check continuity between hazard switch 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.

3.CHECK HAZARD SWITCH SIGNAL CIRCUIT (SHORT)

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-81, "Removal and Installation".
NO >> Repair or replace harness.

4. CHECK HAZARD SWITCH GROUND 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-267, "Removal and Installation".
NO >> Repair or replace harness.

SYMPTOM DIAGNOSIS

EXTERIOR LIGHTING SYSTEM SYMPTOMS

Symptom Table

INFOID:0000000012830949

NOTE:
Perform the “Self Diagnostic Result” with CONSULT before the symptom diagnosis. Perform the trouble diagnosis if any DTC is detected.

Symptom		Possible cause	Inspection item
Headlamp (HI) is not turned ON	One side	• Fuse • Headlamp (HI) power supply circuit • Front combination lamp internal circuit - Harness • IPDM E/R	Headlamp (HI) circuit Refer to EXL-217, "Component Function Check".
	Both sides	**Symptom diagnosis** “BOTH SIDE HEADLAMPS (HI) ARE NOT TURNED ON” Refer to EXL-246, "Diagnosis Procedure".	
High beam indicator lamp is not turned ON [Headlamp (HI) is turned ON]		Combination meter	• Combination meter “Data Monitor”“HI-BEAM IND” • “BCM (HEAD LAMP) “Active Test”“HEAD LAMP”
Headlamp (LO) is not turned ON	One side	• Fuse • Headlamp (LO) power supply circuit • Front combination lamp internal circuit - LED (headlamp low) - LED headlamp control module - Harness • IPDM E/R	Headlamp (LO) circuit Refer to EXL-219, "Component Function Check".
	Both sides	**Symptom diagnosis** “BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON” Refer to EXL-247, "Diagnosis Procedure".	
Headlamp (HI) and (LO) is not turned ON		• LED headlamp ground circuit (headlamp HI) • Front combination lamp internal circuit - LED headlamp control module (headlamp HI) - Harness	LED headlamp Refer to EXL-223, "Diagnosis Procedure".
Headlamp warning remains ON [Headlamp (LO) is turned ON]		• LED headlamp warning signal circuit • Front combination lamp internal circuit - LED headlamp control module - Harness • Combination meter	Headlamp warning Refer to EXL-142, "HEADLAMP SYSTEM : System Description".
Each lamp is not turned ON/OFF with lighting switch AUTO		• Combination switch input/output signal circuit • Combination switch • BCM	Combination switch Refer to BCS-79, "Symptom Table".
		• Optical sensor power supply/ground/signal circuit • Optical sensor • BCM	Optical sensor Refer to EXL-237, "Component Function Check".

Symptom	Possible cause	Inspection item
Parking lamp is not turned ON	• Fuse • Parking lamp power supply/ground circuit • Front combination lamp internal circuit - LED (parking lamp) - Control circuit - Harness • IPDM E/R	Parking lamp circuit Refer to EXL-224, "Component Function Check".
Side marker lamp is not turned ON [Parking lamp is turned ON]	Front combination lamp internal circuit • Side marker lamp • Control circuit • Harness	Replace front combination lamp Refer to EXL-254, "Removal and Installation".
Tail lamp is not turned ON	• Fuse • Tail lamp power supply/ground circuit • Rear combination lamp internal circuit - LED (tail lamp) - Harness • IPDM E/R	Tail lamp circuit Refer to EXL-228, "Component Function Check".
License plate lamp is not turned ON [Tail lamp is turned ON]	• License plate lamp power supply/ground circuit • License plate lamp bulb • License plate lamp bulb socket • IPDM E/R	License plate lamp circuit Refer to EXL-230, "Component Function Check".
Parking lamp, license plate lamp, side marker lamp and tail lamp are not turned ON	**Symptom diagnosis** “PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMPS ARE NOT TURNED ON” Refer to EXL-248, "Diagnosis Procedure".	
Position lamp indicator is not turned ON (Parking lamp, license plate lamp, side marker lamp and tail lamp are turned ON)	Combination meter	• Combination meter “Data Monitor”“LIGHT IND” • BCM (HEAD LAMP) “Active Test”“TAIL LAMP”
Daytime running light is not turned ON	• Fuse • Daytime running light relay • Daytime running light relay power supply/control signal circuit • Daytime running light power supply/ground circuit • Front combination lamp internal circuit - LED (daytime running light) - Control circuit - Harness • IPDM E/R • BCM • ECM • Combination meter	• Daytime running light circuit Refer to EXL-221, "Component Function Check". • BCM (HEAD LAMP) “Data Monitor”“ENGINE STATE” • Combination meter “Data Monitor”“PKB SW”
Back-up lamp is not turned ON	• Back-up lamp power supply/ground circuit • Rear combination lamp internal circuit - Back-up lamp - Harness • Joint connector • TCM	—

Symptom		Possible cause	Inspection item
Turn signal lamp does not blink	Indicator lamp is normal (Applicable side performs high flasher activation)	• Front turn signal lamp - Front turn signal lamp power supply/ground circuit - Front turn signal lamp • Side turn signal lamp - Side turn signal lamp power supply/ground circuit - Side turn signal lamp • Rear turn signal lamp - Rear turn signal lamp power supply/ground circuit - Bulb (rear turn signal lamp) - Rear turn signal lamp bulb socket/harness	Turn signal lamp circuit Refer to EXL-234, "Component Function Check".
	Indicator lamp is included	• Combination switch input/output signal circuit • Combination switch • BCM	Combination switch Refer to BCS-79, "Symptom Table".
Turn signal indicator lamp does not blink (Turn signal lamp is normal)	One side	Combination meter	—
	Both sides (Always)	• Turn signal indicator • BCM • Combination meter	• Combination meter “Data Monitor”“TURN IND” • BCM (FLASHER) “Active Test”“FLASHER”
	Both sides (Only when activating hazard warning lamp with ignition switch OFF)	• Combination meter power supply/ground circuit • Combination meter	Combination meter Power supply and ground circuit Refer to MWI-59, "COMBINATION METER : Diagnosis Procedure".
• Hazard warning lamp does not activate (Turn signal is normal) • Hazard warning lamp continues activating		• Hazard switch signal/ground circuit • Integral switch (hazard switch) • BCM	Hazard switch Refer to EXL-240, "Component Function Check".
Front fog lamp is not turned ON	One side	• Front fog lamp power supply/ground circuit • Front fog lamp • IPDM E/R	Front fog lamp circuit Refer to EXL-232, "Component Function Check".
	Both sides	**Symptom diagnosis** “BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON” Refer to EXL-249, "Diagnosis Procedure".	
Front fog lamp indicator lamp is not turned ON (Front fog lamp is turned ON)		Combination meter	• Combination meter “Data Monitor”“FR FOG IND” • BCM (HEAD LAMP) “Active Test”“FR FOG LAMP”

NORMAL OPERATING CONDITION

Description

INFOID:0000000012830950

LED HEADLAMP

- LED brightness and color may slightly change until the temperature becomes stable. This is not a malfunction.
- Illumination time lag may occur between right and left. This is not a malfunction.
- Brightness may be reduced due to age deterioration of LED.

AUTO LIGHT SYSTEM

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

BOTH SIDE HEADLAMPS (HI) ARE NOT TURNED ON

Description

INFOID:0000000012830951

Both side headlamps (HI) are not turned ON when setting to the lighting switch HI or PASS.

Diagnosis Procedure

INFOID:0000000012830952

1.COMBINATION SWITCH INSPECTION

Check combination 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 (HI) REQUEST SIGNAL INPUT

With CONSULT

1. Select “HL HI REQ” in “Data Monitor” mode of “IPDM E/R”.
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
		LO	Off

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-47, "Removal and Installation".
NO >> Replace BCM. Refer to BCS-81, "Removal and Installation".

BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

Description

INFOID:0000000012830953

Both side headlamps (LO) are not turned ON in any condition.

Diagnosis Procedure

INFOID:0000000012830954

1.CHECK COMBINATION SWITCH

Check combination 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

With CONSULT

1. Select “HL LO REQ” in “Data Monitor” mode of “IPDM E/R”.
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 >> Replace IPDM E/R. Refer to PCS-47, "Removal and Installation".
NO >> Replace BCM. Refer to BCS-81, "Removal and Installation".

PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMPS ARE NOT TURNED ON

Description

INFOID:0000000012830955

The parking, license plate, side marker and tail lamps are not turned ON in any condition.

Diagnosis Procedure

INFOID:0000000012830956

1.COMBINATION SWITCH INSPECTION

Check combination switch. Refer to BCS-79, "Symptom Table".

Is the combination switch normal?

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

2.CHECK TAIL LAMP RELAY REQUEST SIGNAL INPUT

With CONSULT

1. Select “TAIL & CLR REQ” in “Data Monitor” mode of “IPDM E/R”.
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 result normal?

YES >> Replace IPDM E/R. Refer to PCS-47, "Removal and Installation".
NO >> Replace BCM. Refer to BCS-81, "Removal and Installation".

BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

Description

INFOID:0000000012830957

Both side front fog lamps are not turned ON in any condition.

Diagnosis Procedure

INFOID:0000000012830958

1.COMBINATION SWITCH INSPECTION

Check combination 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

With CONSULT

1. Select “FR FOG REQ” in “Data Monitor” mode of “IPDM E/R”.
2. While operating the front fog lamp switch, check the monitor status.

Monitor item	Condition		Monitor status
FR FOG REQ	Front fog lamp switch (With lighting switch 1ST)	ON	On
		OFF	Off

Is the item status normal?

YES >> Perform the front fog lamp diagnosis. Refer to EXL-232, "Diagnosis Procedure".
NO >> Replace BCM. Refer to BCS-81, "Removal and Installation".

PERIODIC MAINTENANCE

HEADLAMP AIMING ADJUSTMENT

Aiming Adjustment

INFOID:0000000012851509

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:

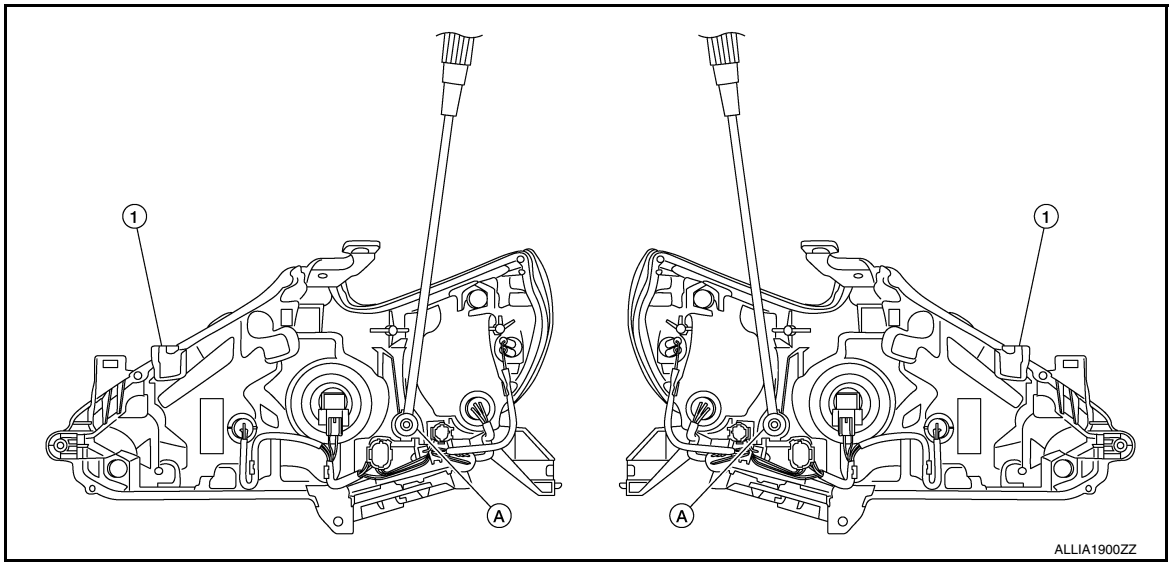
Do not use organic solvent (thinner, gasoline etc.)

- 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.

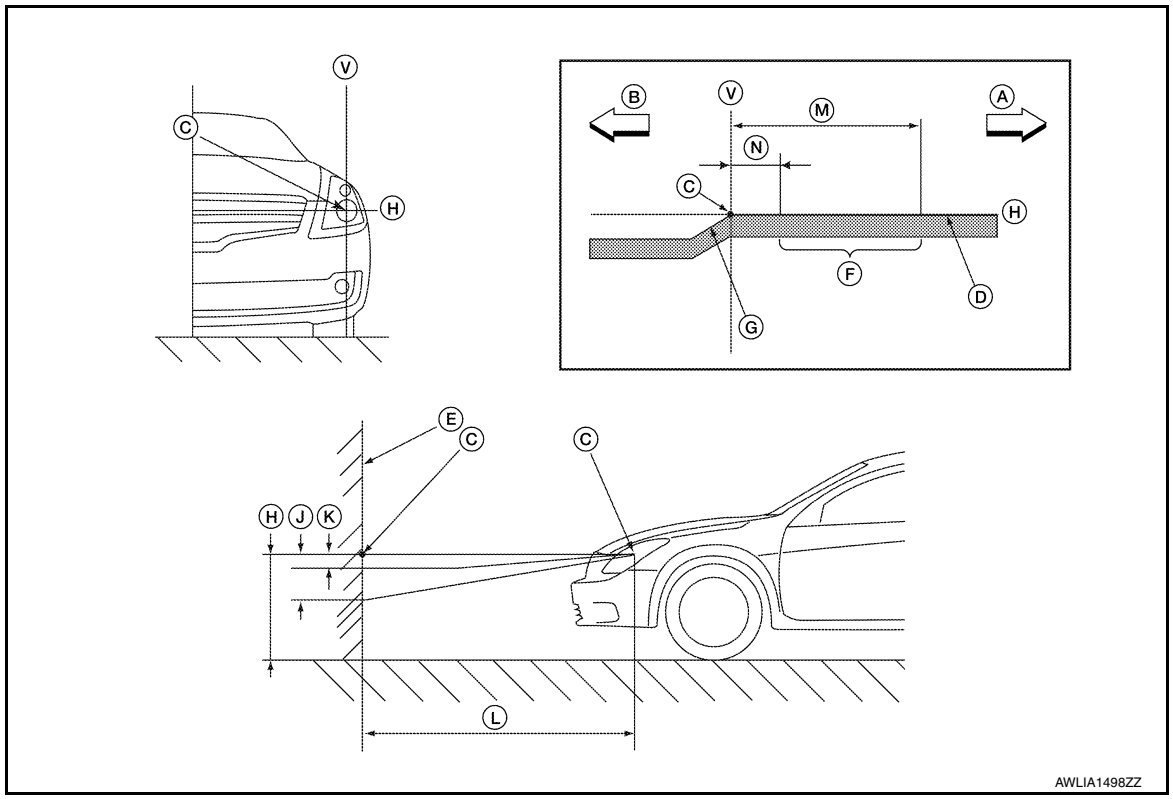


1. Front combination lamp
A. Suitable tool (for aiming adjustment)
B. Adjusting screw

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:0000000012851510

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.

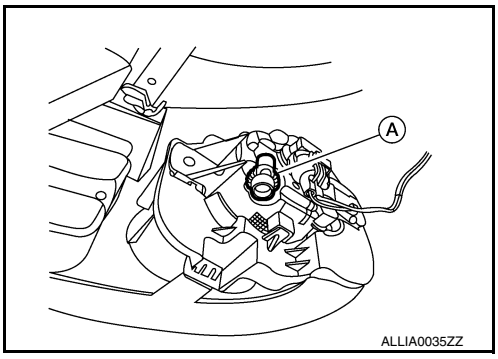
NOTE:

- For fog lamp 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 fog lamp aiming if:

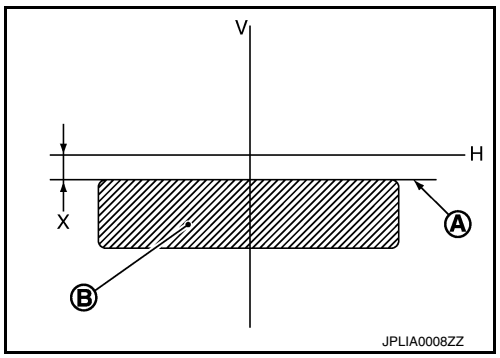
- The vehicle front body has been repaired.
- The front fog lamp has been removed or replaced.
- Any outfitting has been installed.
- The vehicle’s standard load condition has been substantially increased.

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 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).



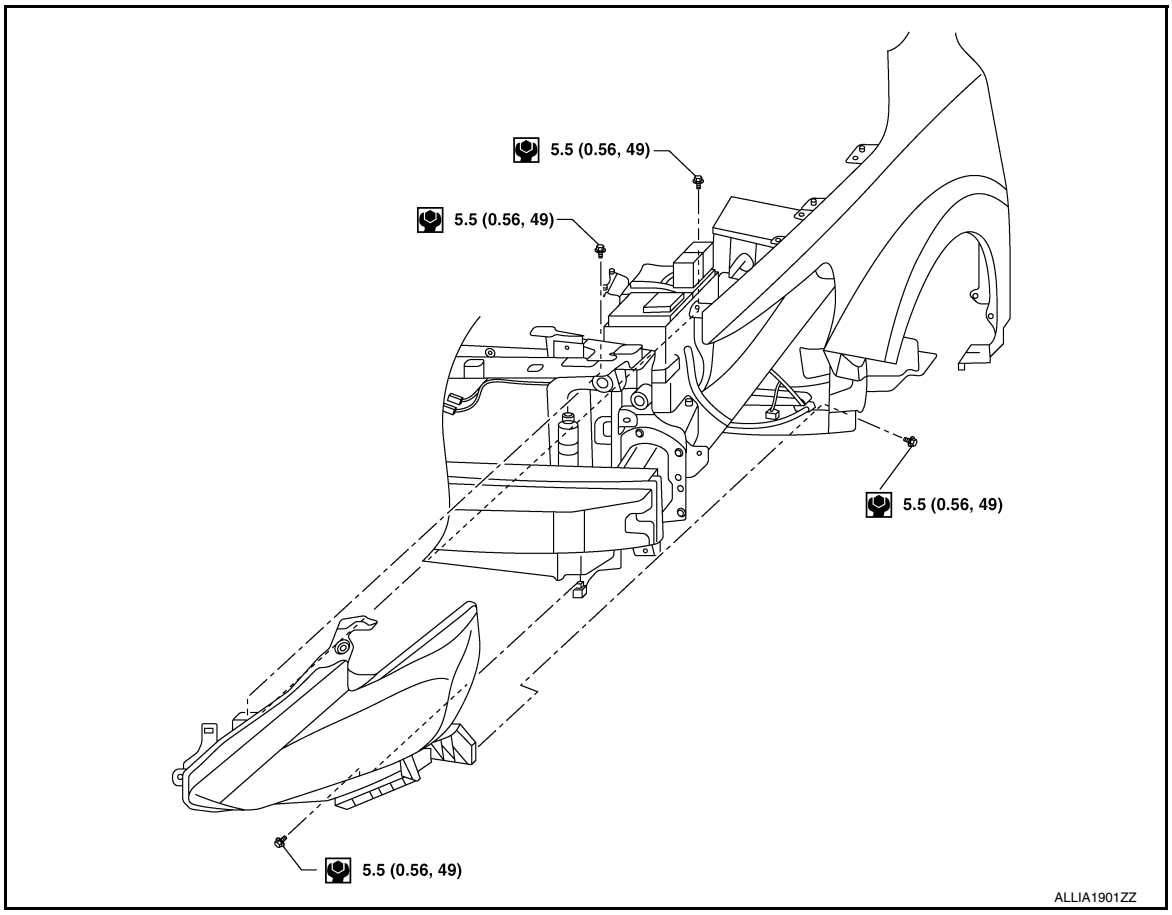
A : Cutoff line
B : High illuminance area
H : Horizontal center line of front fog lamp
V : Vertical center line of front fog lamp
X : Cutoff line height

REMOVAL AND INSTALLATION

FRONT COMBINATION LAMP

Exploded View

INFOID:0000000012830962



1. Front combination lamp

NOTE:
LH shown, RH similar.

Removal and Installation

INFOID:0000000012830963

REMOVAL

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

INSTALLATION

Installation is in the reverse order of removal.

NOTE:
After installation, perform headlamp aiming adjustment. Refer to EXL-250, "Aiming Adjustment".

Bulb Replacement

INFOID:0000000012830964

WARNING:
Do not touch bulb with hand while it is lit or right after being turned off. Burning may result.
CAUTION:

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

HEADLAMP (LOW BEAM) BULB

The headlamp (low beam) bulb is LED and not serviced separately. Refer to EXL-254, "Removal and Installation".

HEADLAMP (HIGH BEAM) BULB

Removal

1. Remove front combination lamp. Refer to EXL-254, "Removal and Installation".
2. Rotate bulb counterclockwise and remove from front combination lamp.
3. Disconnect the harness connector from the high beam lamp bulb and remove.

Installation

Installation is in the reverse order of removal.

SIDE MARKER LAMP BULB

Removal

1. Remove front combination lamp. Refer to EXL-254, "Removal and Installation".
2. Rotate bulb socket counterclockwise and remove from front combination lamp.
3. Remove bulb from bulb socket.

Installation

Installation is in the reverse order of removal.

TURN SIGNAL LAMP BULB

Removal

1. Remove front combination lamp. Refer to EXL-254, "Removal and Installation".
2. Rotate bulb socket counterclockwise and remove from front combination lamp.
3. Remove bulb from bulb socket.

Installation

Installation is in the reverse order of removal.

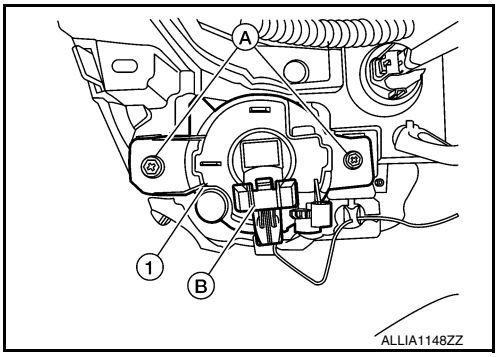
FRONT FOG LAMP

Removal and Installation

INFOID:0000000012830966

REMOVAL

1. Remove the front under cover. Refer to EXT-38, "FRONT UNDER COVER : Removal and Installation"
2. Remove the front fender protector side cover. EXT-36, "FENDER PROTECTOR : Exploded View".
3. Position the fender protector aside. Refer to EXT-36, "FENDER PROTECTOR : Removal and Installation".
4. Disconnect the harness connector (B) from the front fog lamp (1).
5. 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-115, "Aiming Adjustment".

Bulb Replacement

INFOID:0000000012830967

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

FRONT FOG LAMP BULB

Removal

1. Remove the front under cover. Refer to EXT-38, "FRONT UNDER COVER : Removal and Installation"
2. Remove the front fender protector side cover. EXT-36, "FENDER PROTECTOR : Exploded View".
3. Position the front fender protector aside. Refer to EXT-36, "FENDER PROTECTOR : Removal and Installation".
4. Disconnect the harness connector from the front fog lamp bulb.
5. 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 (CANADA ONLY)

Removal

1. Remove the front under cover. Refer to EXT-38, "FRONT UNDER COVER : Removal and Installation"
2. Remove the front fender protector side cover. EXT-36, "FENDER PROTECTOR : Exploded View".
3. Position the front fender protector aside. Refer to EXT-36, "FENDER PROTECTOR : Removal and Installation".

4. Disconnect the harness connector from the daytime light lamp.
5. 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.

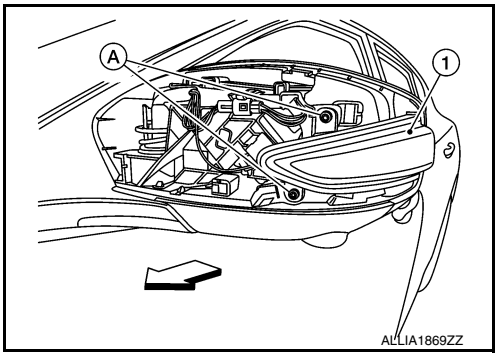
DOOR MIRROR TURN SIGNAL LAMP

Removal and Installation

INFOID:0000000012830969

REMOVAL

1. Remove door mirror rear finisher. Refer to MIR-23, "Removal and Installation".
2. Remove screws (A) from door mirror turn signal lamp (1).



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

INSTALLATION

Installation is in the reverse order of removal.

Bulb Replacement

INFOID:0000000012855539

DOOR MIRROR SIDE TURN SIGNAL LAMP

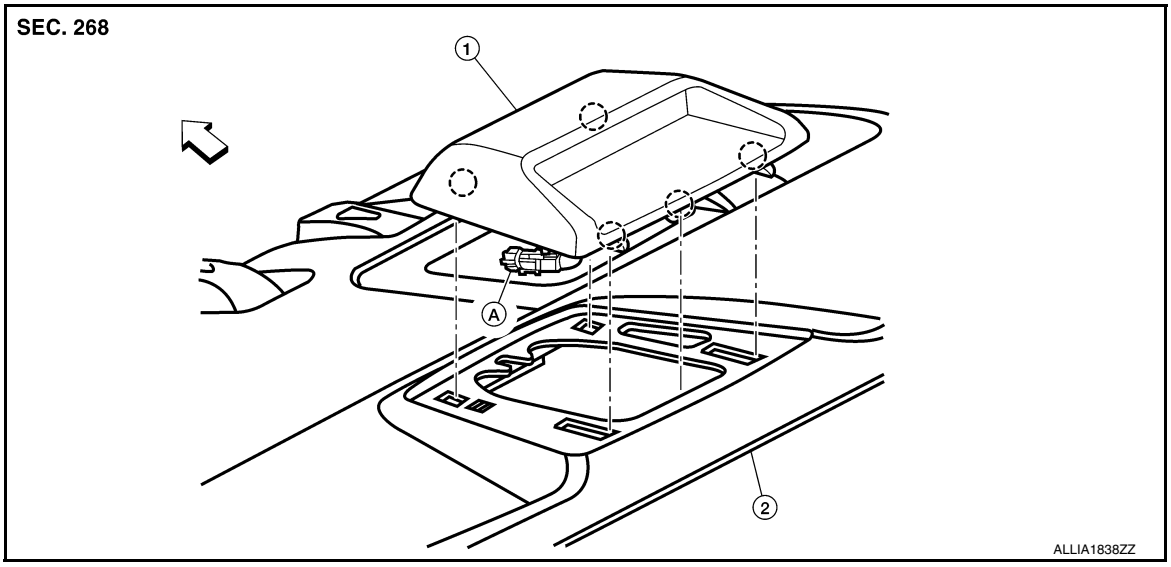
The door mirror side turn signal lamp bulb is integrated into the door mirror side turn signal lamp and is serviced as an assembly. Refer to EXL-121, "Removal and Installation".

HIGH-MOUNTED STOP LAMP

Exploded View

INFOID:0000000012830979

PRACEL SHELF MOUNTED



1. High-mounted stop lamp
2. Rear parcel shelf finisher
A. Harness connector
Pawl
Front

Removal and Installation

INFOID:0000000012830980

REMOVAL

1. Release pawls and lift up on high-mounted stop lamp.
2. Disconnect the harness connector from the high-mounted stop lamp then remove the high-mounted stop lamp.

INSTALLATION

Installation is in the reverse order of removal.

Bulb Replacement

INFOID:0000000012830981

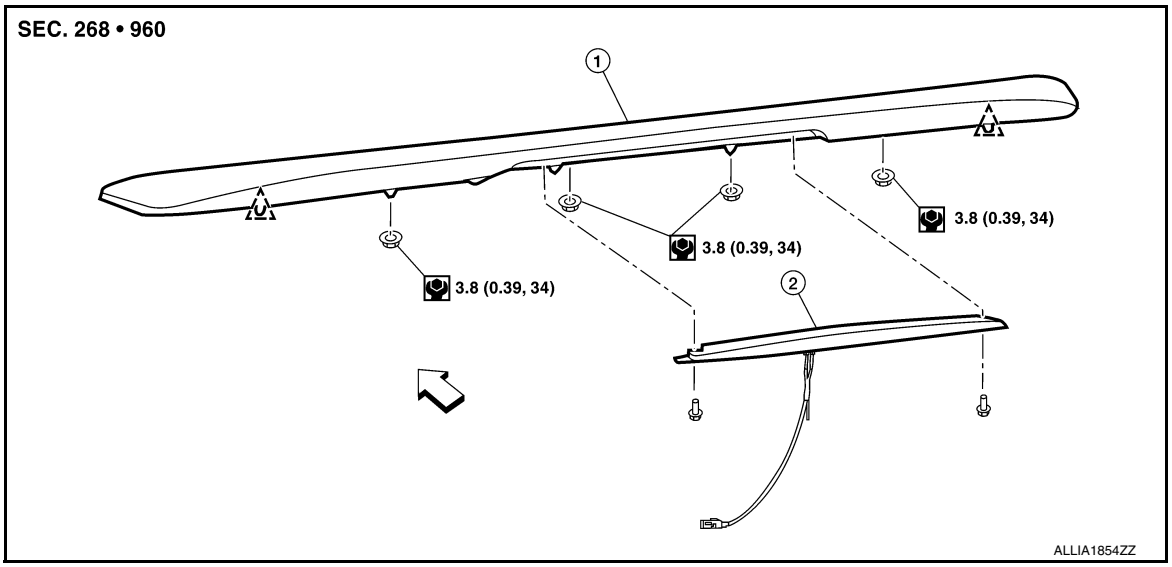
HIGH-MOUNTED STOP LAMP BULB

The high-mounted stop lamp bulb is LED and not serviced separately. Refer to EXL-259, "Removal and Installation".

Exploded View

INFOID:0000000012830982

REAR SPOILER MOUNTED



1. Rear air spoiler
2. High-mounted stop lamp
Clip
Front

Removal and Installation

INFOID:0000000012830983

REMOVAL

1. Remove rear spoiler. Refer to EXT-47, "Removal and Installation".
2. Remove nuts and remove high-mounted stop lamp.

INSTALLATION

Installation is in the reverse order of removal.

Bulb Replacement - With Rear Spoiler

INFOID:0000000012830984

HIGH-MOUNTED STOP LAMP BULB

The high-mounted stop lamp bulb is LED and not serviced separately. Refer to EXL-260, "Removal and Installation".

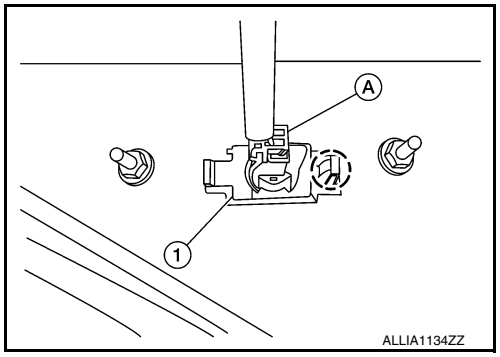
LICENSE PLATE LAMP

Removal and Installation

INFOID:0000000012830986

REMOVAL

1. Remove the license lamp finisher. Refer to EXT-46, "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:0000000012830987

WARNING:

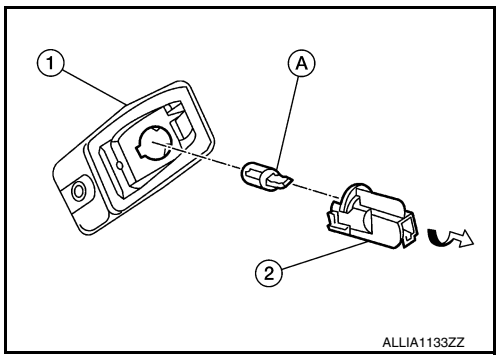
Do not touch bulb with your hand while it is on or right after being turned off. Burning may result.

CAUTION:

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

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).



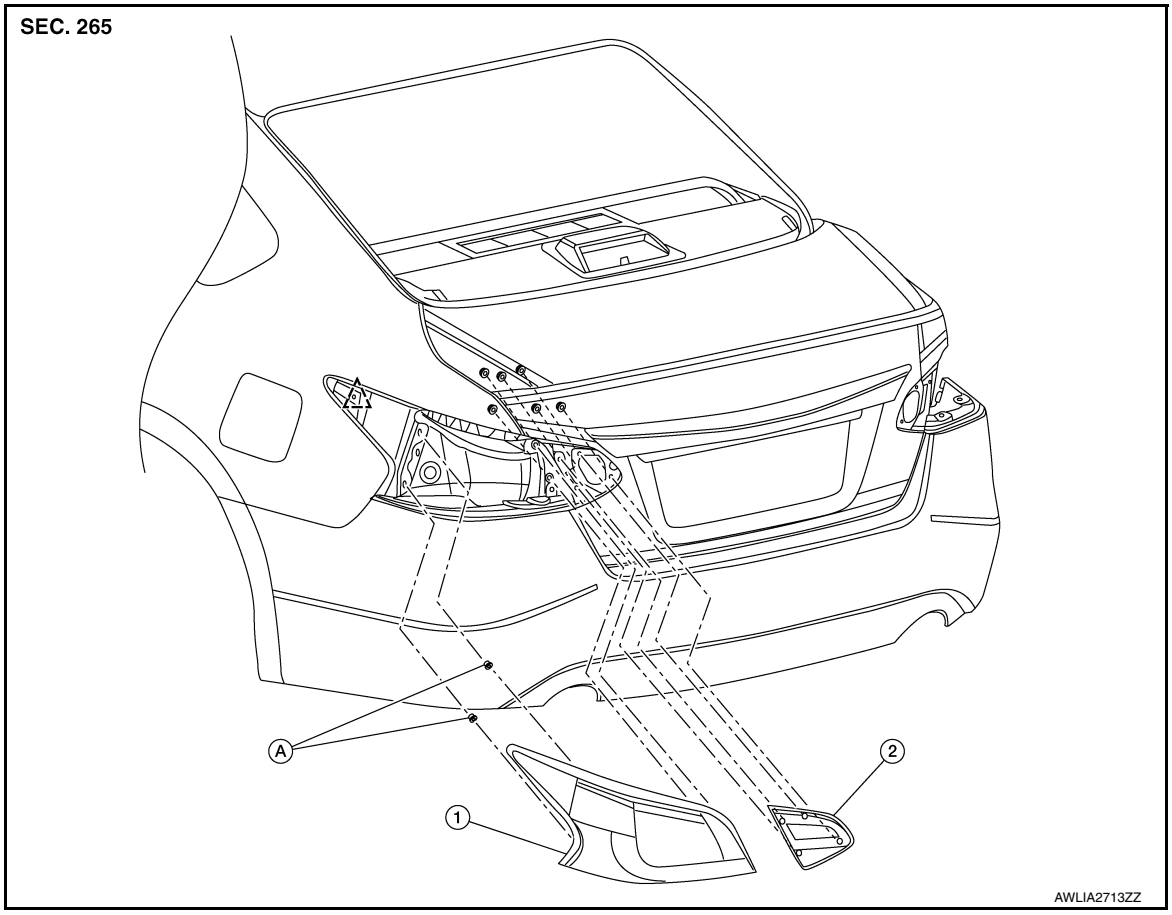
INSTALLATION

Installation is in the reverse order of removal.

REAR COMBINATION LAMP

Exploded View

INFOID:0000000012830976



1. Rear combination lamp
2. Back-up lamp
A. Grommet
Clip

NOTE:
RH shown, LH similar.

Removal and Installation

INFOID:0000000012830977

REMOVAL

1. Partially remove trunk side finisher.
2. Remove rear combination lamp nuts.
3. Pull rear combination lamp rearward to release clip and locators.
4. Disconnect the harness connector from the rear combination lamp and remove.

INSTALLATION

Installation is in the reverse order of removal.

Bulb Replacement

INFOID:0000000012830978

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

- **Do not leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect performance of lamp. When replacing bulb, be sure to replace it with new one.**

REAR TURN SIGNAL LAMP BULB

Removal

1. Remove the rear combination lamp. Refer to EXL-125, "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

Removal

1. Remove the rear combination lamp. Refer to EXL-125, "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.

SIDE MARKER LAMP BULB

Removal

1. Remove the rear combination lamp. Refer to EXL-125, "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.

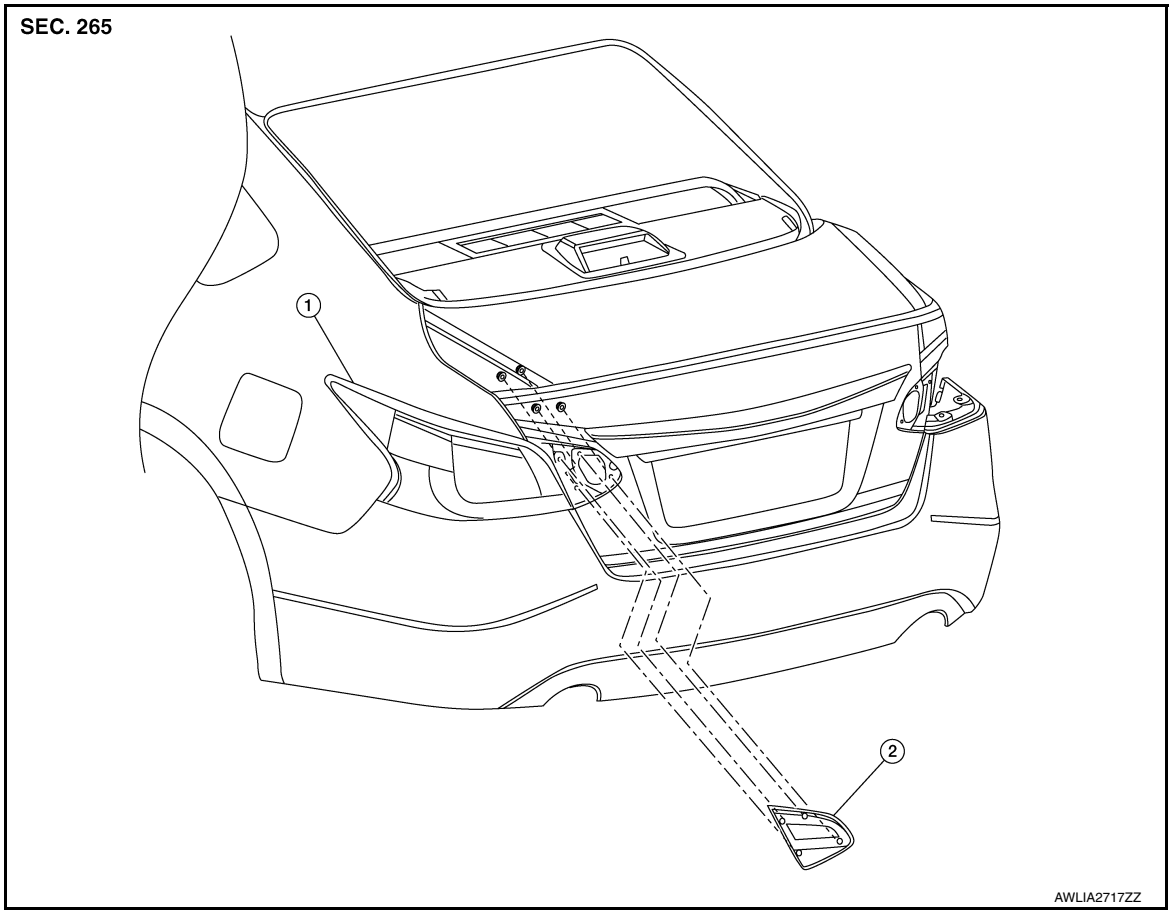
CAUTION:

After installing, be sure to install the bulb socket securely to ensure watertightness.

BACK-UP LAMP

Exploded View

INFOID:0000000012830988



1. Rear combination lamp
2. Back-up lamp
3. Clip

Removal and Installation

INFOID:0000000012830989

REMOVAL

1. Partially remove trunk lid finisher. Refer to INT-33, "Exploded View".
2. Remove back-up lamp assembly nuts.
3. Disconnect the harness connector from the back-up lamp assembly and remove.

INSTALLATION

Installation is in the reverse order of removal.

Bulb Replacement

INFOID:0000000012830990

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

REMOVAL

1. Partially remove trunk lid finisher. Refer to INT-33, "Exploded View".

2. Rotate back-up lamp bulb socket counterclockwise and remove.
3. Remove back-up lamp bulb from bulb socket.

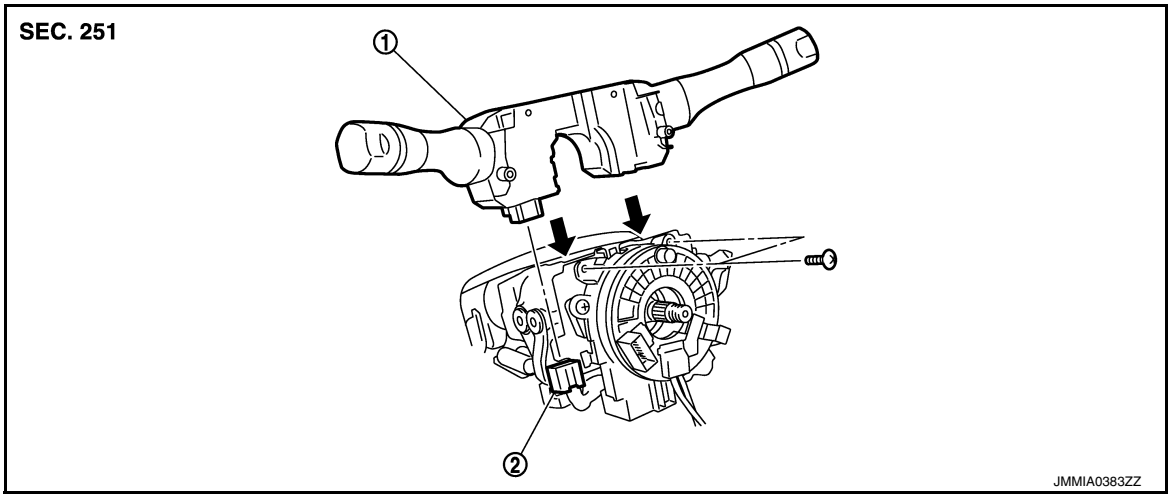
INSTALLATION

Installation is in the reverse order of removal.

COMBINATION SWITCH

Exploded View

INFOID:0000000012830972



1. Combination switch
2. Combination switch harness connector

NOTE:
Shown with the steering wheel removed for clarity only.

Removal and Installation

INFOID:0000000012830973

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-81, "Removal and Installation".
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-16, "SRS Final Check".**

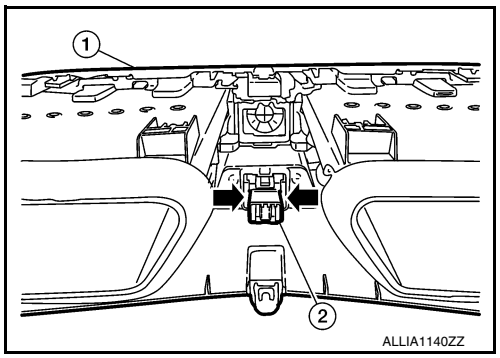
HAZARD SWITCH

Removal and Installation

INFOID:0000000012830975

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.

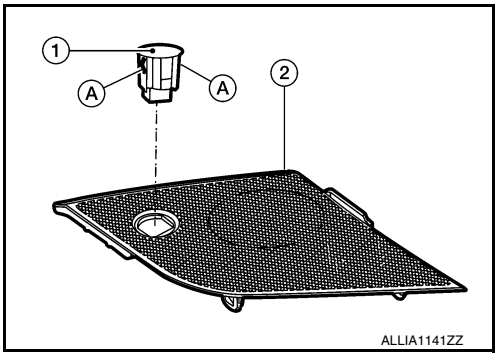
OPTICAL SENSOR

Removal and Installation

INFOID:0000000012830971

REMOVAL

1. Remove the front pillar finisher. Refer to INT-21, "FRONT PILLAR FINISHER : Removal and Installation".
2. Release the front speaker grille (RH) (2) using a suitable tool.
3. Disconnect the harness connector from the optical sensor (1).
4. Release pawls (A) and remove the optical sensor.



INSTALLATION

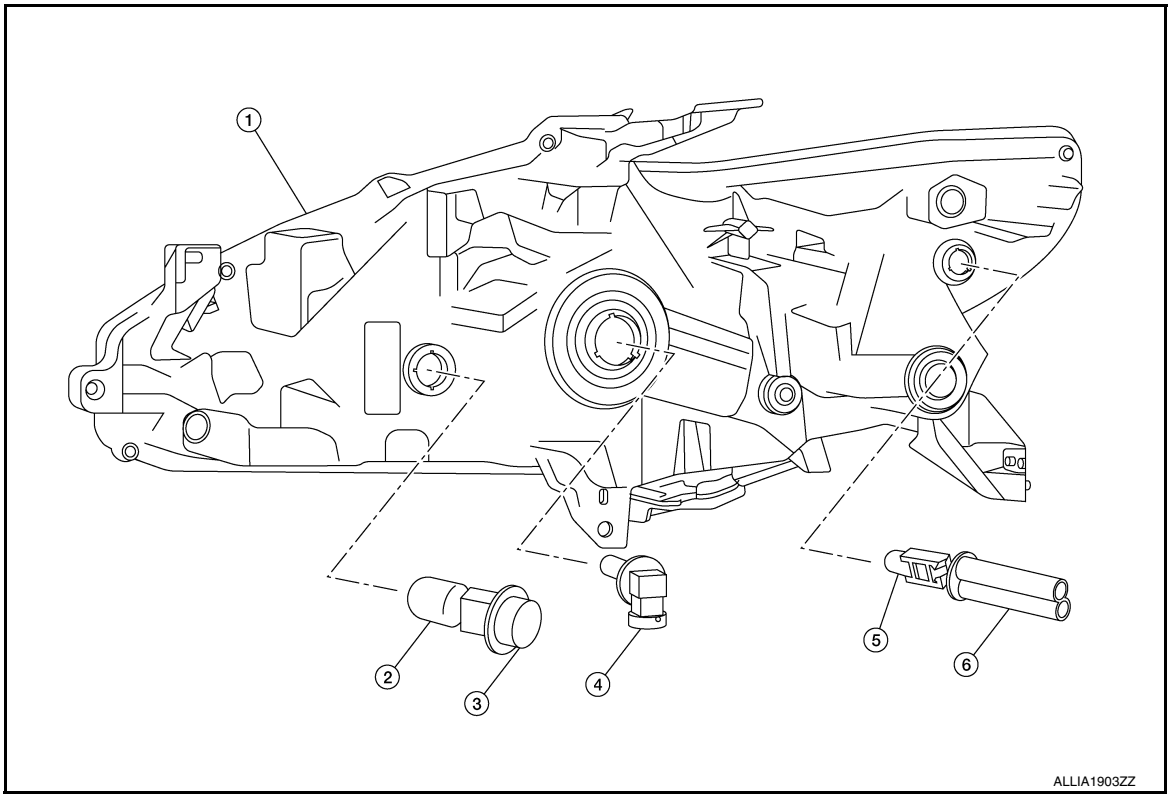
Installation is in the reverse order of removal.

UNIT DISASSEMBLY AND ASSEMBLY

FRONT COMBINATION LAMP

Exploded View

INFOID:0000000012830991



1. Front combination lamp
2. Turn signal lamp bulb
3. Turn signal lamp bulb socket
4. High beam lamp bulb
5. Side marker lamp bulb
6. Side marker lamp bulb socket

NOTE:
LH shown, RH similar.

Disassembly and Assembly

INFOID:0000000012830992

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

NOTE:
The headlamp (low beam) bulb is LED and not serviced separately. Refer to EXL-254, "Removal and Installation".

DISASSEMBLY

1. Remove front combination lamp. Refer to EXL-254, "Removal and Installation".
2. Rotate headlamp (high beam) bulb counterclockwise and remove.
3. Disconnect the harness connector from the headlamp (high beam) bulb.
4. Rotate turn signal lamp bulb socket counterclockwise and remove.
5. Remove turn signal lamp bulb from bulb socket.
6. Rotate side marker lamp bulb socket counterclockwise and remove.

7. Remove side marker lamp bulb from bulb socket.

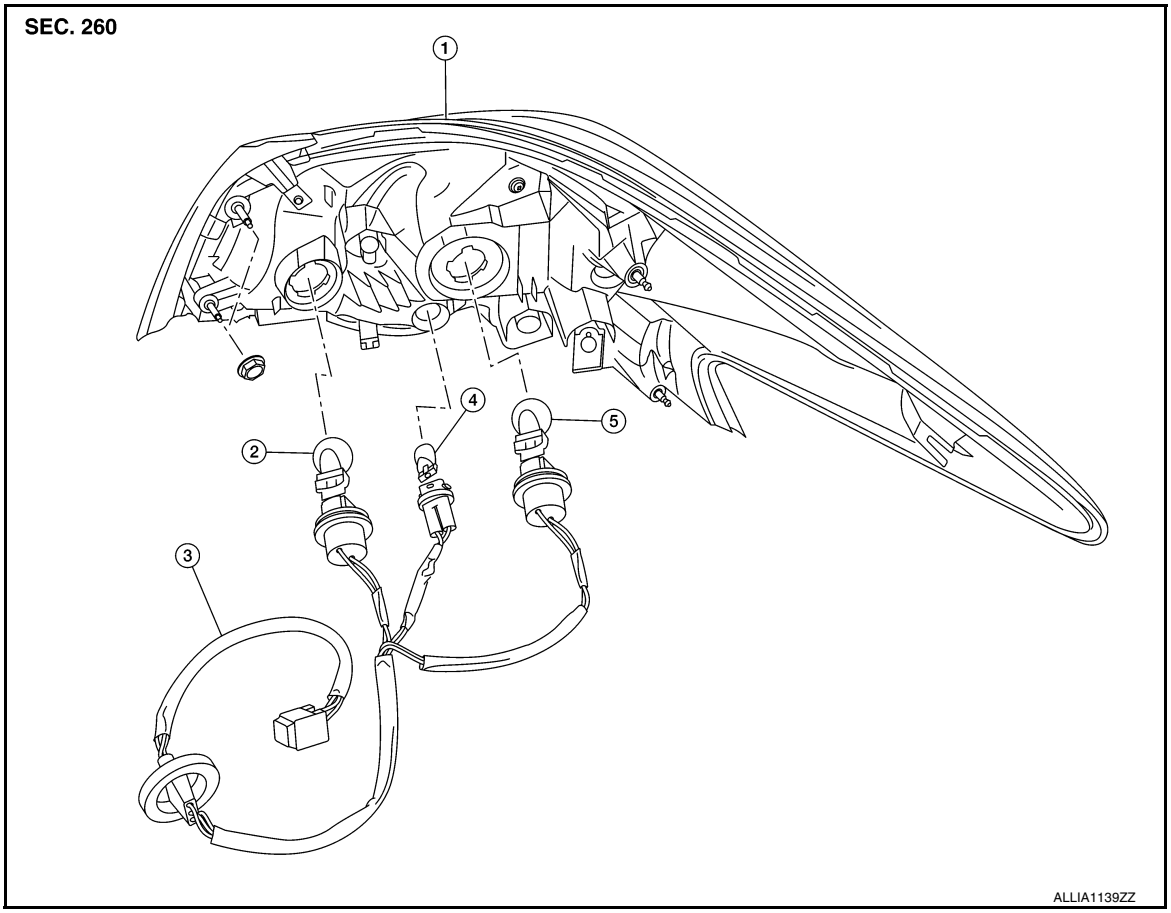
ASSEMBLY

Assembly is in the reverse order of disassembly.

REAR COMBINATION LAMP

Exploded View

INFOID:0000000012830993



1. Rear combination lamp
2. Rear turn signal lamp bulb
3. Rear combination lamp harness
4. Side mark lamp bulb
5. Stop/Tail lamp bulb

Disassembly and Assembly

INFOID:0000000012830994

REAR COMBINATION LAMP

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-125, "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 side mark lamp bulb socket counterclockwise to remove from rear combination lamp.
5. Remove the side mark 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.

ASSEMBLY

Assembly is in the reverse order of disassembly.

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Bulb Specifications

INFOID:0000000012830997

Item		Wattage (W)
Front combination lamp	High beam	65
	Low beam	—
	Turn signal/parking lamp	28/8
	Side marker lamp	5
	Daytime running lamp	—
Front fog lamp (if equipped)		19
Daytime running lamp built-in fog lamp (Canada only)		—
Door mirror turn signal lamp (if equipped)		—
Rear combination lamp	Stop/Tail lamp	21
	Side marker lamp	5
	Turn signal lamp	21
Back-up lamp		16
License plate lamp		5
High-mounted stop lamp	Parcel shelf mounted	—
	Rear spoiler mounted	—

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