SECTION EXL
EXTERIOR LIGHTING SYSTEM

CONTENTS

LED HEADLAMP

PRECAUTION

PRECAUTIONS

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

INFOID:0000000012782791

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:0000000012782792

- 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.

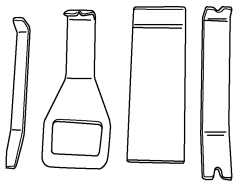
PREPARATION

PREPARATION

Special Service Tool

INFOID:0000000012782793

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

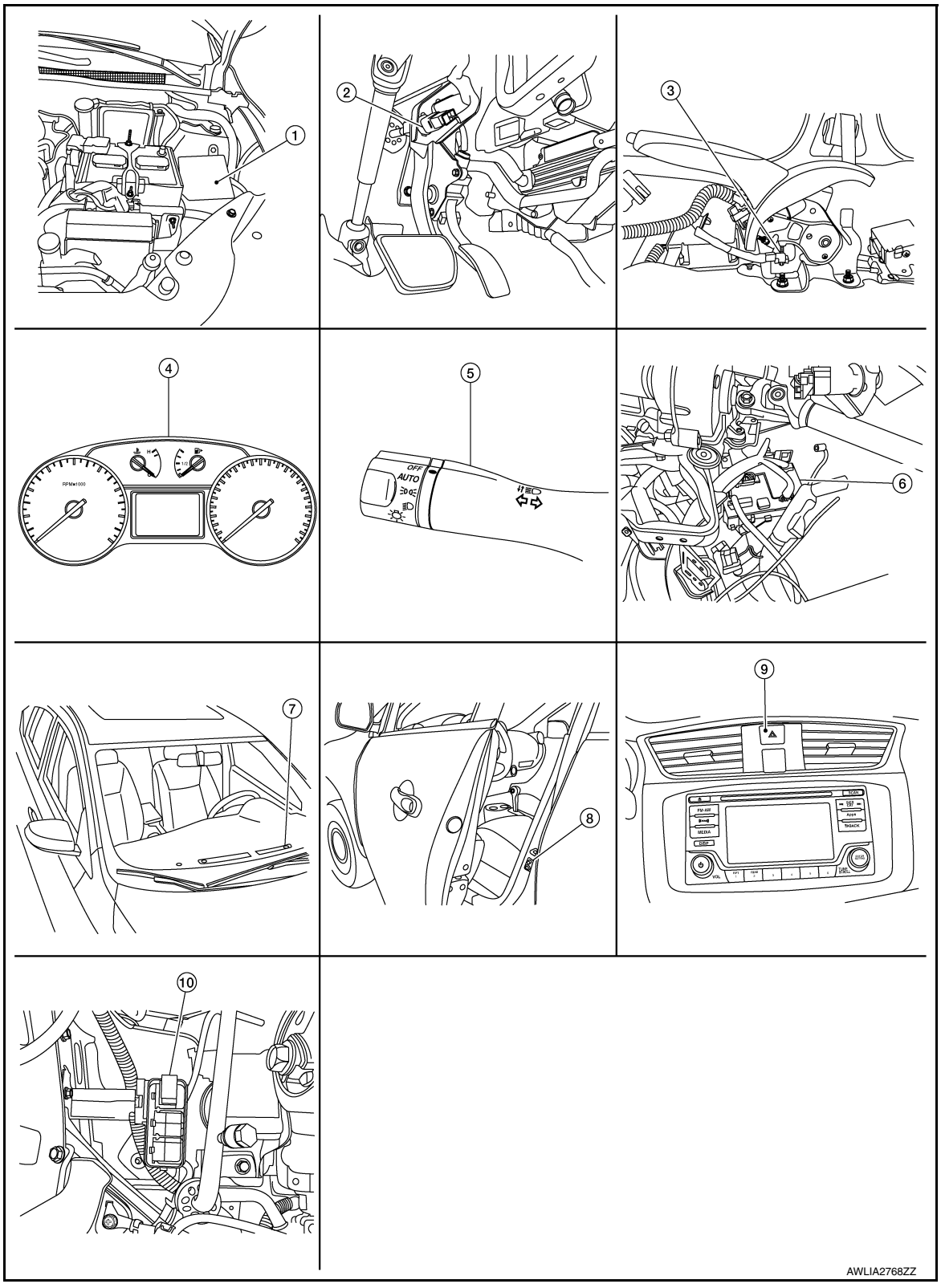
Tool number (TechMate No.) Tool name	Description
— (J-46534) Trim Tool Set  AWJIA0483ZZ	Removing trim components

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000012782794



1. IPDM E/R, (Headlamp high relay, Headlamp low relay, Taillamp relay and Front fog lamp relay (if equipped))
2. Stop lamp switch
3. Parking brake switch
4. Combination meter
5. Combination switch (lighting and turn signal switch)
6. BCM (view with combination meter removed)
7. Optical sensor
8. Front door switch LH (Other doors similar)
9. Hazard switch
10. Daytime running light relay (if equipped)

Component Description

INFOID:0000000012782795

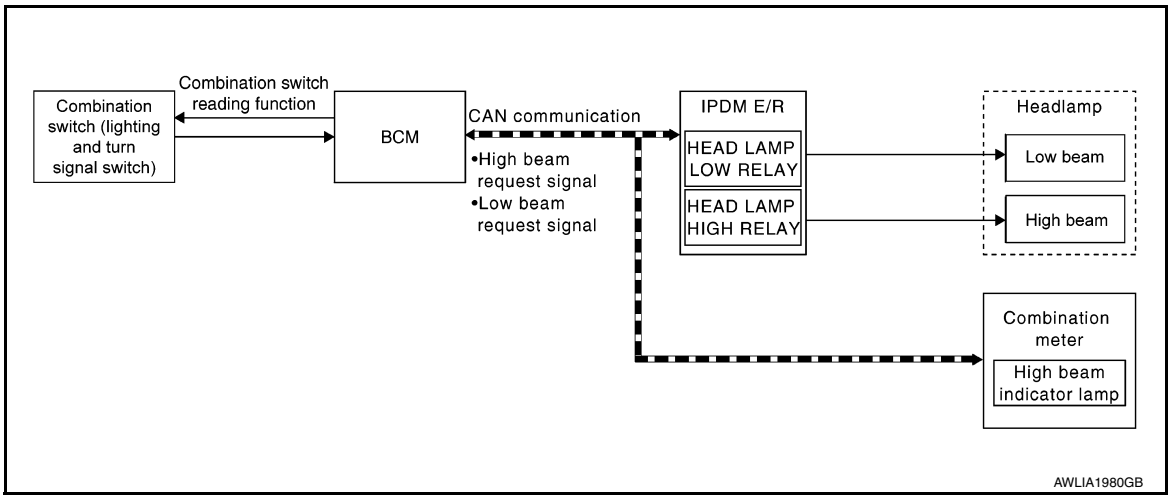
Part	Description
BCM	Controls the exterior lighting system.
Combination switch (Lighting & turn signal switch)	Refer to BCS-9, "COMBINATION SWITCH READING SYSTEM : System Description" (with Intelligent Key system) or BCS-85, "COMBINATION SWITCH READING SYSTEM : System Description" (without Intelligent Key system).
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 when the brake pedal is pressed to operate stop lamps.
Combination meter	Refer to MWI-10, "METER SYSTEM : System Description" (type A) or MWI-83, "METER SYSTEM : System Description" (type B).
Daytime running light relay (if equipped)	Sends power to the daytime running lamp when operated by the IPDM E/R.
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 autolight system.
Parking brake switch	Transmits the parking brake switch signal to the combination meter to operate the autolight system.
Hazard switch	Inputs the hazard switch signal to BCM.

SYSTEM

HEADLAMP SYSTEM

HEADLAMP SYSTEM : System Diagram

INFOID:0000000012782796



HEADLAMP SYSTEM : System Description

INFOID:0000000012782797

LOW BEAM OPERATION

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

HIGH BEAM OPERATION/FLASH-TO-PASS OPERATION

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

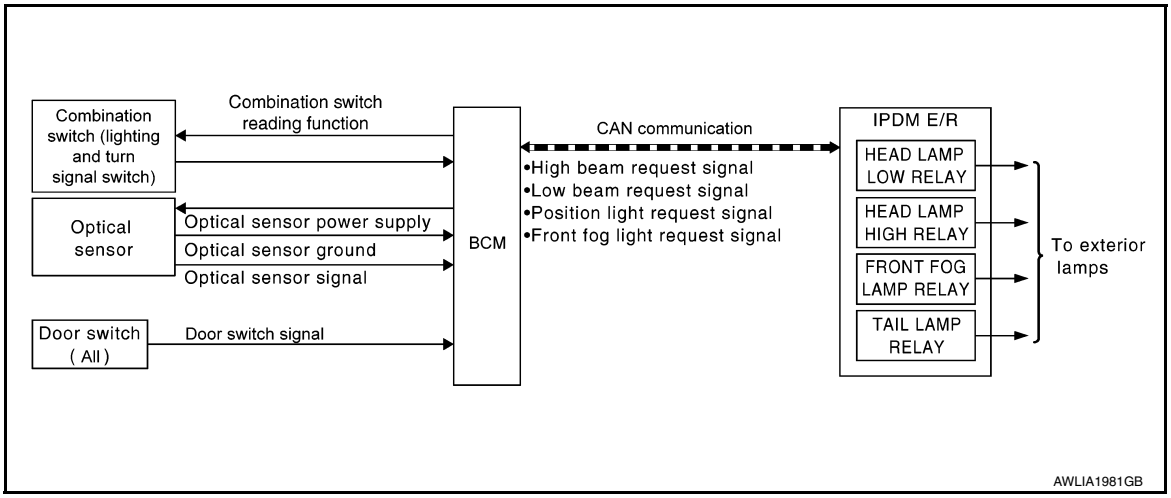
EXTERIOR LAMP BATTERY SAVER CONTROL

With the combination switch (lighting and turn signal switch) in the 2nd position and the ignition switch is turned from ON or ACC to OFF, the battery saver feature is activated.
Under this condition, the headlamps remain illuminated for 45 seconds, unless the lighting switch position is changed. If the lighting switch position is changed, then the headlamps are turned off.

AUTO LIGHT SYSTEM

AUTO LIGHT SYSTEM : System Diagram

INFOID:0000000012782798



AUTO LIGHT SYSTEM : System Description

INFOID:0000000012782799

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

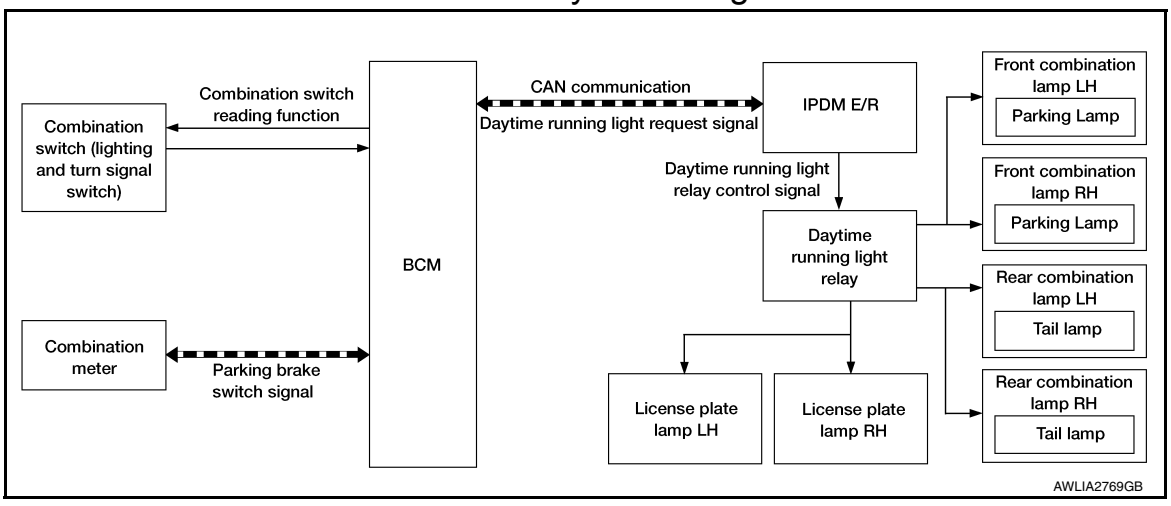
OUTLINE

The auto light control system has an optical sensor that detects outside brightness.
When the lighting switch is in AUTO position, it automatically turns ON/OFF the parking, license plate, tail, front fog lamps and headlamps in accordance with the ambient light. Sensitivity can be adjusted. For the details of the setting, Refer to BCS-19, "HEADLAMP : CONSULT Function (BCM - HEAD LAMP)" (with Intelligent Key system) or BCS-96, "HEADLAMP : CONSULT Function (BCM - HEAD LAMP)" (without Intelligent Key system).

DAYTIME RUNNING LIGHT SYSTEM

DAYTIME RUNNING LIGHT SYSTEM : System Diagram

INFOID:0000000012782800



DAYTIME RUNNING LIGHT SYSTEM : System Description

INFOID:0000000012782801

System Description

The daytime running light system is equipped with a daytime running light control that activates the daytime running lights 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.

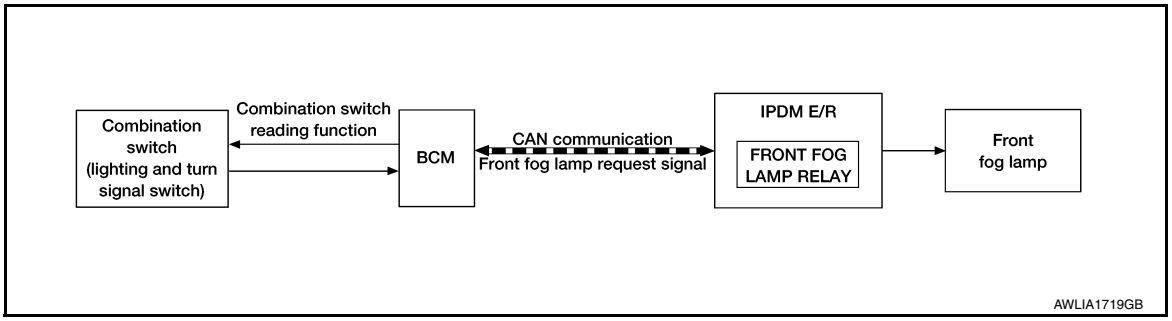
OPERATION

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:0000000012782802



FRONT FOG LAMP SYSTEM : System Description

INFOID:0000000012782803

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.

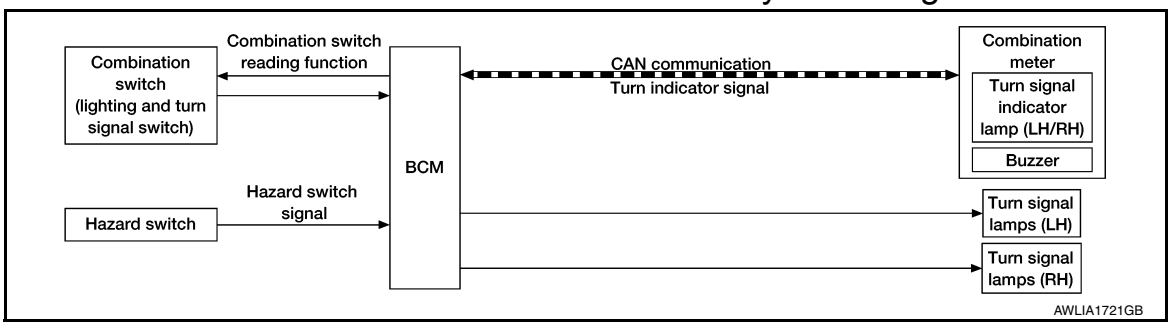
FRONT FOG LAMP OPERATION

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:0000000012782804



TURN SIGNAL AND HAZARD WARNING LAMPS : System Description

INFOID:0000000012782805

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.

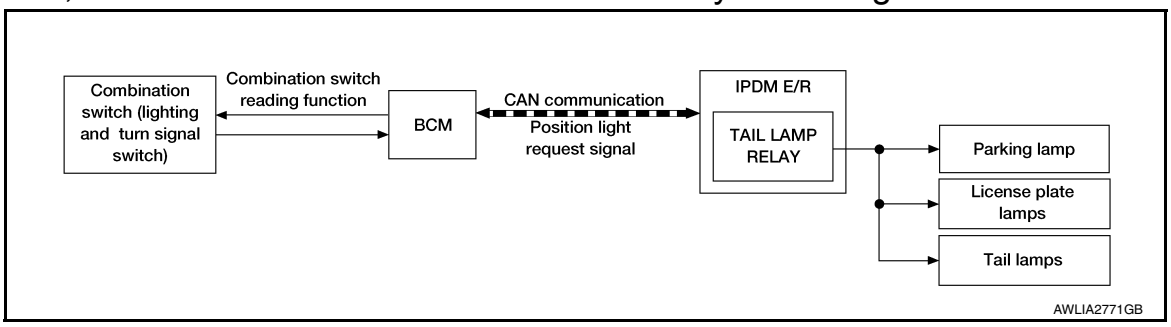
HAZARD LAMP OPERATION

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:0000000012782806



PARKING, LICENSE PLATE AND TAIL LAMPS : System Description

INFOID:0000000012782807

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.

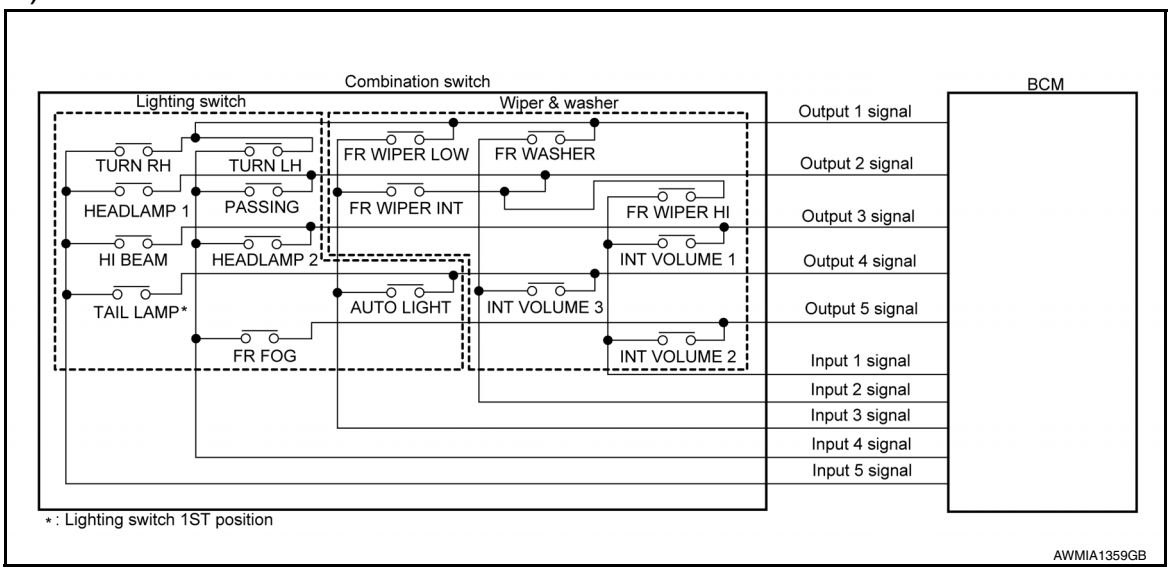
EXTERIOR LAMP BATTERY SAVER CONTROL

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 (With Intelligent Key System)

INFOID:0000000012782808



COMBINATION SWITCH READING SYSTEM : System Description (With Intelligent Key System)

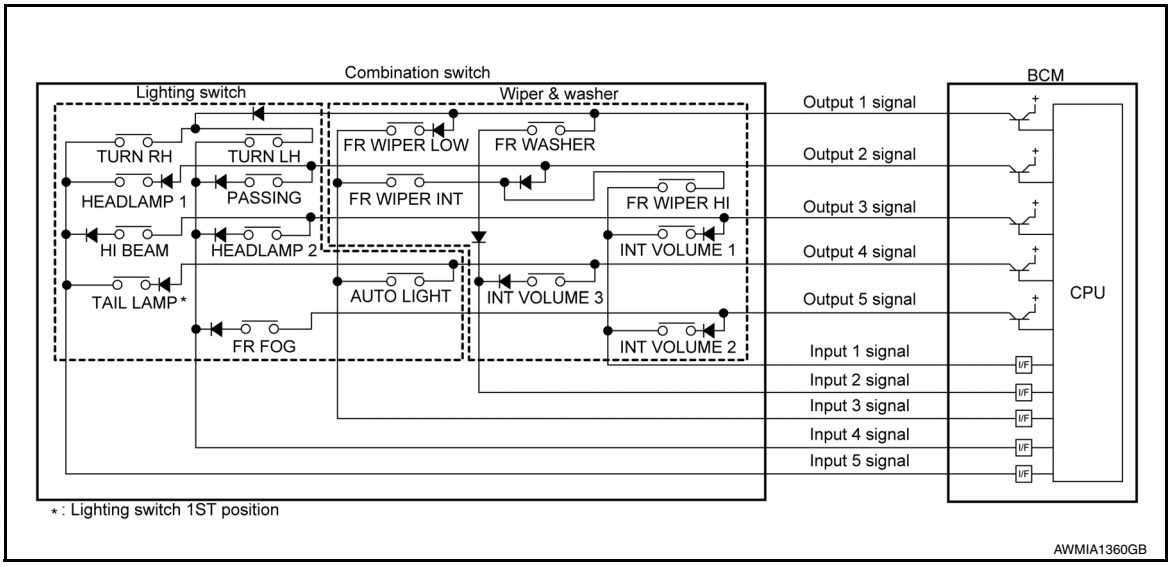
INFOID:0000000012782809

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). It reads a maximum of 20 switch states.

COMBINATION SWITCH MATRIX

Combination switch circuit



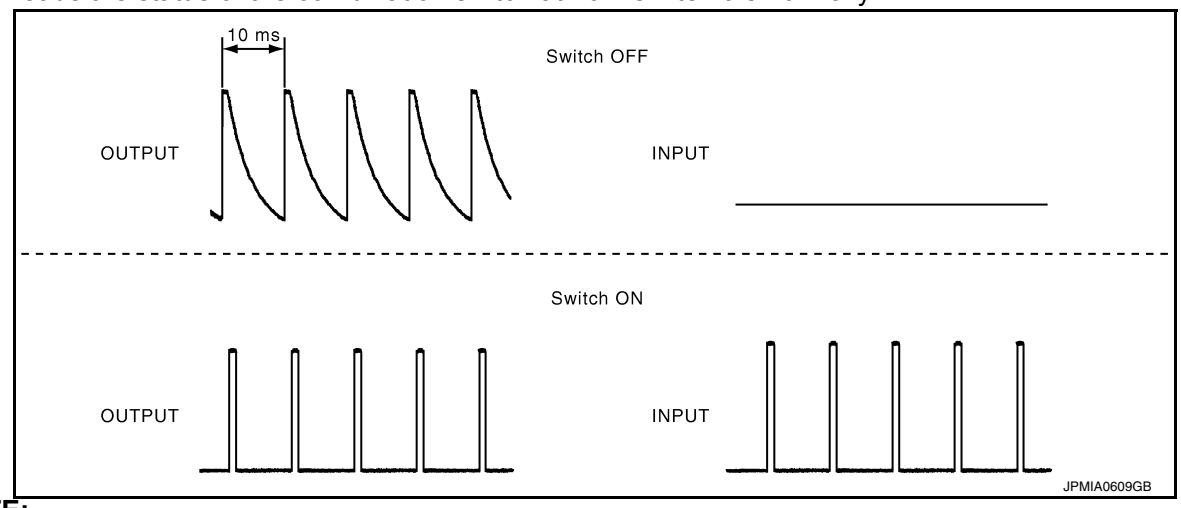
Combination switch INPUT-OUTPUT system list

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

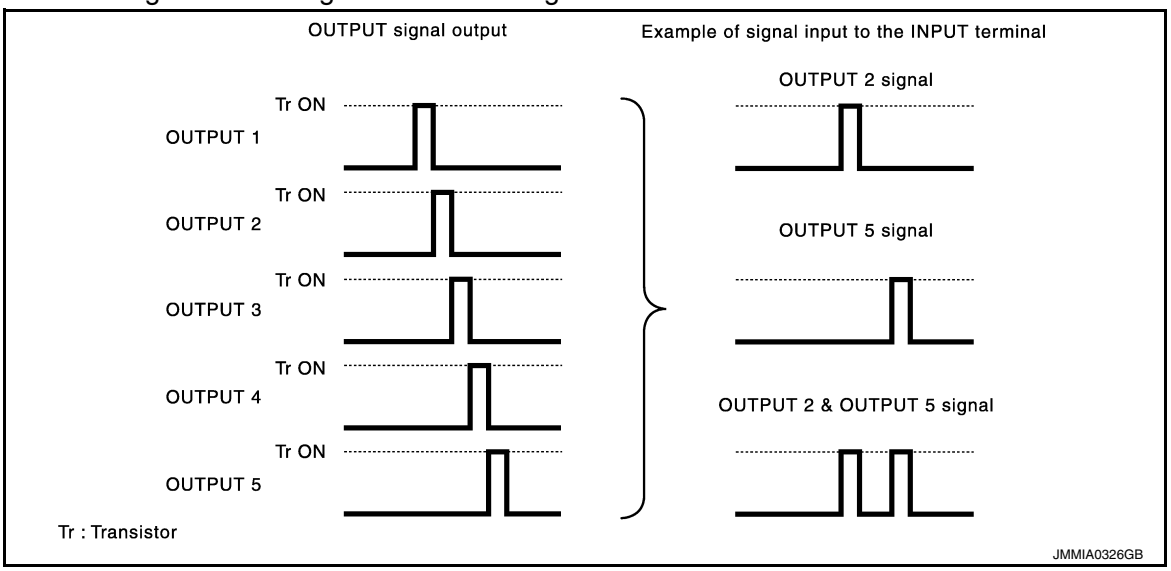
- BCM reads the status of the combination switch at 10 ms intervals normally.



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.

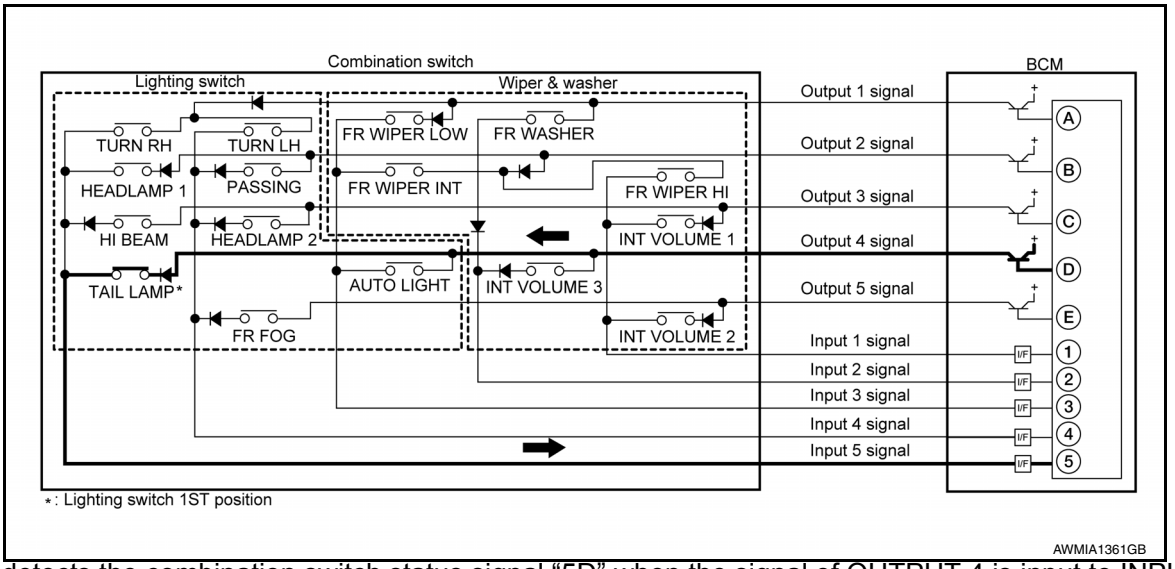


Operation Example

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

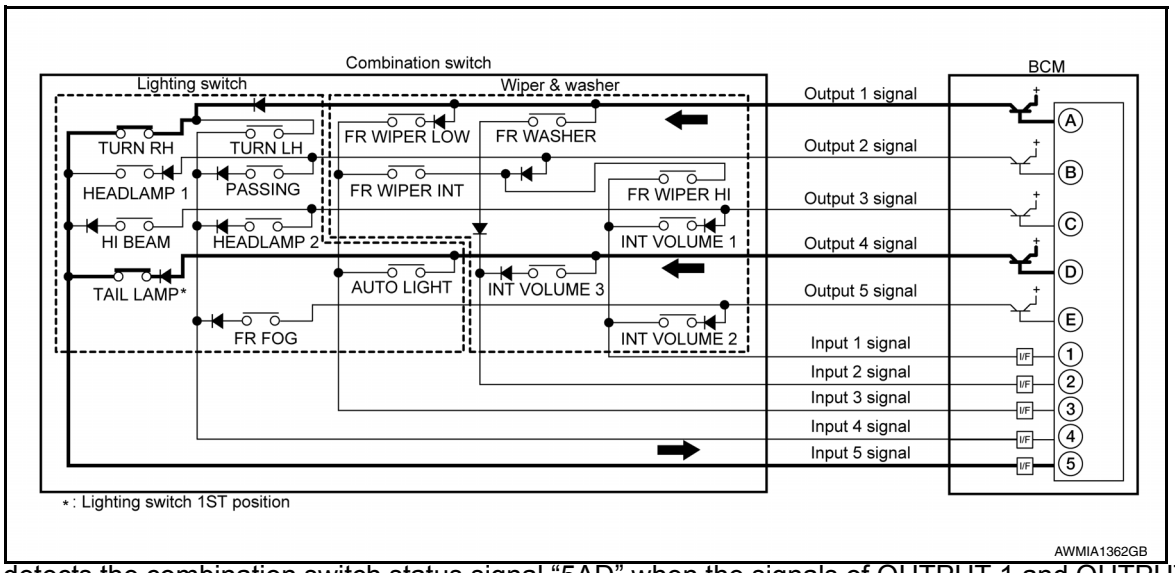
- The circuit between OUTPUT 4 and INPUT 5 is formed when the TAIL LAMP switch is turned ON.



- 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

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

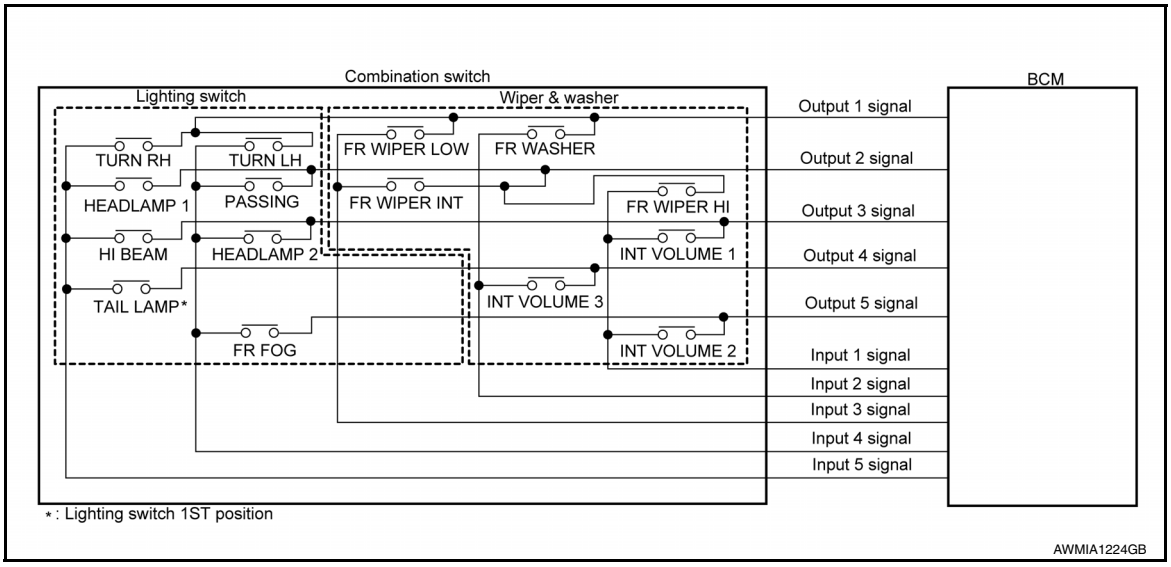
NOTE:

For details of wiper intermittent dial position, refer to WW-8, "System Description".

COMBINATION SWITCH READING SYSTEM : System Diagram (Without Intelligent

Key System)

INFOID:0000000012782810



COMBINATION SWITCH READING SYSTEM : System Description (Without Intelligent Key System)

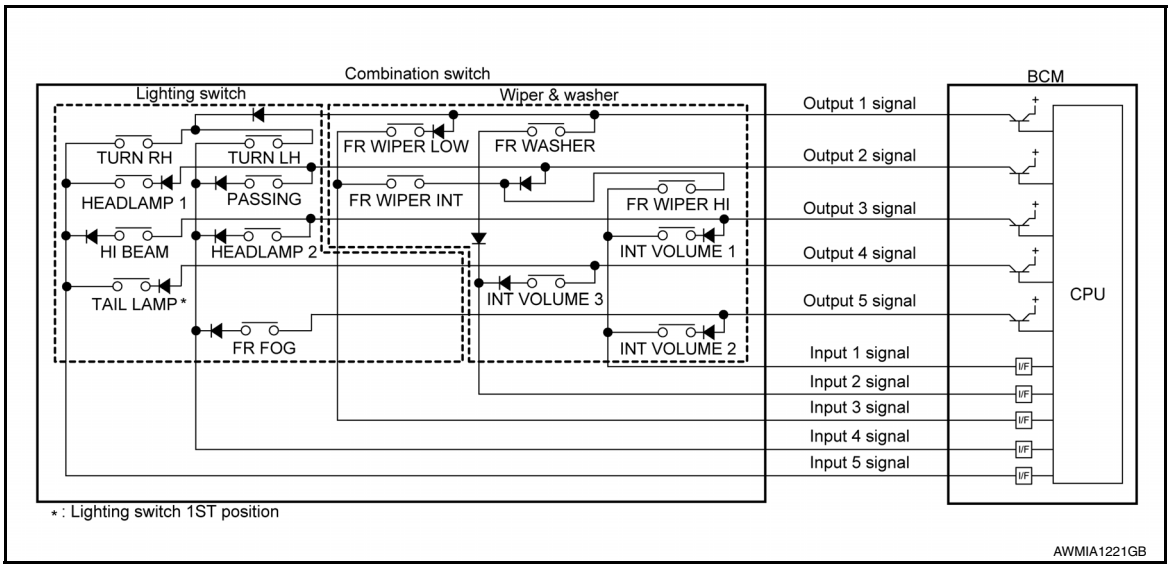
INFOID:0000000012782811

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). It reads a maximum of 20 switch states.

COMBINATION SWITCH MATRIX

Combination switch circuit



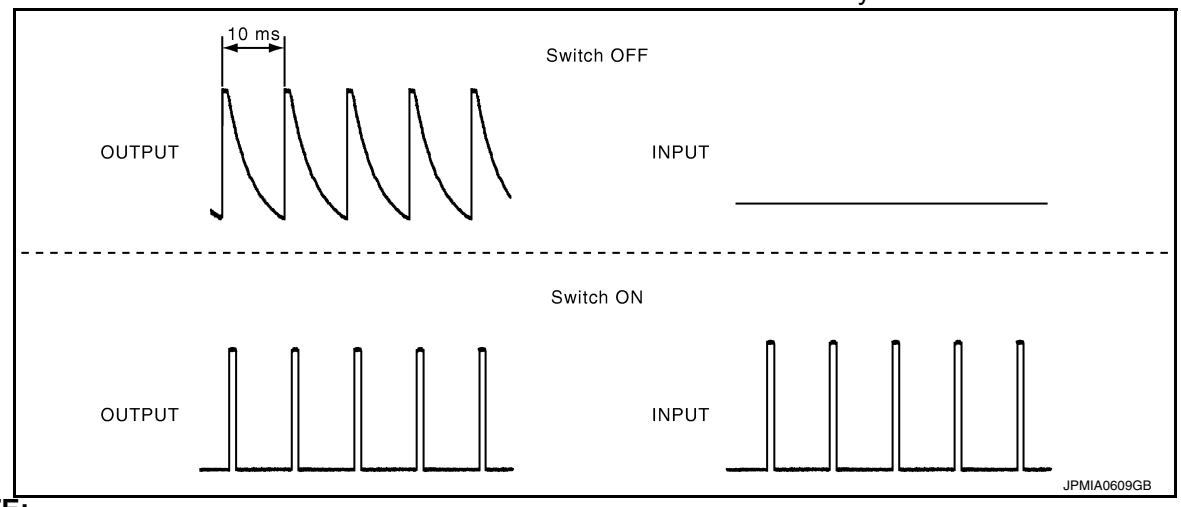
Combination switch INPUT-OUTPUT system list

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	—	—	TAIL LAMP
OUTPUT 5	INT VOLUME 2	—	—	FR FOG	—

COMBINATION SWITCH READING FUNCTION

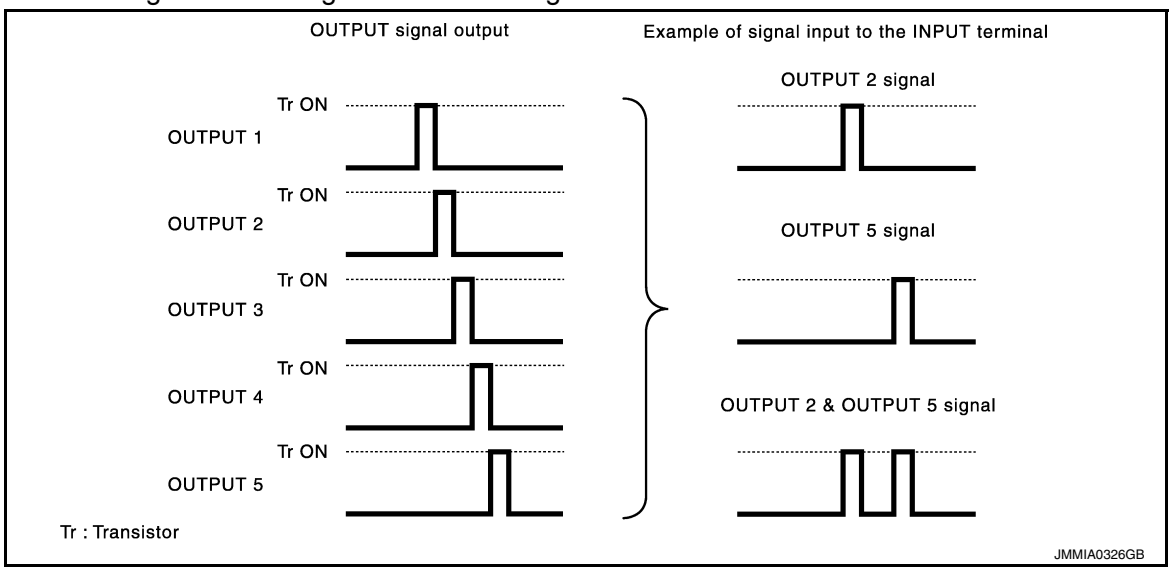
Description

- 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.

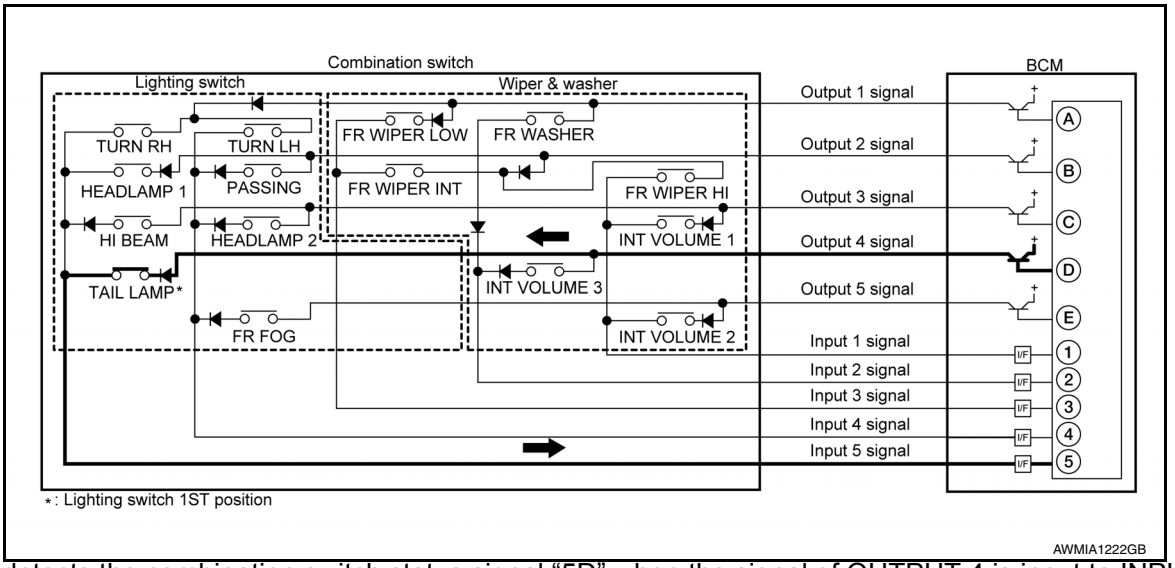


Operation Example

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

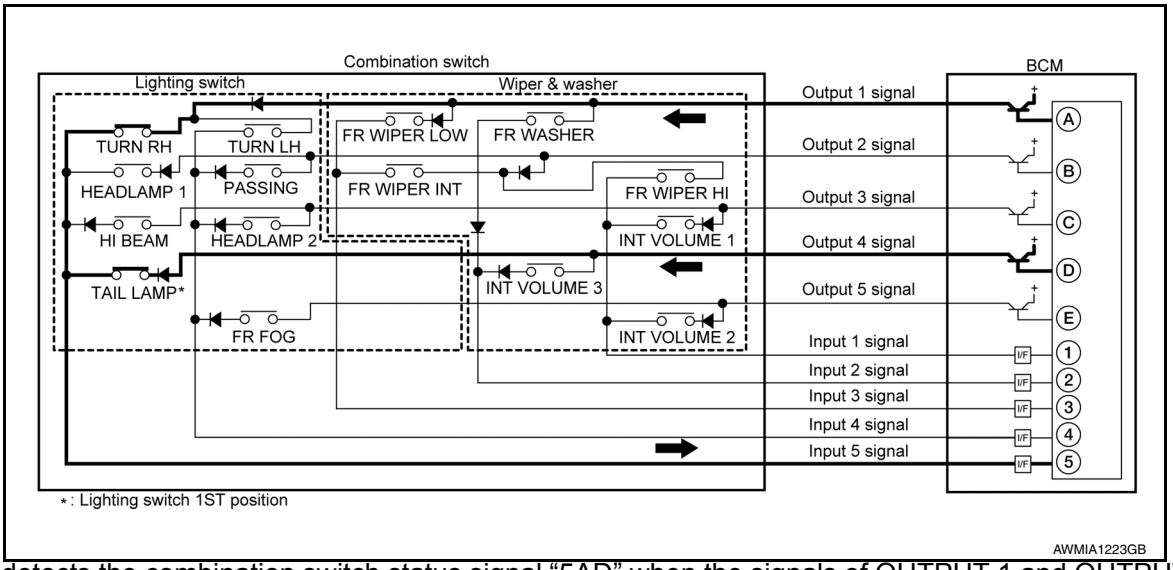
• The circuit between OUTPUT 4 and INPUT 5 is formed when the TAIL LAMP switch is turned ON.



• 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.

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

COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

INFOID:0000000013407937

APPLICATION ITEM

CONSULT performs the following functions via CAN communication with BCM.

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

SYSTEM APPLICATION

BCM can perform the following functions.

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

HEADLAMP

HEADLAMP : CONSULT Function (BCM - HEAD LAMP)

INFOID:0000000013407939

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].
HEAD LAMP	This test is able to check head lamp operation [Hi/Low/Off].
ILL DIM SIGNAL	This test is able to check head lamp illumination dimming operation [On/Off].
TAIL LAMP	This test is able to check tail lamp operation [On/Off].

WORK SUPPORT

Support Item	Setting	Description
AUTO LIGHT LOGIC SET	MODE 1*	With twilight ON custom & with wiper INT, LO and HI
	MODE 2	Witt twilight ON custom & with wiper LO and HI
	MODE 3	With twilight ON custom & without
	MODE 4	Without twilight ON custom & with wiper INT, LO and HI
	MODE 5	Without twilight ON custom & with wiper LO and HI
	MODE 6	Without twilight ON custom & without
BATTERY SAVER SET	On*	Exterior lamp battery saver function ON.
	Off	Exterior lamp battery saver function OFF.

Support Item	Setting		Description
CUSTOM A/LIGHT SETTING	MODE 1*		Normal
	MODE 2		More sensitive setting than normal setting (Turns ON earlier than normal operation)
	MODE 3		More sensitive setting than MODE 2 (Turns ON earlier than MODE 2)
	MODE 4		Less sensitive setting than normal setting (Turns ON later than normal operation)
ILL DELAY SET	MODE 8	180 sec.	Sets delay timer function operation time (All doors closed).
	MODE 7	150 sec.	
	MODE 6	120 sec.	
	MODE 4	60 sec.	
	MODE 5	90 sec.	
	MODE 3	30 sec.	
	MODE 2	OFF	
	MODE 1*	45 sec.	

*: Initial setting

FLASHER

FLASHER : CONSULT Function (BCM - FLASHER)

INFOID:0000000013407940

DATA MONITOR

Monitor Item [Unit]	Description
REQ SW -DR [On/Off]	Indicates condition of door request switch LH.
REQ SW -AS [On/Off]	Indicates condition of door request switch RH.
PUSH SW [On/Off]	Indicates condition of push-button ignition switch.
TURN SIGNAL R [On/Off]	Indicates condition of turn signal function of combination switch.
TURN SIGNAL L [On/Off]	
HAZARD SW [On/Off]	Indicates condition of hazard switch.
RKE-LOCK [On/Off]	Indicates condition of lock signal from Intelligent Key.
RKE-UNLOCK [On/Off]	Indicates condition of unlock signal from Intelligent Key.
RKE-PANIC [On/Off]	Indicates condition of panic alarm signal from Intelligent Key.

ACTIVE TEST

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

WORK SUPPORT

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

* : Initial setting

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

COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

INFOID:0000000013407942

APPLICATION ITEM

CONSULT performs the following functions via CAN communication with BCM.

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

SYSTEM APPLICATION

BCM can perform the following functions.

System	Sub System	Direct Diagnostic Mode						
		ECU Identification	Self Diagnostic Result	Data Monitor	Active Test	Work support	Configuration	CAN DIAG SUPPORT MNTR
Door lock	DOOR LOCK			×	×	×		
Rear window defogger	REAR DEFOGGER			×	×			
Warning chime	BUZZER			×	×			
Interior room lamp timer	INT LAMP			×	×	×		
Remote keyless entry system	MULTI REMOTE ENT			×	×	×		
Exterior lamp	HEAD LAMP			×	×	×		
Wiper and washer	WIPER			×	×	×		
Turn signal and hazard warning lamps	FLASHER			×	×			
Air conditioner	AIR CONDITIONER			×				
Combination switch	COMB SW			×				
BCM	BCM	×	×			×	×	×
Immobilizer	IMMU		×		×	×		
Interior room lamp battery saver	BATTERY SAVER			×	×	×		
Trunk open	TRUNK			×				
RAP system	RETAINED PWR			×		×		
Signal buffer system	SIGNAL BUFFER			×				
TPMS	AIR PRESSURE MONITOR		×	×	×	×		
Panic alarm system	PANIC ALARM				×			

HEADLAMP

HEADLAMP : CONSULT Function (BCM - HEAD LAMP)

INFOID:0000000013407944

DATA MONITOR

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

ACTIVE TEST

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

WORK SUPPORT

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

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

* : Initial setting

FLASHER

FLASHER : CONSULT Function (BCM - FLASHER)

INFOID:0000000013407946

DATA MONITOR

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

ACTIVE TEST

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

DIAGNOSIS SYSTEM (IPDM E/R) (WITH INTELLIGENT KEY SYSTEM)

Diagnosis Description

INFOID:0000000013407948

AUTO ACTIVE TEST

Description

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

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

Operation Procedure

NOTE:

Never perform auto active test in the following conditions.

- Passenger door is open
- CONSULT is connected

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

NOTE:

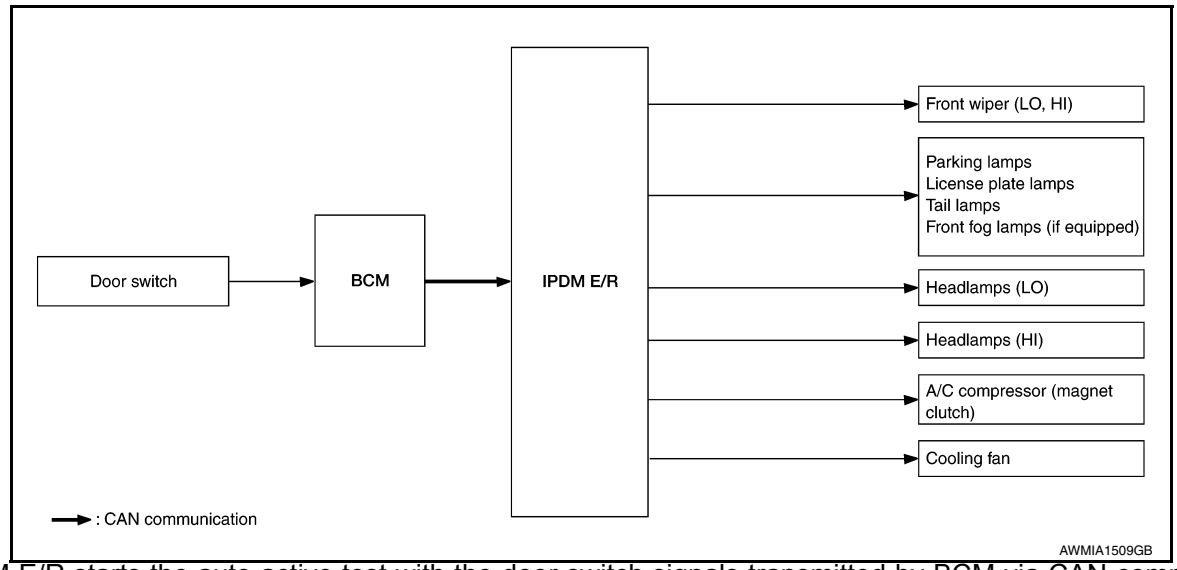
- When auto active test has to be cancelled halfway through test, turn the ignition switch OFF.
- When auto active test is not activated, door switch may be the cause. Check door switch. Refer to DLK-109, "Component Inspection".

Inspection in Auto Active Test

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

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

Concept of Auto Active Test



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

Diagnosis Chart in Auto Active Test

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

CONSULT Function (IPDM E/R)

INFOID:0000000013407949

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.

Direct Diagnostic Mode	Description
Active Test	The IPDM E/R activates outputs to test components.
CAN Diag Support Mntr	The result of transmit/receive diagnosis of CAN communication is displayed.

ECU IDENTIFICATION

The IPDM E/R part number is displayed.

SELF DIAGNOSTIC RESULT

Refer to PCS-20, "DTC Index".

DATA MONITOR

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

ACTIVE TEST

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

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

CAN DIAG SUPPORT MNTR

Refer to LAN-14, "CAN Diagnostic Support Monitor".

DIAGNOSIS SYSTEM (IPDM E/R) (WITHOUT INTELLIGENT KEY SYSTEM)

Diagnosis Description

INFOID:0000000013407955

AUTO ACTIVE TEST

Description

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

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

Operation Procedure

NOTE:

Never perform auto active test in the following conditions.

- Passenger door is open
- CONSULT is connected

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

NOTE:

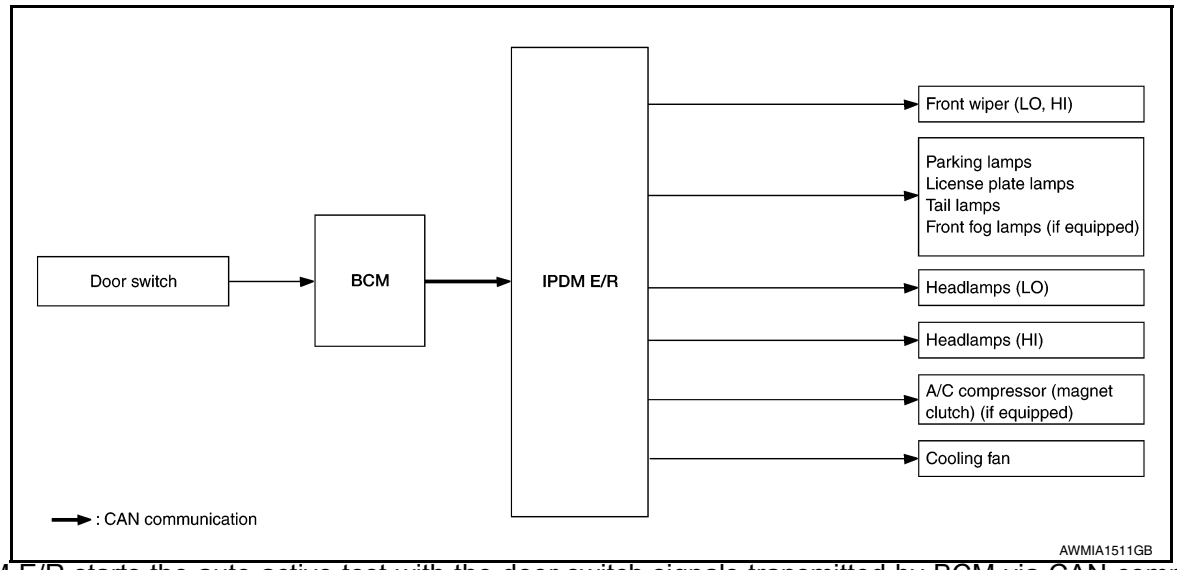
- When auto active test has to be cancelled halfway through test, turn the ignition switch OFF.
- When auto active test is not activated, door switch may be the cause. Check door switch. Refer to DLK-248, "Component Inspection".

Inspection in Auto Active Test

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

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

Concept of Auto Active Test



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

Diagnosis Chart in Auto Active Test

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

CONSULT Function (IPDM E/R)

INFOID:0000000013407956

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.

Direct Diagnostic Mode	Description
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-48, "DTC Index".

DATA MONITOR

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

ACTIVE TEST

Test item	Description
HORN	This test is able to check horn operation [On].
REAR DEFOGGER	This test is able to check rear window defogger operation [On/Off].
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-14, "CAN Diagnostic Support Monitor".

ECU DIAGNOSIS INFORMATION

BCM, IPDM E/R

List of ECU Reference

INFOID:0000000012782822

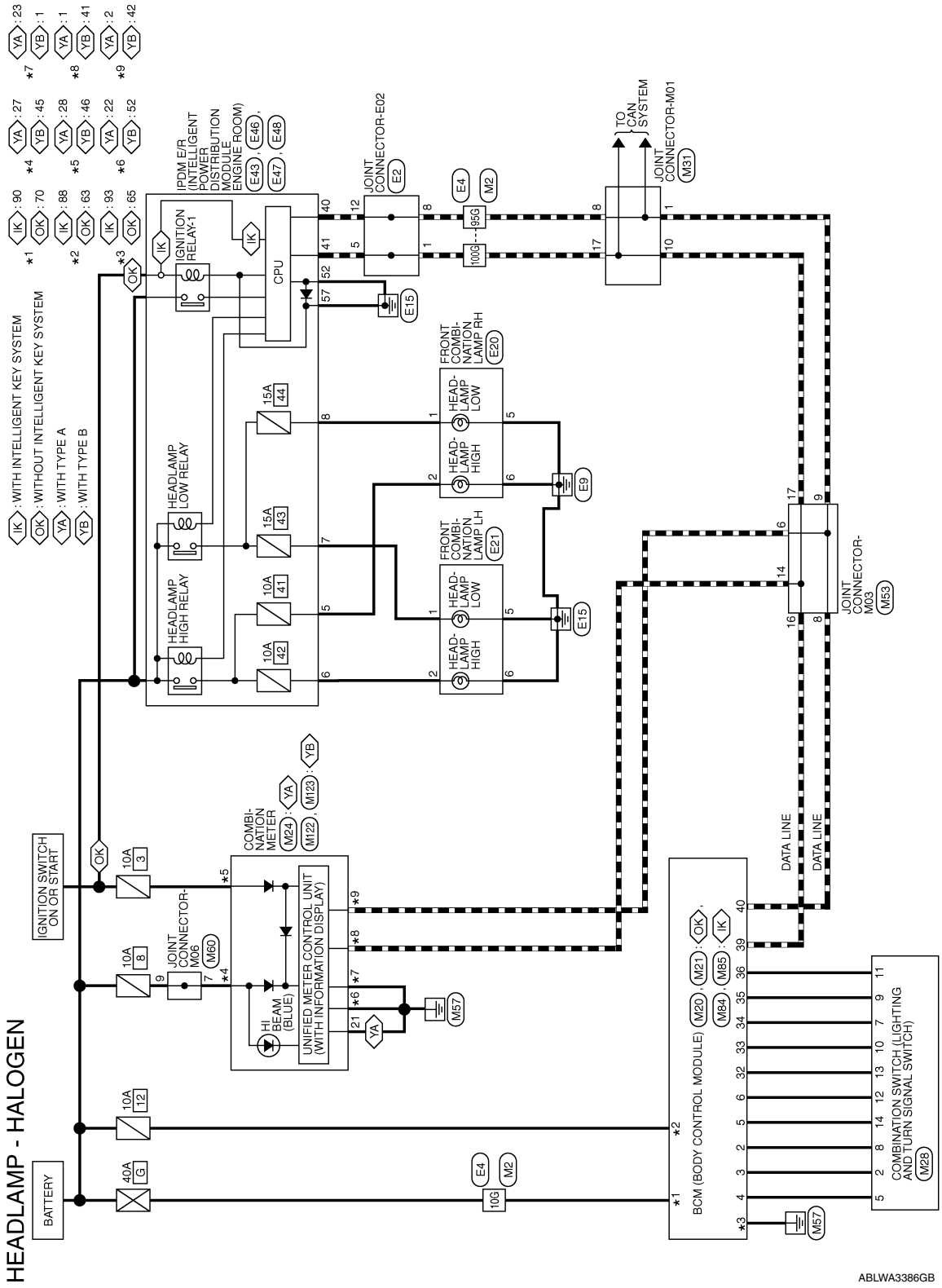
ECU	Reference
BCM (with Intelligent Key system)	BCS-30, "Reference Value"
	BCS-48, "Fail-safe"
	BCS-49, "DTC Inspection Priority Chart"
	BCS-50, "DTC Index"
BCM (without Intelligent Key system)	BCS-103, "Reference Value"
	BCS-114, "Fail-safe"
	BCS-115, "DTC Inspection Priority Chart"
	BCS-115, "DTC Index"
IPDM E/R (with Intelligent Key system)	PCS-13, "Reference Value"
	PCS-19, "Fail-safe"
	PCS-20, "DTC Index"
IPDM E/R (without Intelligent Key system)	PCS-42, "Reference Value"
	PCS-47, "Fail-Safe"
	PCS-48, "DTC Index"

WIRING DIAGRAM

HEADLAMP

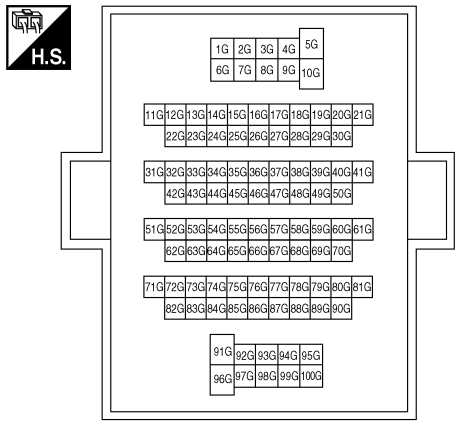
Wiring Diagram

INFOID:0000000012782823



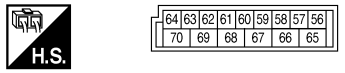
HEADLAMP CONNECTORS - HALOGEN

Connector No.	M2
Connector Name	WIRE TO WIRE
Connector Color	WHITE



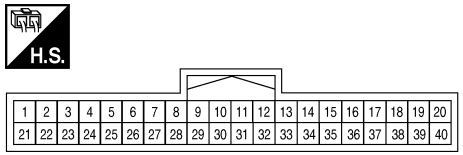
Terminal No.	Color of Wire	Signal Name
10G	Y	–
95G	P	–
100G	L	–

Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)
Connector Color	WHITE



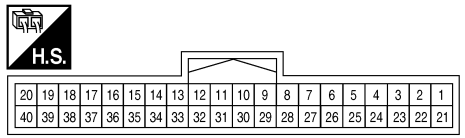
Terminal No.	Color of Wire	Signal Name
63	BG	BATTERY (FUSE)
65	B	GND
70	Y	BATTERY (F/L)

Connector No.	M21
Connector Name	BCM (BODY CONTROL MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)
Connector Color	WHITE



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

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



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

ABLIA8428GB

Connector No.	M31
Connector Name	JOINT CONNECTOR-M01
Connector Color	BLUE

H.S.

Terminal No.	Color of Wire	Signal Name
1	P	–
8	P	–
10	L	–
17	L	–

Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
2	GR	–
5	BR	–
7	V	–
8	L	–

Terminal No.	Color of Wire	Signal Name
9	R	–
10	Y	–
11	SB	–
12	W	–
13	LG	–
14	BG	–

Connector No.	M60
Connector Name	JOINT CONNECTOR-M06
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
7	W	–
9	W	–

Connector No.	M53
Connector Name	JOINT CONNECTOR-M03
Connector Color	BLUE

H.S.

Terminal No.	Color of Wire	Signal Name
6	P	–
8	P	–
9	P	–
14	L	–
16	L	–
17	L	–

ABLIA8429GB

Connector No.	M84
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	BLACK

H.S.

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

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

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

Connector No.	M85
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

H.S.

89	88	87	86	85	84	83	82	81
95	94	93	92	91	90			

Terminal No.	Color of Wire	Signal Name
88	BG	BATTERY (FUSE)
90	Y	BATTERY (F/L)
93	B	GND

Connector No.	E2
Connector Name	JOINT CONNECTOR-E02
Connector Color	BLUE

H.S.

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

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

Connector No.	M123
Connector Name	COMBINATION METER (WITH TYPE B)
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
41	L	CAN-H
42	P	CAN-L
45	LG	BAT
46	GR	IGN
52	B	GND

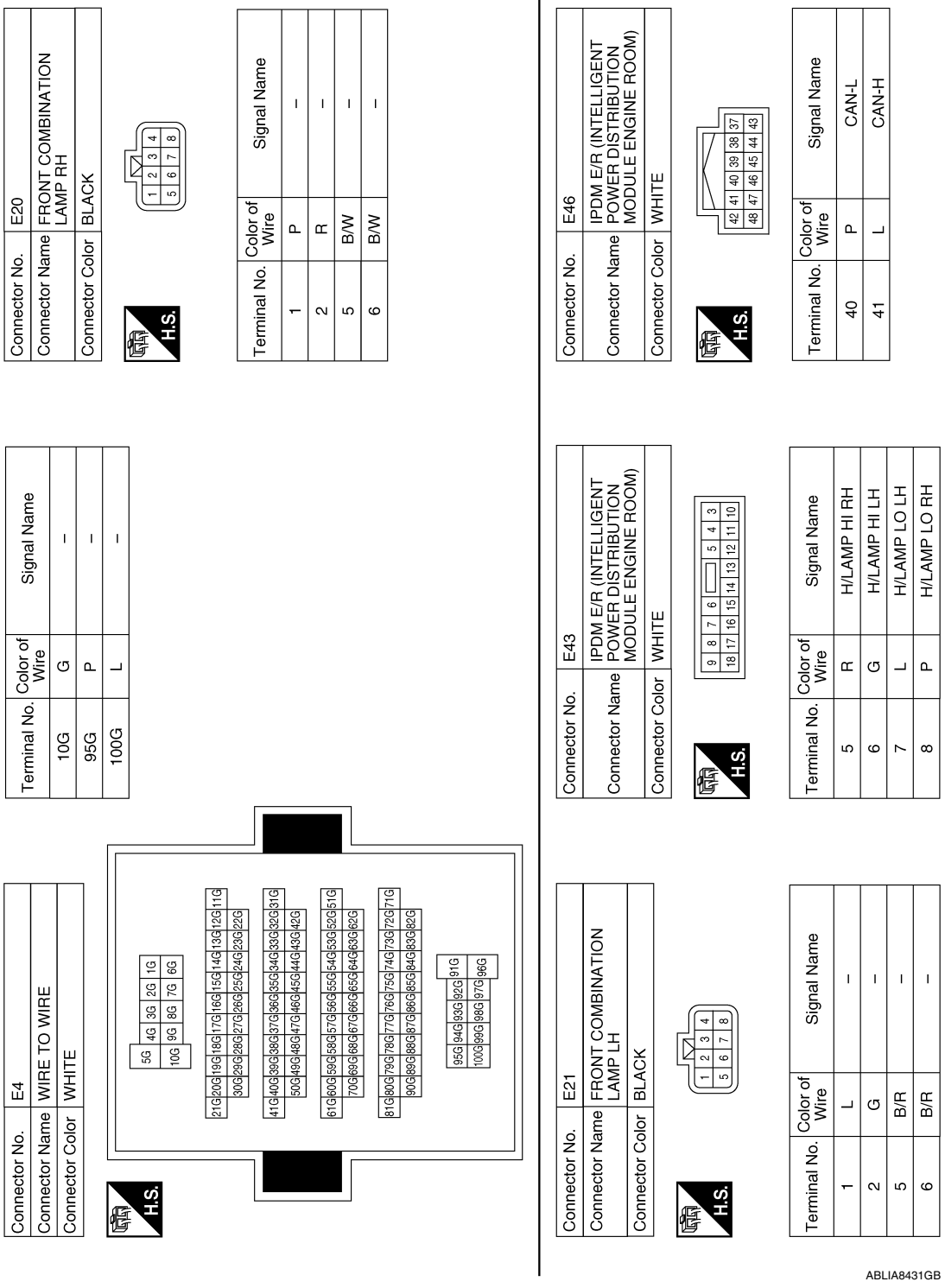
Connector No.	M122
Connector Name	COMBINATION METER (WITH TYPE B)
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	B	GND

ABLIA8430GB



ABLIA8431GB

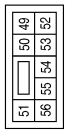
Connector No.	E48
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
57	B/Y	POWER GND

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

H.S.



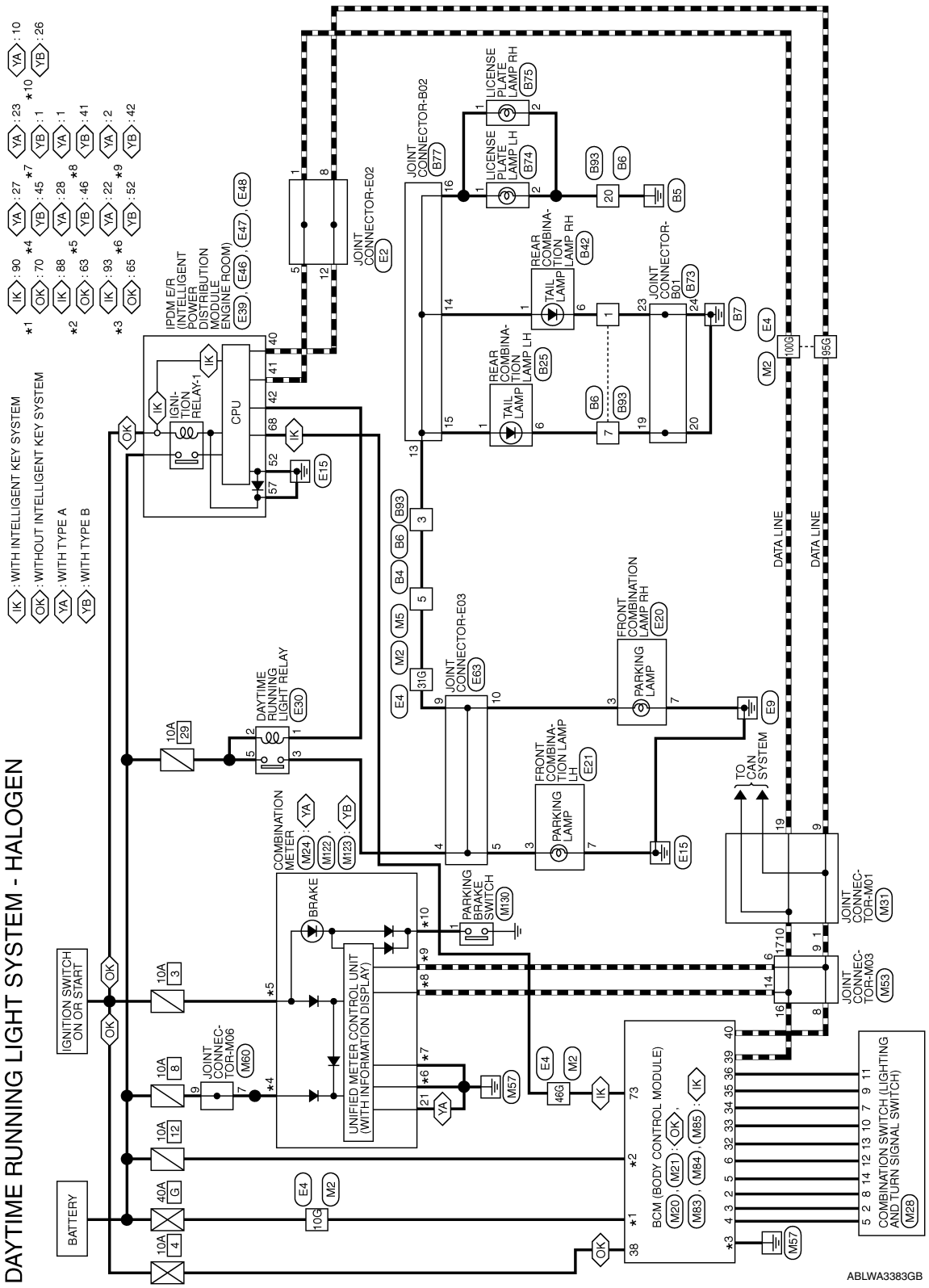
Terminal No.	Color of Wire	Signal Name
52	B/Y	SIGNAL GND

ABLIA8432GB

DAYTIME RUNNING LIGHT SYSTEM

Wiring Diagram

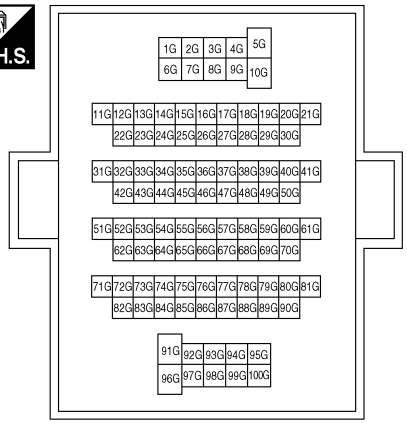
INFOID:0000000012782824



DAYTIME RUNNING LIGHT SYSTEM CONNECTORS - HALOGEN

Connector No.	M2
Connector Name	WIRE TO WIRE
Connector Color	WHITE

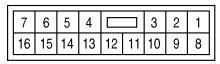
H.S.



Terminal No.	Color of Wire	Signal Name
10G	Y	–
31G	V	–
46G	V	–
95G	P	–
100G	L	–

Connector No.	M5
Connector Name	WIRE TO WIRE
Connector Color	WHITE

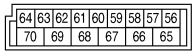
H.S.



Terminal No.	Color of Wire	Signal Name
5	V	–

Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

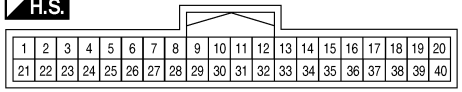
H.S.



Terminal No.	Color of Wire	Signal Name
63	BG	BATTERY (FUSE)
65	B	GND
70	Y	BATTERY (F/L)

Connector No.	M21
Connector Name	BCM (BODY CONTROL MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

H.S.



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

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

ABLIA8410GB

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

H.S.

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

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

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	GR	–
5	BR	–
7	V	–
8	L	–
9	R	–
10	Y	–
11	SB	–
12	W	–
13	LG	–
14	BG	–

Connector No.	M31
Connector Name	JOINT CONNECTOR-M01
Connector Color	BLUE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	P	–
8	P	–
10	L	–
17	L	–

Connector No.	M53
Connector Name	JOINT CONNECTOR-M03
Connector Color	BLUE

H.S.

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

Terminal No.	Color of Wire	Signal Name
6	P	–
8	P	–
9	P	–
14	L	–
16	L	–
17	L	–

Connector No.	M60
Connector Name	JOINT CONNECTOR-M06
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
7	W	–
9	W	–

Connector No.	M83
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

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
73	V	IGN RELAY OUTPUT1 (USM)

ABLIA8411GB

Connector No.	M84
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	BLACK

H.S.

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

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

Connector No.	M85
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

H.S.

89	88	87	86	85	84	83	82	81
95	94	93	92	91	90			

Terminal No.	Color of Wire	Signal Name
88	BG	BATTERY (FUSE)
90	Y	BATTERY (F/L)
93	B	GND

Connector No.	M130
Connector Name	PARKING BRAKE SWITCH
Connector Color	BLACK

H.S.

1

Terminal No.	Color of Wire	Signal Name
1	SB	–

Connector No.	M122
Connector Name	COMBINATION METER (WITH TYPE B)
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
2	L	COMBINATION SW INPUT 5
3	GR	COMBINATION SW INPUT 4
4	BR	COMBINATION SW INPUT 3
5	BG	COMBINATION SW INPUT 2
6	W	COMBINATION SW INPUT 1

Connector No.	M123
Connector Name	COMBINATION METER (WITH TYPE B)
Connector Color	WHITE

H.S.

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

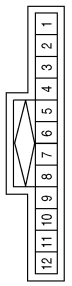
Terminal No.	Color of Wire	Signal Name
1	B	GND
26	SB	PKB SW

Terminal No.	Color of Wire	Signal Name
41	L	CAN-H
42	P	CAN-L
45	LG	BAT
46	GR	IGN
52	B	GND

ABLIA8412GB

Connector No.	E2
Connector Name	JOINT CONNECTOR-E02
Connector Color	BLUE

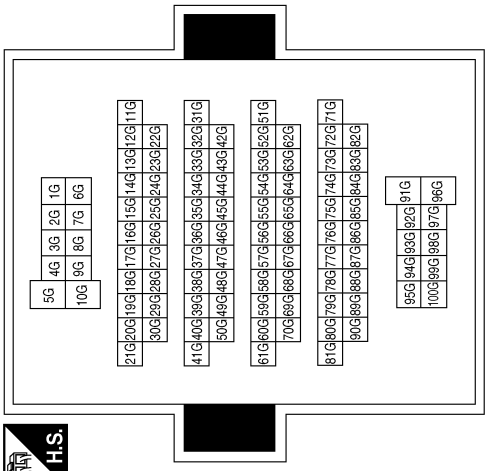
H.S.



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

Connector No.	E4
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
10G	G	–
31G	R	–
46G	O	–
95G	P	–
100G	L	–

Connector No.	E20
Connector Name	FRONT COMBINATION LAMP RH
Connector Color	BLACK

H.S.

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

Connector No.	E21
Connector Name	FRONT COMBINATION LAMP LH
Connector Color	BLACK

H.S.

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

Connector No.	E30
Connector Name	DAYTIME RUNNING LIGHT RELAY
Connector Color	BLUE

H.S.

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

ABLIA8413GB

Connector No.	E39
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK

H.S.

67	66	65	64	63
72	71	70	69	68

Terminal No.	Color of Wire	Signal Name
68	O	IGN SIGNAL

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
40	P	CAN-L
41	L	CAN-H
42	Y	DTRL RLY DRIVE

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

H.S.

51		50	49
56	55	54	53	52

Terminal No.	Color of Wire	Signal Name
52	B/Y	SIGNAL GND

Connector No.	E48
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK

H.S.

59	58	57
62	61	60

Terminal No.	Color of Wire	Signal Name
57	B/Y	POWER GND

Connector No.	E63
Connector Name	JOINT CONNECTOR-E03
Connector Color	BLACK

H.S.

1	2	3	4	5
6	7	8	9	10

Terminal No.	Color of Wire	Signal Name
4	L	–
5	L	–
9	R	–
10	L	–

Connector No.	B4
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

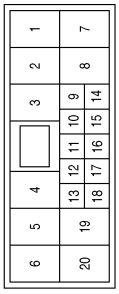
1	2	3		4	5	6	7
8	9	10	11	12	13	14	15	16

Terminal No.	Color of Wire	Signal Name
5	LG	–

ABLIA8414GB

Connector No.	B6
Connector Name	WIRE TO WIRE
Connector Color	WHITE

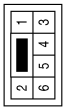
H.S.



Terminal No.	Color of Wire	Signal Name
1	L	–
3	LG	–
7	BG	–
20	B	–

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

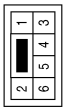
H.S.



Terminal No.	Color of Wire	Signal Name
1	LG	–
6	BG	–

Connector No.	B42
Connector Name	REAR COMBINATION LAMP RH
Connector Color	WHITE

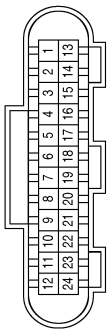
H.S.



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

Connector No.	B73
Connector Name	JOINT CONNECTOR-B01
Connector Color	BLACK

H.S.



Terminal No.	Color of Wire	Signal Name
19	B	–
20	B	–
23	L	–
24	B	–

Connector No.	B74
Connector Name	LICENSE PLATE LAMP LH
Connector Color	BROWN

H.S.

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

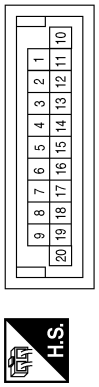
Connector No.	B75
Connector Name	LICENSE PLATE LAMP RH
Connector Color	BROWN

H.S.

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

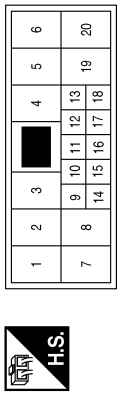
ABLIA8415GB

Connector No.	B77
Connector Name	JOINT CONNECTOR-B02
Connector Color	GREEN



Terminal No.	Color of Wire	Signal Name
13	G	–
14	BR	–
15	LG	–
16	GR	–

Connector No.	B93
Connector Name	WIRE TO WIRE
Connector Color	WHITE



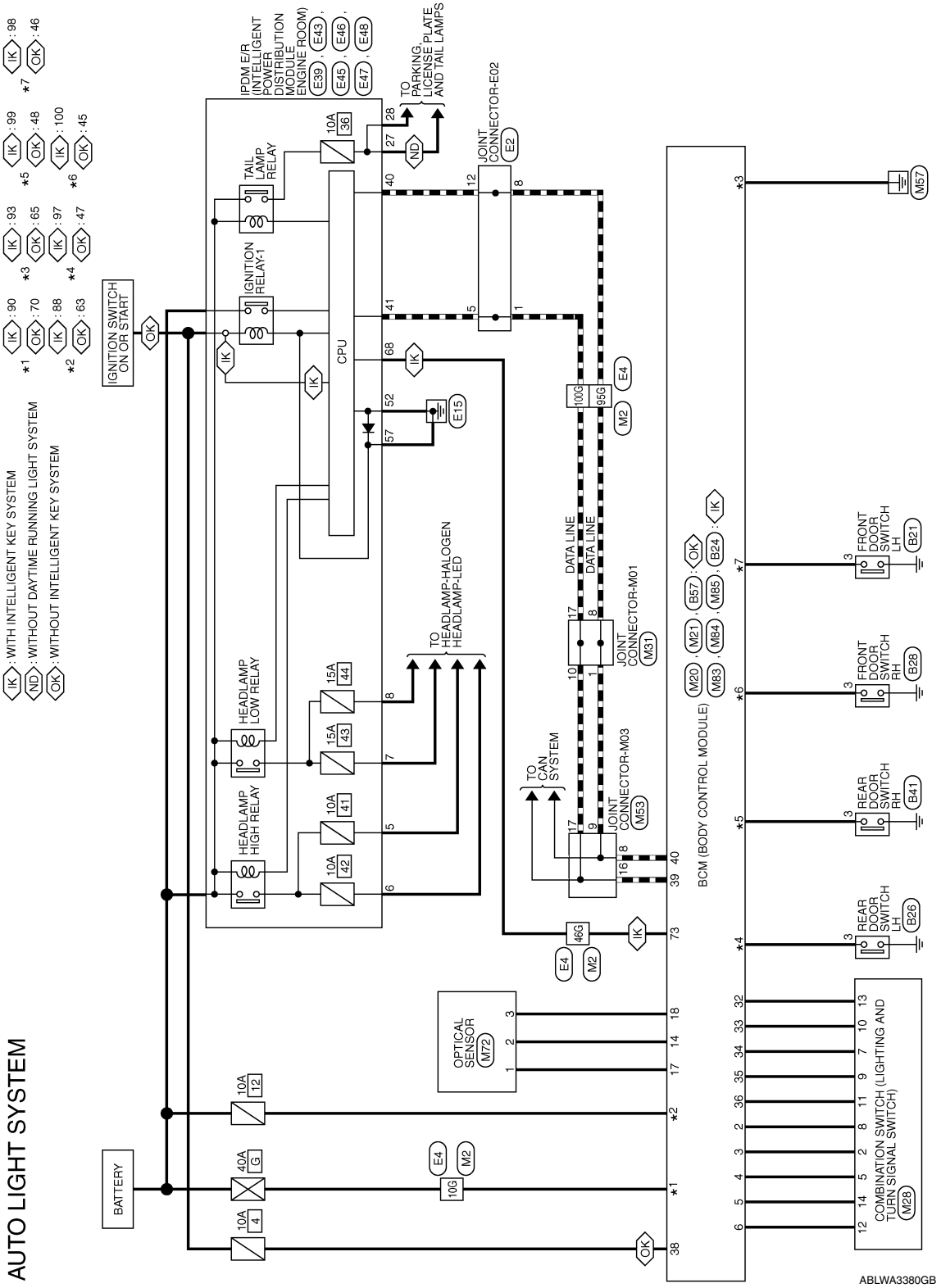
Terminal No.	Color of Wire	Signal Name
1	L	–
3	G	–
7	B	–
20	B	–

ABLIA8416GB

AUTO LIGHT SYSTEM

Wiring Diagram

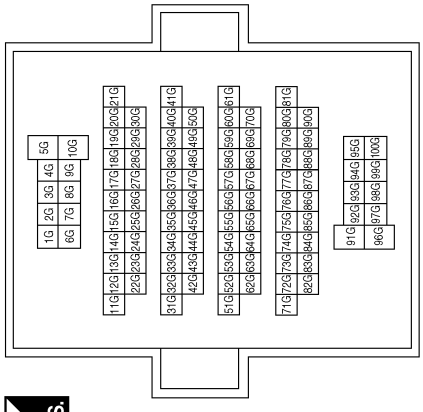
INFOID:0000000012782825



AUTO LIGHT SYSTEM CONNECTORS

Connector No.	M2
Connector Name	WIRE TO WIRE
Connector Color	WHITE

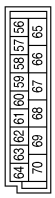
H.S.



Terminal No.	Color of Wire	Signal Name
10G	Y	–
46G	V	–
95G	P	–
100G	L	–

Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
63	BG	BATTERY (FUSE)
65	B	GND
70	Y	BATTERY (F/L)

Terminal No.	Color of Wire	Signal Name
35	R	COMBINATION SW OUTPUT 2
36	SB	COMBINATION SW OUTPUT 1
38	R	IGN SW
39	L	CAN-H
40	P	CAN-L

Connector No.	M21
Connector Name	BCM (BODY CONTROL MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

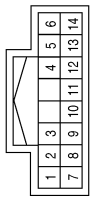
H.S.

Terminal No.	Color of Wire	Signal Name
2	L	COMBINATION SW INPUT 5
3	GR	COMBINATION SW INPUT 4
4	BR	COMBINATION SW INPUT 3
5	BG	COMBINATION SW INPUT 2
6	W	COMBINATION SW INPUT 1
14	SB	AUTO LIGHT SENSOR INPUT 1 (& 2)
17	Y	AUTO LIGHT SENSOR POWER SUPPLY OUTPUT
18	V	KEYLESS & AUTO LIGHT SENSOR GND
32	LG	COMBINATION SW OUTPUT 5
33	Y	COMBINATION SW OUTPUT 4
34	V	COMBINATION SW OUTPUT 3

ABLIA8401GB

Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE

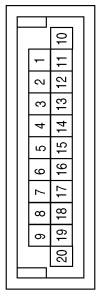
H.S.



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

Connector No.	M31
Connector Name	JOINT CONNECTOR-M01
Connector Color	BLUE

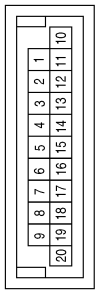
H.S.



Terminal No.	Color of Wire	Signal Name
1	P	–
8	P	–
10	L	–
17	L	–

Connector No.	M53
Connector Name	JOINT CONNECTOR-M03
Connector Color	BLUE

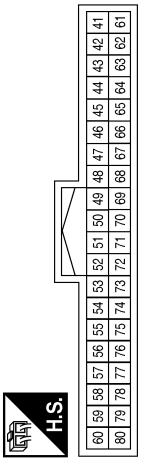
H.S.



Terminal No.	Color of Wire	Signal Name
8	P	–
9	P	–
16	L	–
17	L	–

Connector No.	M83
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
73	V	IGN RELAY OUTPUT1 (USM)

Connector No.	M72
Connector Name	OPTICAL SENSOR
Connector Color	WHITE

H.S.

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

ABLIA8402GB

Connector No.	M84
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	BLACK

H.S.

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

Terminal No.	Color of Wire	Signal Name
2	L	COMBINATION SW INPUT 5
3	GR	COMBINATION SW INPUT 4
4	BR	COMBINATION SW INPUT 3
5	BG	COMBINATION SW INPUT 2
6	W	COMBINATION SW INPUT 1
14	SB	AUTO LIGHT SENSOR INPUT
17	Y	AUTO LIGHT SENSOR POWER SUPPLY OUTPUT
18	V	KEYLESS TUNER, AUTO LIGHT SENSOR GND
32	LG	COMBINATION SW OUTPUT 5
33	Y	COMBINATION SW OUTPUT 4
34	V	COMBINATION SW OUTPUT 3
35	R	COMBINATION SW OUTPUT 2
36	SB	COMBINATION SW OUTPUT 1
39	L	CAN-H
40	P	CAN-L

Connector No.	M85
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

H.S.

89	88	87	86	85	84	83	82	81
95	94	93	92	91	90			

Terminal No.	Color of Wire	Signal Name
88	BG	BATTERY (FUSE)
90	Y	BATTERY (F/L)
93	B	GND

Connector No.	E2
Connector Name	JOINT CONNECTOR-E02
Connector Color	BLUE

H.S.

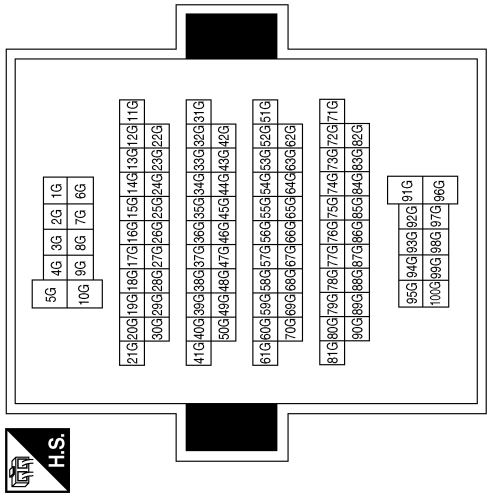
12	11	10	9	8	7	6	5	4	3	2	1

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

ABLIA8403GB

Connector No.	E4
Connector Name	WIRE TO WIRE
Connector Color	WHITE

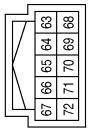
H.S.



Terminal No.	Color of Wire	Signal Name
10G	G	–
46G	O	–
95G	P	–
100G	L	–

Connector No.	E39
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK

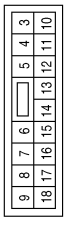
H.S.



Terminal No.	Color of Wire	Signal Name
68	O	IGN SIGNAL

Connector No.	E43
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

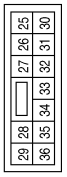
H.S.



Terminal No.	Color of Wire	Signal Name
5	R	H/LAMP HI RH
6	G	H/LAMP HI LH
7	L	H/LAMP LO LH
8	P	H/LAMP LO RH

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

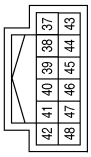
H.S.



Terminal No.	Color of Wire	Signal Name
27	L	CLEARANCE/L RH
28	R	TAIL 1

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

H.S.



Terminal No.	Color of Wire	Signal Name
40	P	CAN-L
41	L	CAN-H

ABLIA8404GB

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

H.S.

51		50	49
56	55	54	53	52

Terminal No.	Color of Wire	Signal Name
52	B/Y	SIGNAL GND

Connector No.	E48
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK

H.S.

59	58	57
62	61	60

Terminal No.	Color of Wire	Signal Name
57	B/Y	POWER GND

Connector No.	B21
Connector Name	FRONT DOOR SWITCH LH
Connector Color	WHITE

H.S.

1	2	3	4

Terminal No.	Color of Wire	Signal Name
3	Y	–

Connector No.	B24
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	BLACK

H.S.

104	103	102	101	100	99	98	97	96
110	109	108	107	106	105			

Terminal No.	Color of Wire	Signal Name
97	GR	DOOR SW (RL)
98	Y	DOOR SW (DR)
99	P	DOOR SW (RR)
100	R	DOOR SW (AS)

Connector No.	B26
Connector Name	REAR DOOR SWITCH LH
Connector Color	WHITE

H.S.

1	2	3	4

Terminal No.	Color of Wire	Signal Name
3	GR	–

Connector No.	B28
Connector Name	FRONT DOOR SWITCH RH
Connector Color	WHITE

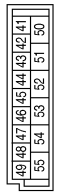
H.S.

1	2	3	4

Terminal No.	Color of Wire	Signal Name
3	R	–

ABLIA8508GB

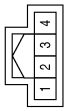
Connector No.	B57
Connector Name	BCM (BODY CONTROL MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)
Connector Color	BLACK



H.S.

Terminal No.	Color of Wire	Signal Name
45	R	DOOR SW (AS)
46	Y	DOOR SW (DR)
47	GR	DOOR SW (RL)
48	P	DOOR SW (RR)

Connector No.	B41
Connector Name	REAR DOOR SWITCH RH
Connector Color	WHITE



H.S.

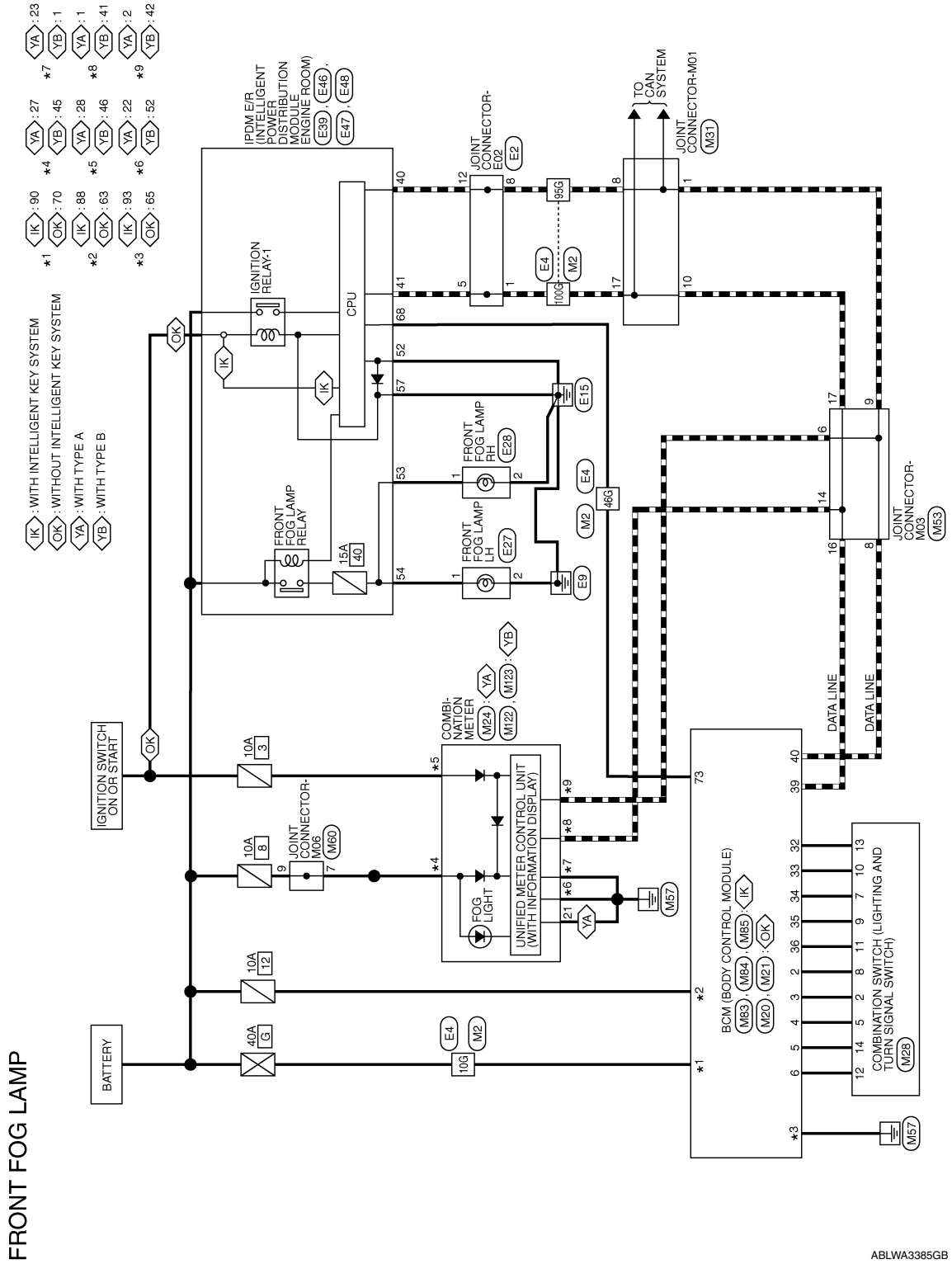
Terminal No.	Color of Wire	Signal Name
3	P	–

ABLIA8509GB

FRONT FOG LAMP

Wiring Diagram

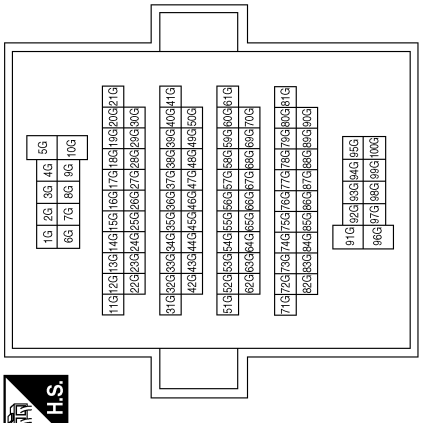
INFOID:0000000012782826



FRONT FOG LAMP CONNECTORS

Connector No.	M2
Connector Name	WIRE TO WIRE
Connector Color	WHITE

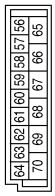
H.S.



Terminal No.	Color of Wire	Signal Name
10G	Y	–
46G	V	–
95G	P	–
100G	L	–

Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
63	BG	BATTERY (FUSE)
65	B	GND
70	Y	BATTERY (F/L)

Connector No.	M21
Connector Name	BCM (BODY CONTROL MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

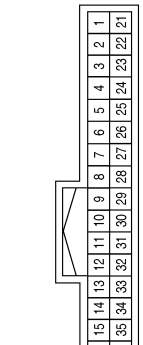
H.S.

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

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

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

H.S.



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

ABLIA8424GB

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	GR	–
5	BR	–
7	V	–
8	L	–
9	R	–
10	Y	–
11	SB	–
12	W	–
13	LG	–
14	BG	–

Connector No.	M31
Connector Name	JOINT CONNECTOR-M01
Connector Color	BLUE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	P	–
8	P	–
10	L	–
17	L	–

Connector No.	M53
Connector Name	JOINT CONNECTOR-M03
Connector Color	BLUE

H.S.

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

Terminal No.	Color of Wire	Signal Name
6	P	–
8	P	–
9	P	–
14	L	–
16	L	–
17	L	–

Connector No.	M83
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

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
73	V	IGN RELAY OUTPUT1 (USM)

Connector No.	M60
Connector Name	JOINT CONNECTOR-M06
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
7	W	–
9	W	–

ABLIA8425GB

Connector No.	M84
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	BLACK

H.S.

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

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

Connector No.	M122
Connector Name	COMBINATION METER (WITH TYPE B)
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	B	GND

Connector No.	M85
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

H.S.

89	88	87	86	85	84	83	82	81
95	94	93	92	91	90			

Terminal No.	Color of Wire	Signal Name
88	BG	BATTERY (FUSE)
90	Y	BATTERY (F/L)
93	B	GND

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

Connector No.	M123
Connector Name	COMBINATION METER (WITH TYPE B)
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
41	L	CAN-H
42	P	CAN-L
45	LG	BAT
46	GR	IGN
52	B	GND

Connector No.	E2
Connector Name	JOINT CONNECTOR-E02
Connector Color	BLUE

H.S.

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

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

ABLIA8426GB

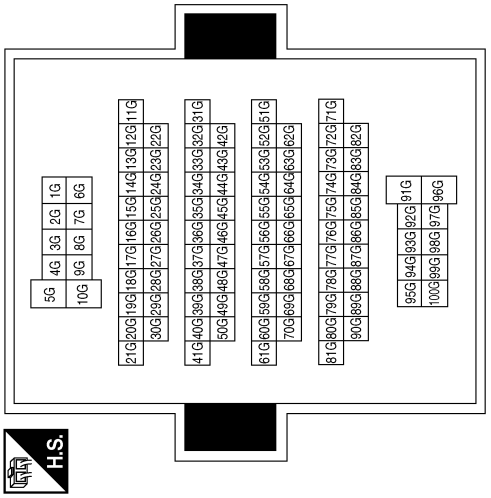
Connector No.	E27
Connector Name	FRONT FOG LAMP LH
Connector Color	BLACK

H.S.

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

Connector No.	E4
Connector Name	WIRE TO WIRE
Connector Color	WHITE

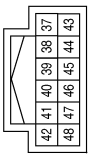
H.S.



Terminal No.	Color of Wire	Signal Name
10G	G	–
46G	O	–
95G	P	–
100G	L	–

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

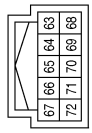
H.S.



Terminal No.	Color of Wire	Signal Name
40	P	CAN-L
41	L	CAN-H

Connector No.	E39
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK

H.S.



Terminal No.	Color of Wire	Signal Name
68	O	IGN SIGNAL

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

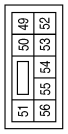
H.S.

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

ABLIA8427GB

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

H.S.



Terminal No.	Color of Wire	Signal Name
52	B/Y	SIGNAL GND
53	W	FR FOG/L RH
54	V	FR FOG/L LH

Connector No.	E48
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK

H.S.

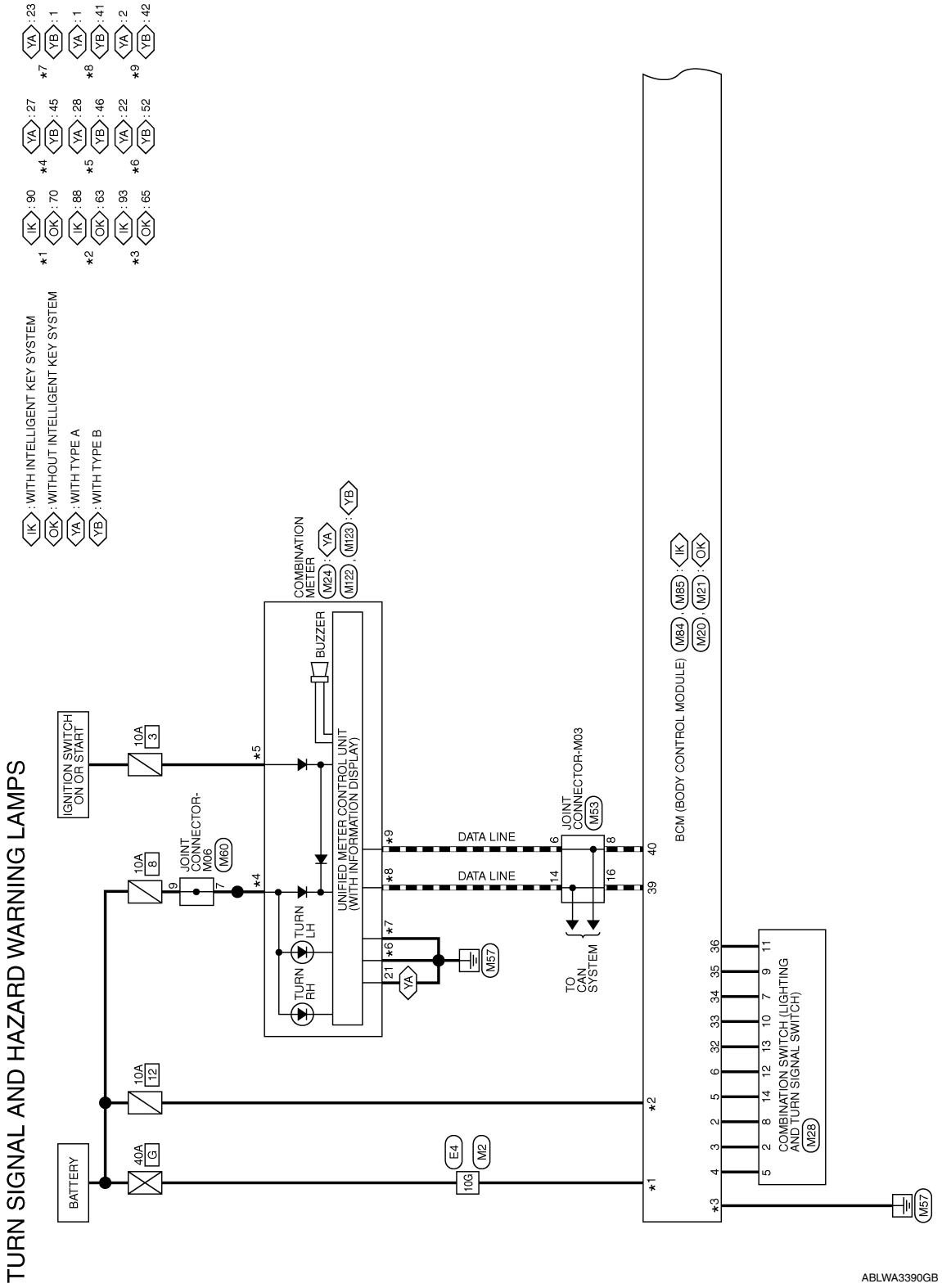
Terminal No.	Color of Wire	Signal Name
57	B/Y	POWER GND

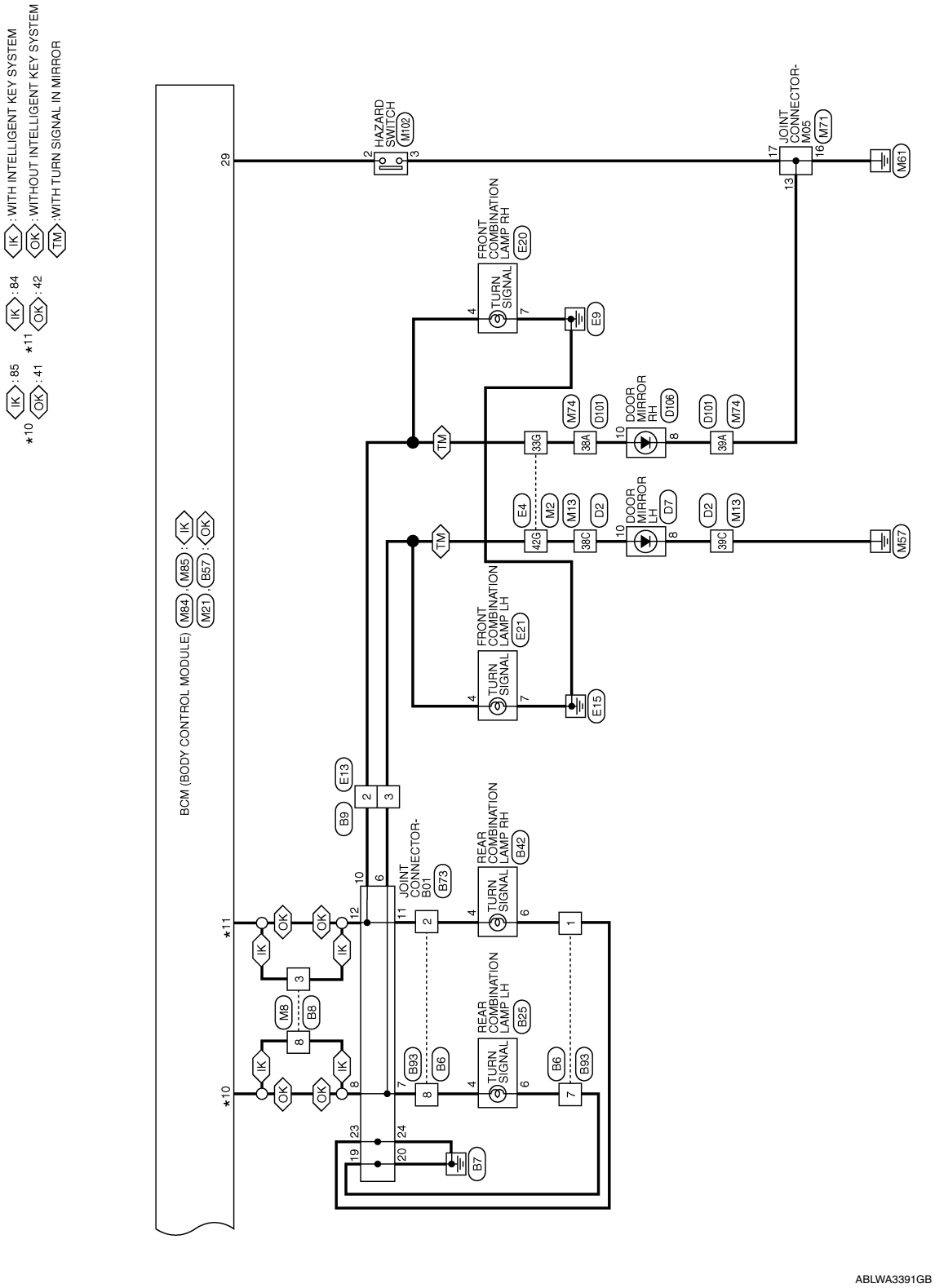
ABLIA8579GB

TURN SIGNAL AND HAZARD WARNING LAMPS

Wiring Diagram

INFOID:0000000012782827



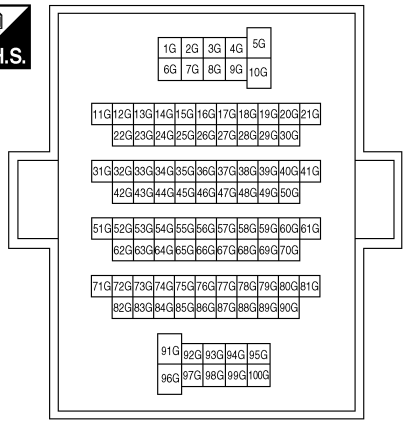


ABLWA3391GB

TURN SIGNAL AND HAZARD WARNING LAMPS CONNECTORS

Connector No.	M2
Connector Name	WIRE TO WIRE
Connector Color	WHITE

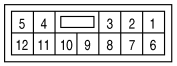
H.S.



Terminal No.	Color of Wire	Signal Name
10G	Y	–
33G	Y	–
42G	W	–

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

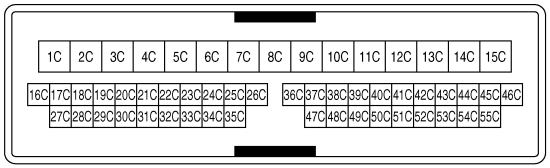
H.S.



Terminal No.	Color of Wire	Signal Name
3	W	–
8	Y	–

Connector No.	M13
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

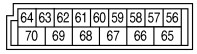


ABLIA8447GB

Terminal No.	Color of Wire	Signal Name
38C	W	–
39C	B	–

Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
63	BG	BATTERY (FUSE)
65	B	GND
70	Y	BATTERY (F/L)

Connector No.	M21
Connector Name	BCM (BODY CONTROL MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
2	L	COMBINATION SW INPUT 5
3	GR	COMBINATION SW INPUT 4
4	BR	COMBINATION SW INPUT 3
5	BG	COMBINATION SW INPUT 2
6	W	COMBINATION SW INPUT 1

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

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

H.S.

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

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

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	GR	–
5	BR	–
7	V	–
8	L	–

Terminal No.	Color of Wire	Signal Name
9	R	–
10	Y	–
11	SB	–
12	W	–
13	LG	–
14	BG	–

Connector No.	M53
Connector Name	JOINT CONNECTOR-M03
Connector Color	BLUE

H.S.

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

Terminal No.	Color of Wire	Signal Name
6	P	–
8	P	–
14	L	–
16	L	–

ABLIA8448GB

Connector No.	M74
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1A	2A	3A	4A	5A	6A	7A	8A	9A	10A	11A	12A	13A	14A	15A
16A	17A	18A	19A	20A	21A	22A	23A	24A	25A	26A	36A	37A	38A	39A	40A	41A	42A	43A	44A	45A	46A
27A	28A	29A	30A	31A	32A	33A	34A	35A			47A	48A	49A	50A	51A	52A	53A	54A	55A		

Terminal No.	Color of Wire	Signal Name
38A	Y	–
39A	B	–

Connector No.	M71
Connector Name	JOINT CONNECTOR-M05
Connector Color	BLUE

H.S.

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

Terminal No.	Color of Wire	Signal Name
13	B	–
16	B	–
17	B	–

Connector No.	M60
Connector Name	JOINT CONNECTOR-M06
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
7	W	–
9	W	–

Connector No.	M85
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

H.S.

89	88	87	86	85	84	83	82	81
95	94	93	92	91	90

Terminal No.	Color of Wire	Signal Name
84	W	FLASHER OUTPUT (RIGHT)
85	Y	FLASHER OUTPUT (LEFT)
88	BG	BATTERY (FUSE)
90	Y	BATTERY (F/L)
93	B	GND

Connector No.	M84
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	BLACK

H.S.

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

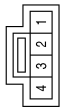
Terminal No.	Color of Wire	Signal Name
2	L	COMBINATION SW INPUT 5
3	GR	COMBINATION SW INPUT 4
4	BR	COMBINATION SW INPUT 3
5	BG	COMBINATION SW INPUT 2
6	W	COMBINATION SW INPUT 1

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

ABLIA8449GB

Connector No.	M102
Connector Name	HAZARD SWITCH
Connector Color	WHITE

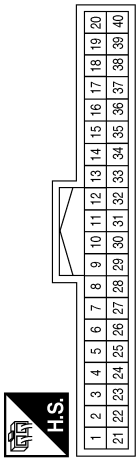
H.S.



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

Connector No.	M122
Connector Name	COMBINATION METER (WITH TYPE B)
Connector Color	WHITE

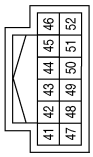
H.S.



Terminal No.	Color of Wire	Signal Name
1	B	GND

Connector No.	M123
Connector Name	COMBINATION METER (WITH TYPE B)
Connector Color	WHITE

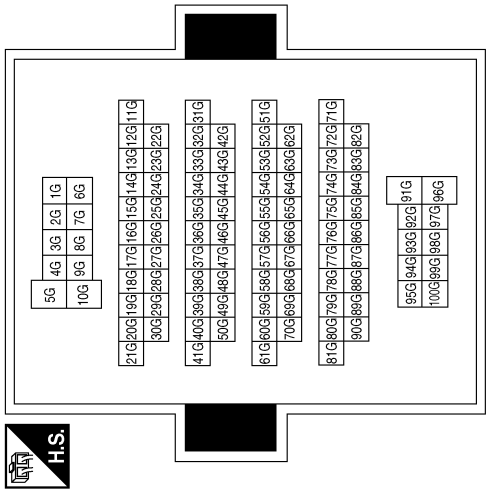
H.S.



Terminal No.	Color of Wire	Signal Name
41	L	CAN-H
42	P	CAN-L
45	LG	BAT
46	GR	IGN
52	B	GND

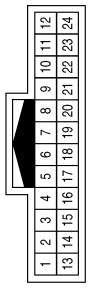
Connector No.	E4
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



Connector No.	E13
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



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

Terminal No.	Color of Wire	Signal Name
10G	G	–
33G	Y	–
42G	V	–

ABLIA8450GB

Connector No.	E20
Connector Name	FRONT COMBINATION LAMP RH
Connector Color	BLACK

H.S.

1	2	3	4
5	6	7	8

Terminal No.	Color of Wire	Signal Name
4	Y	–
7	B/W	–

Connector No.	E21
Connector Name	FRONT COMBINATION LAMP LH
Connector Color	BLACK

H.S.

1	2	3	4
5	6	7	8

Terminal No.	Color of Wire	Signal Name
4	V	–
7	B/R	–

Connector No.	B6
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	L	–
2	R	–
7	BG	–
8	SB	–

Connector No.	B8
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
3	BG	–
8	LG	–

Connector No.	B9
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
2	Y	–
3	SB	–

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

H.S.

2		1
6	5	4	3

Terminal No.	Color of Wire	Signal Name
4	SB	–
6	BG	–

ABLIA8451GB

Connector No.	B73
Connector Name	JOINT CONNECTOR-B01
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
6	SB	–
7	BR	–
8	LG	–
10	Y	–
11	R	–
12	BG	–
19	B	–
20	B	–
23	L	–
24	B	–

Connector No.	B57
Connector Name	BCM (BODY CONTROL MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
41	LG	FLASHER OUTPUT (LEFT)
42	BG	FLASHER OUTPUT (RIGHT)

Connector No.	B42
Connector Name	REAR COMBINATION LAMP RH
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
4	R	–
6	L	–

Terminal No.	Color of Wire	Signal Name
38C	G	–
39C	B	–

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

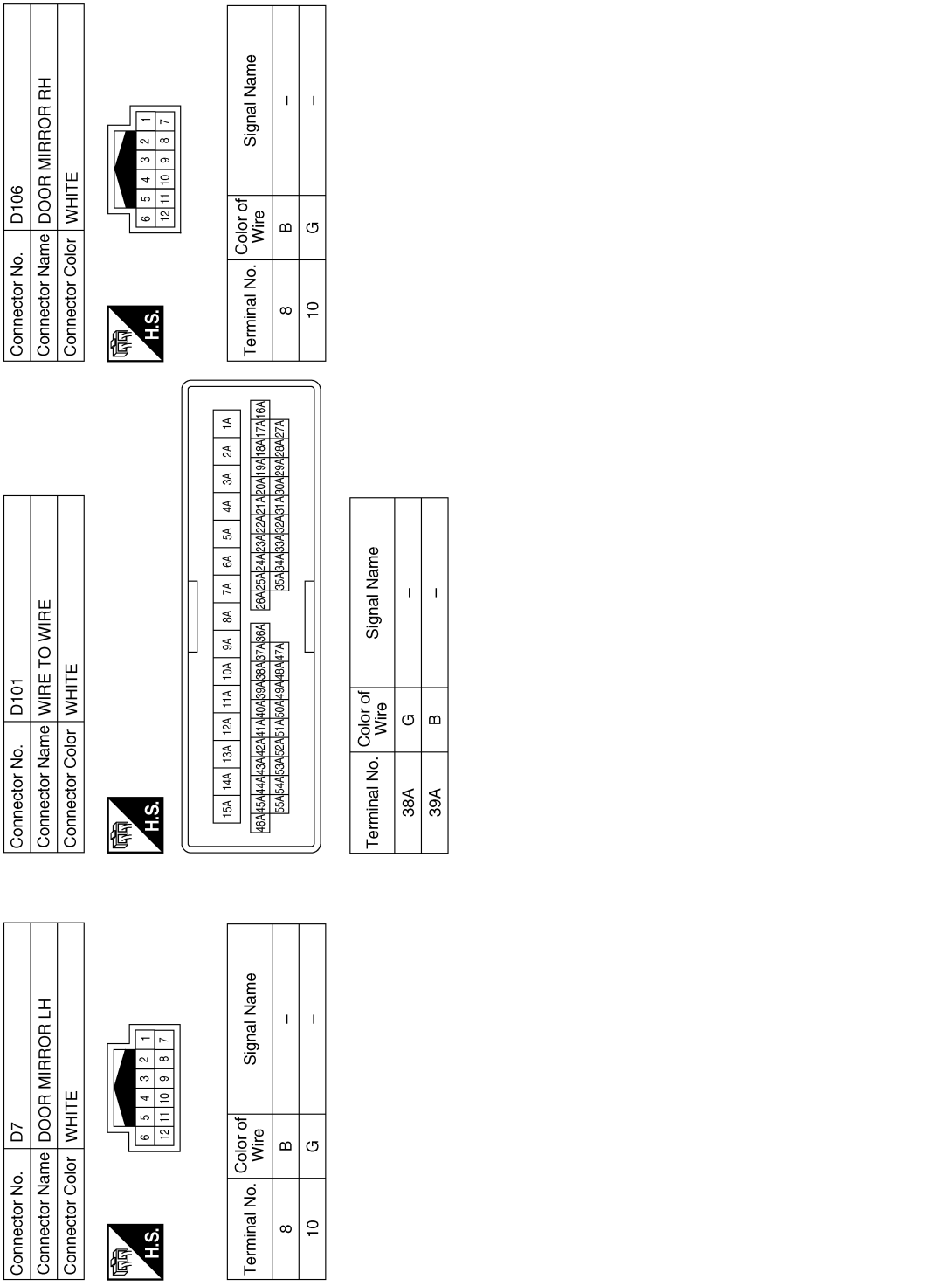
H.S.

Connector No.	B93
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
1	L	–
2	R	–
7	B	–
8	BR	–

ABLIA8452GB

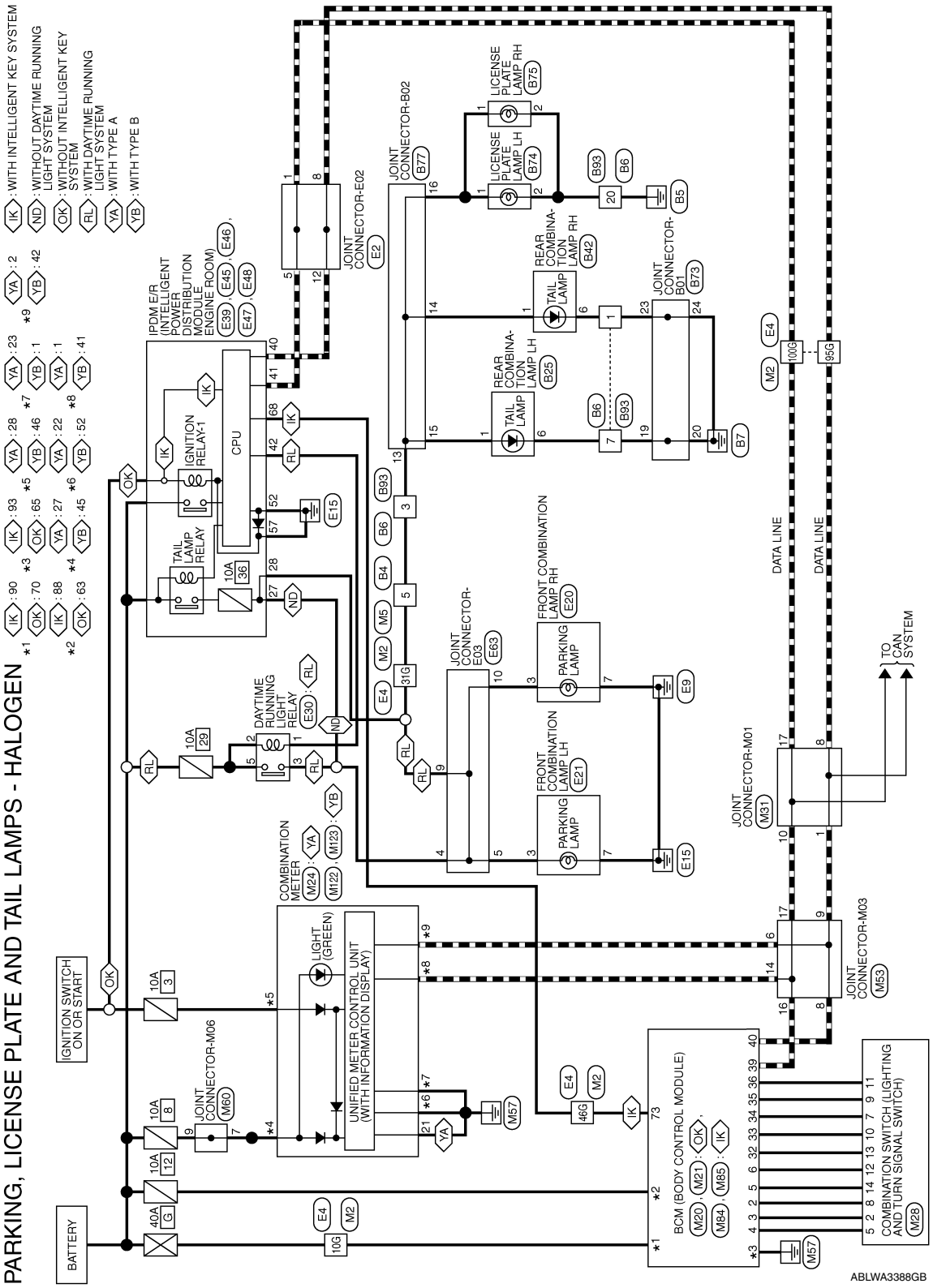


ABLIA8453GB

PARKING, LICENSE PLATE AND TAIL LAMPS

Wiring Diagram

INFOID:0000000012782828



PARKING, LICENSE PLATE AND TAIL LAMPS CONNECTORS - HALOGEN

Connector No.	M2
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
10G	Y	–
31G	V	–
46G	V	–
95G	P	–
100G	L	–

Connector No.	M5
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
5	V	–

Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
63	BG	BATTERY (FUSE)
65	B	GND
70	Y	BATTERY (F/L)

Connector No.	M21
Connector Name	BCM (BODY CONTROL MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
2	L	COMBINATION SW INPUT 5
3	GR	COMBINATION SW INPUT 4
4	BR	COMBINATION SW INPUT 3
5	BG	COMBINATION SW INPUT 2
6	W	COMBINATION SW INPUT 1

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

ABLIA8438GB

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

H.S.

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

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

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	GR	–
5	BR	–
7	V	–
8	L	–
9	R	–
10	Y	–
11	SB	–
12	W	–
13	LG	–
14	BG	–

Connector No.	M31
Connector Name	JOINT CONNECTOR-M01
Connector Color	BLUE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	P	–
8	P	–
10	L	–
17	L	–

Connector No.	M53
Connector Name	JOINT CONNECTOR-M03
Connector Color	BLUE

H.S.

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

Terminal No.	Color of Wire	Signal Name
6	P	–
8	P	–
9	P	–
14	L	–
16	L	–
17	L	–

Connector No.	M60
Connector Name	JOINT CONNECTOR-M06
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
7	W	–
9	W	–

Connector No.	M83
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

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
73	V	IGN RELAY OUTPUT1 (USM)

ABLIA8439GB

Connector No.	M84
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	BLACK

H.S.

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

Terminal No.	Color of Wire	Signal Name
2	L	COMBINATION SW INPUT 5
3	GR	COMBINATION SW INPUT 4
4	BR	COMBINATION SW INPUT 3
5	BG	COMBINATION SW INPUT 2
6	W	COMBINATION SW INPUT 1

Connector No.	M122
Connector Name	COMBINATION METER (WITH TYPE B)
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	B	GND

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

Connector No.	M123
Connector Name	COMBINATION METER (WITH TYPE B)
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
41	L	CAN-H
42	P	CAN-L
45	LG	BAT
46	GR	IGN
52	B	GND

Connector No.	M85
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

H.S.

89	88	87	86	85	84	83	82	81
95	94	93	92	91	90			

Terminal No.	Color of Wire	Signal Name
88	BG	BATTERY (FUSE)
90	Y	BATTERY (F/L)
93	B	GND

Connector No.	E2
Connector Name	JOINT CONNECTOR-E02
Connector Color	BLUE

H.S.

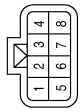
12	11	10	9	8	7	6	5	4	3	2	1

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

ABLIA8440GB

Connector No.	E20
Connector Name	FRONT COMBINATION LAMP RH
Connector Color	BLACK

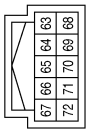
H.S.



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

Connector No.	E39
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK

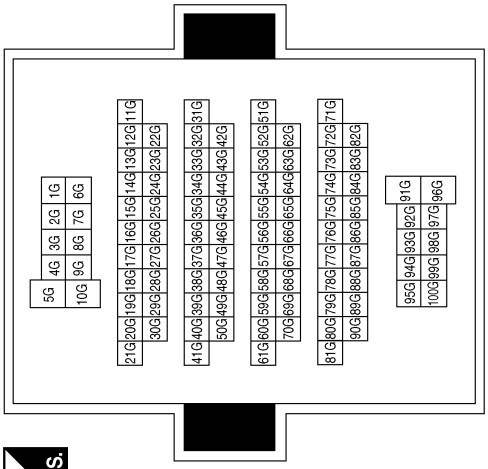
H.S.



Terminal No.	Color of Wire	Signal Name
68	O	IGN SIGNAL

Connector No.	E4
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
10G	G	–
31G	R	–
46G	O	–
95G	P	–
100G	L	–

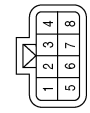
Connector No.	E30
Connector Name	DAYTIME RUNNING LIGHT RELAY
Connector Color	BLUE

H.S.

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

Connector No.	E21
Connector Name	FRONT COMBINATION LAMP LH
Connector Color	BLACK

H.S.



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

ABLIA8441GB

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

H.S.

29	28		27	26	25
36	35	34	33	32	31	30

Terminal No.	Color of Wire	Signal Name
27	L	CLEARANCE/L RH
28	R	TAIL 1

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
40	P	CAN-L
41	L	CAN-H
42	Y	DTRL RLY DRIVE

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

H.S.

51		50	49
56	55	54	53	52

Terminal No.	Color of Wire	Signal Name
52	B/Y	SIGNAL GND

Connector No.	E48
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK

H.S.

59	58	57
62	61	60

Terminal No.	Color of Wire	Signal Name
57	B/Y	POWER GND

Connector No.	E63
Connector Name	JOINT CONNECTOR-E03
Connector Color	BLACK

H.S.

1	2	3	4	5
6	7	8	9	10

Terminal No.	Color of Wire	Signal Name
4	L	–
5	L	–
9	R	–
10	L	–

Connector No.	B4
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

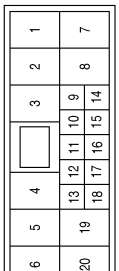
1	2	3		4	5	6	7
8	9	10	11	12	13	14	15	16

Terminal No.	Color of Wire	Signal Name
5	LG	–

ABLIA8442GB

Connector No.	B6
Connector Name	WIRE TO WIRE
Connector Color	WHITE

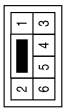
H.S.



Terminal No.	Color of Wire	Signal Name
1	L	–
3	LG	–
7	BG	–
20	B	–

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

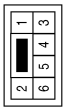
H.S.



Terminal No.	Color of Wire	Signal Name
1	LG	–
6	BG	–

Connector No.	B42
Connector Name	REAR COMBINATION LAMP RH
Connector Color	WHITE

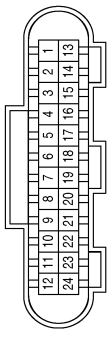
H.S.



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

Connector No.	B73
Connector Name	JOINT CONNECTOR-B01
Connector Color	BLACK

H.S.



Terminal No.	Color of Wire	Signal Name
19	B	–
20	B	–
23	L	–
24	B	–

Connector No.	B74
Connector Name	LICENSE PLATE LAMP LH
Connector Color	BROWN

H.S.

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

Connector No.	B75
Connector Name	LICENSE PLATE LAMP RH
Connector Color	BROWN

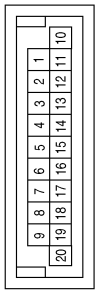
H.S.

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

ABLIA8443GB

Connector No.	B77
Connector Name	JOINT CONNECTOR-B02
Connector Color	GREEN

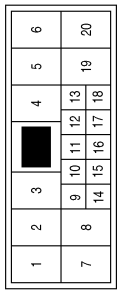
H.S.



Terminal No.	Color of Wire	Signal Name
13	G	–
14	BR	–
15	LG	–
16	GR	–

Connector No.	B93
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



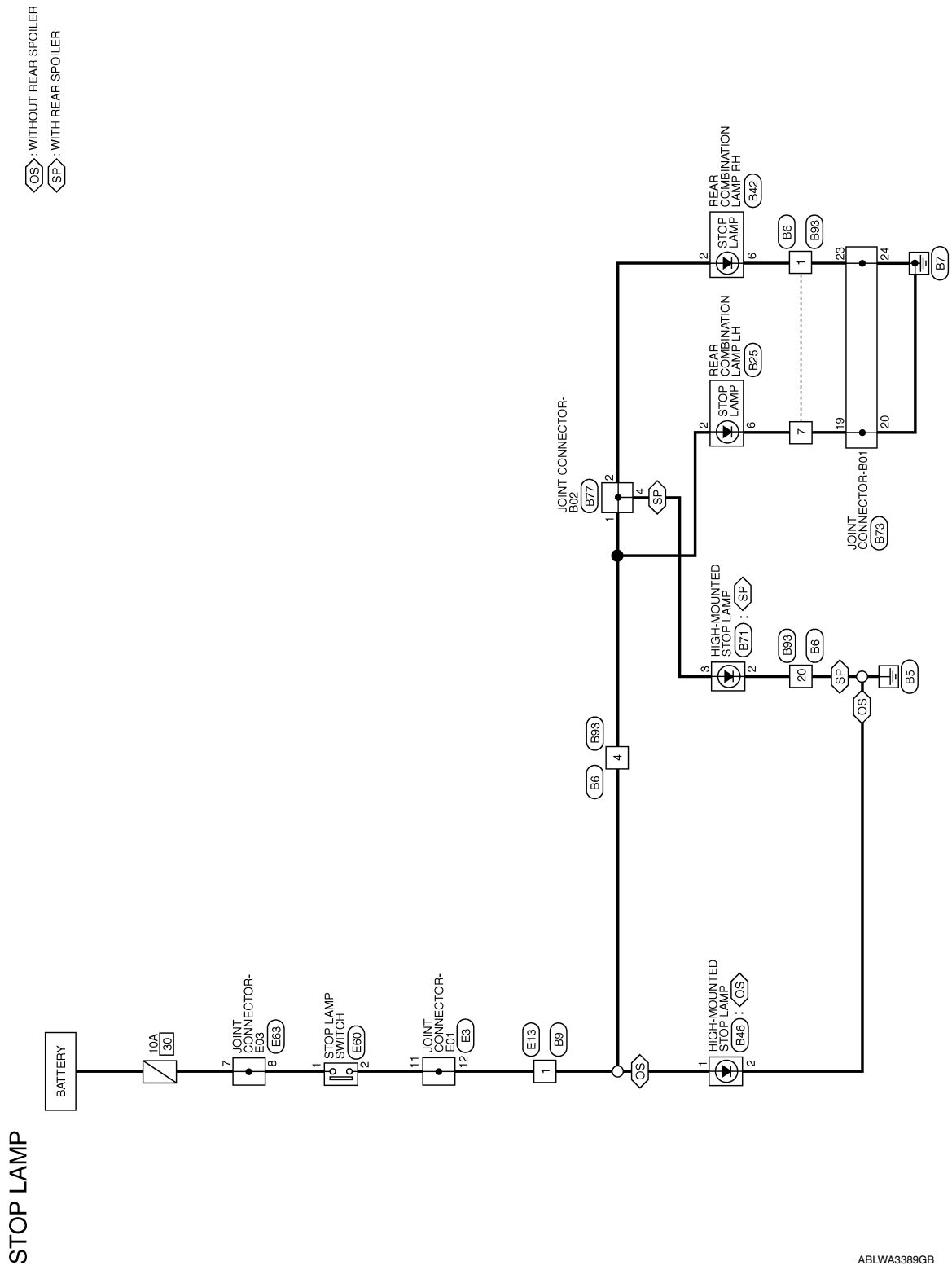
Terminal No.	Color of Wire	Signal Name
1	L	–
3	G	–
7	B	–
20	B	–

ABLIA8444GB

STOP LAMP

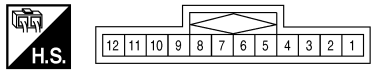
Wiring Diagram

INFOID:0000000012782829



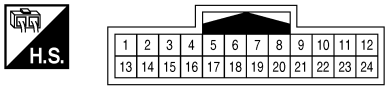
STOP LAMP CONNECTORS

Connector No.	E3
Connector Name	JOINT CONNECTOR-E01
Connector Color	BLUE



Terminal No.	Color of Wire	Signal Name
11	SB	–
12	SB	–

Connector No.	E13
Connector Name	WIRE TO WIRE
Connector Color	WHITE

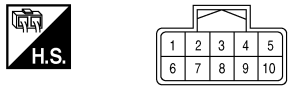


Terminal No.	Color of Wire	Signal Name
1	SB	–

Connector No.	E60
Connector Name	STOP LAMP SWITCH
Connector Color	WHITE

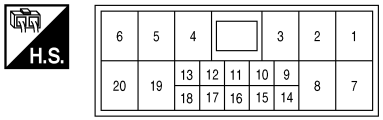
Terminal No.	Color of Wire	Signal Name
1	W	–
2	SB	–

Connector No.	E63
Connector Name	JOINT CONNECTOR-E03
Connector Color	BLACK



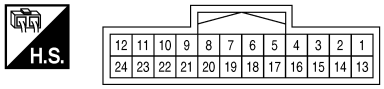
Terminal No.	Color of Wire	Signal Name
7	W	–
8	W	–

Connector No.	B6
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	L	–
4	Y	–
7	BG	–
20	B	–

Connector No.	B9
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	Y	–

ABLIA8445GB

Connector No.	B46
Connector Name	HIGH-MOUNTED STOP LAMP (WITHOUT REAR SPOILER)
Connector Color	BLACK

H.S.

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

Connector No.	B42
Connector Name	REAR COMBINATION LAMP RH
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
2	V	–
6	L	–

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

H.S.

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

Connector No.	B77
Connector Name	JOINT CONNECTOR-B02
Connector Color	GREEN

H.S.

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

Connector No.	B73
Connector Name	JOINT CONNECTOR-B01
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
19	B	–
20	B	–
23	L	–
24	B	–

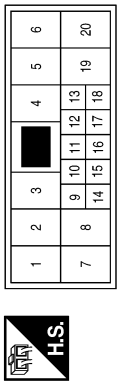
Connector No.	B71
Connector Name	HIGH-MOUNTED STOP LAMP (WITH REAR SPOILER)
Connector Color	WHITE

H.S.

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

ABLIA8446GB

Connector No.	B93
Connector Name	WIRE TO WIRE
Connector Color	WHITE



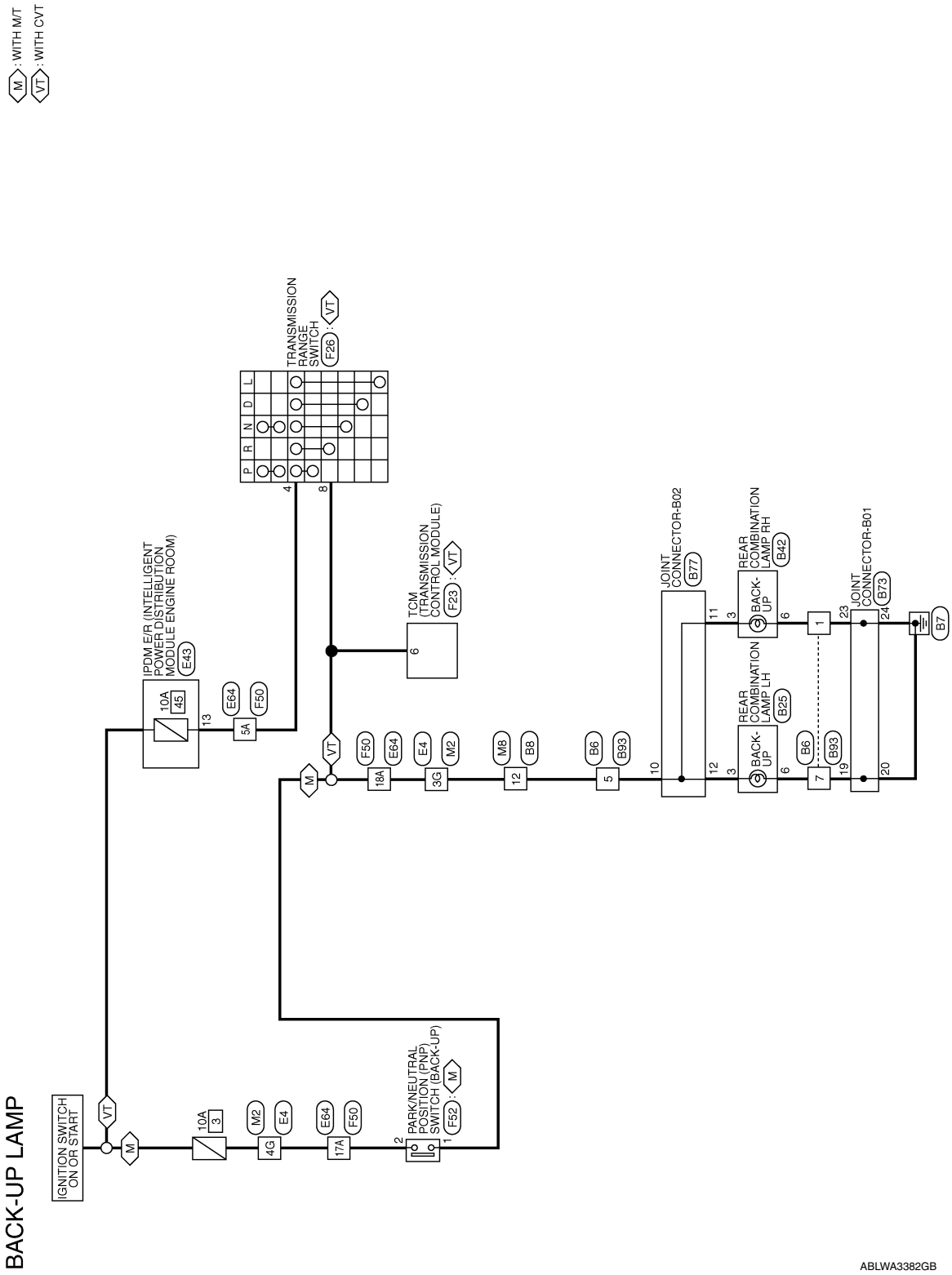
Terminal No.	Color of Wire	Signal Name
1	L	–
4	Y	–
7	B	–
20	B	–

AALIA1022GB

BACK-UP LAMP

Wiring Diagram

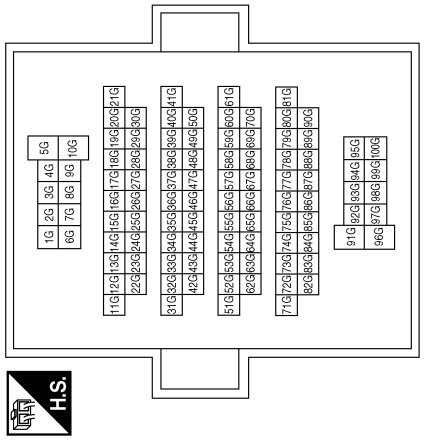
INFOID:0000000012782830



BACK-UP LAMP CONNECTORS

Connector No.	M2
Connector Name	WIRE TO WIRE
Connector Color	WHITE

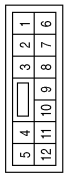
H.S.



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

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

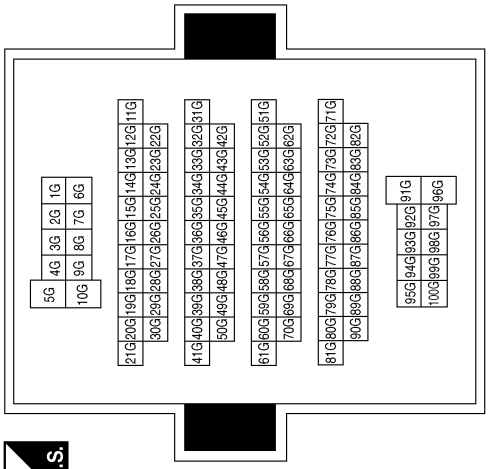
H.S.



Terminal No.	Color of Wire	Signal Name
12	G	–

Connector No.	E4
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



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

ABLIA8406GB

Connector No.	E43
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
13	O	A/T ECU IGN

Connector No.	E64
Connector Name	WIRE TO WIRE
Connector Color	BLACK

H.S.

40A	31A		10A	1A
41A	32A		11A	2A
42A	33A		12A	3A
43A	34A		13A	4A
44A	35A		14A	5A
45A	36A		15A	6A
46A	37A		16A	7A
47A	38A		17A	8A
48A	39A		18A	9A

	19A		
26A	20A		
27A	21A		
28A	22A		
29A	23A		
30A	24A		
	25A		

Terminal No.	Color of Wire	Signal Name
5A	O	–
17A	GR	–
18A	W	–

Connector No.	F23
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	G	R RANGE SW

Connector No.	F50
Connector Name	WIRE TO WIRE
Connector Color	BLACK

H.S.

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

Terminal No.	Color of Wire	Signal Name
5A	LG	–
17A	SB	–
18A	G	–

Connector No.	F26
Connector Name	TRANSMISSION RANGE SWITCH
Connector Color	BLACK

H.S.

6	5	4	3	2	11
10		9	8		7

Terminal No.	Color of Wire	Signal Name
4	LG	–
8	G	–

ABLIA8407GB

Connector No.	F52
Connector Name	PARK/NEUTRAL POSITION (PNP) SWITCH
Connector Color	GREEN

H.S.

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

Connector No.	B6
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Connector No.	B8
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
12	W	–

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

H.S.

Terminal No.	Color of Wire	Signal Name
3	P	–
6	BG	–

Connector No.	B42
Connector Name	REAR COMBINATION LAMP RH
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
3	SB	–
6	L	–

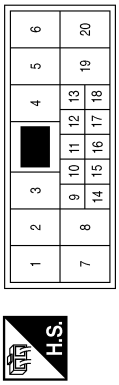
Connector No.	B73
Connector Name	JOINT CONNECTOR-B01
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
19	B	–
20	B	–
23	L	–
24	B	–

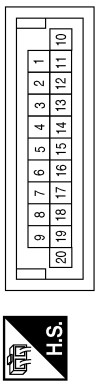
ABLIA8408GB

Connector No.	B93
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Connector No.	B77
Connector Name	JOINT CONNECTOR-B02
Connector Color	GREEN



Terminal No.	Color of Wire	Signal Name
10	W	–
11	SB	–
12	P	–

ABLIA8409GB

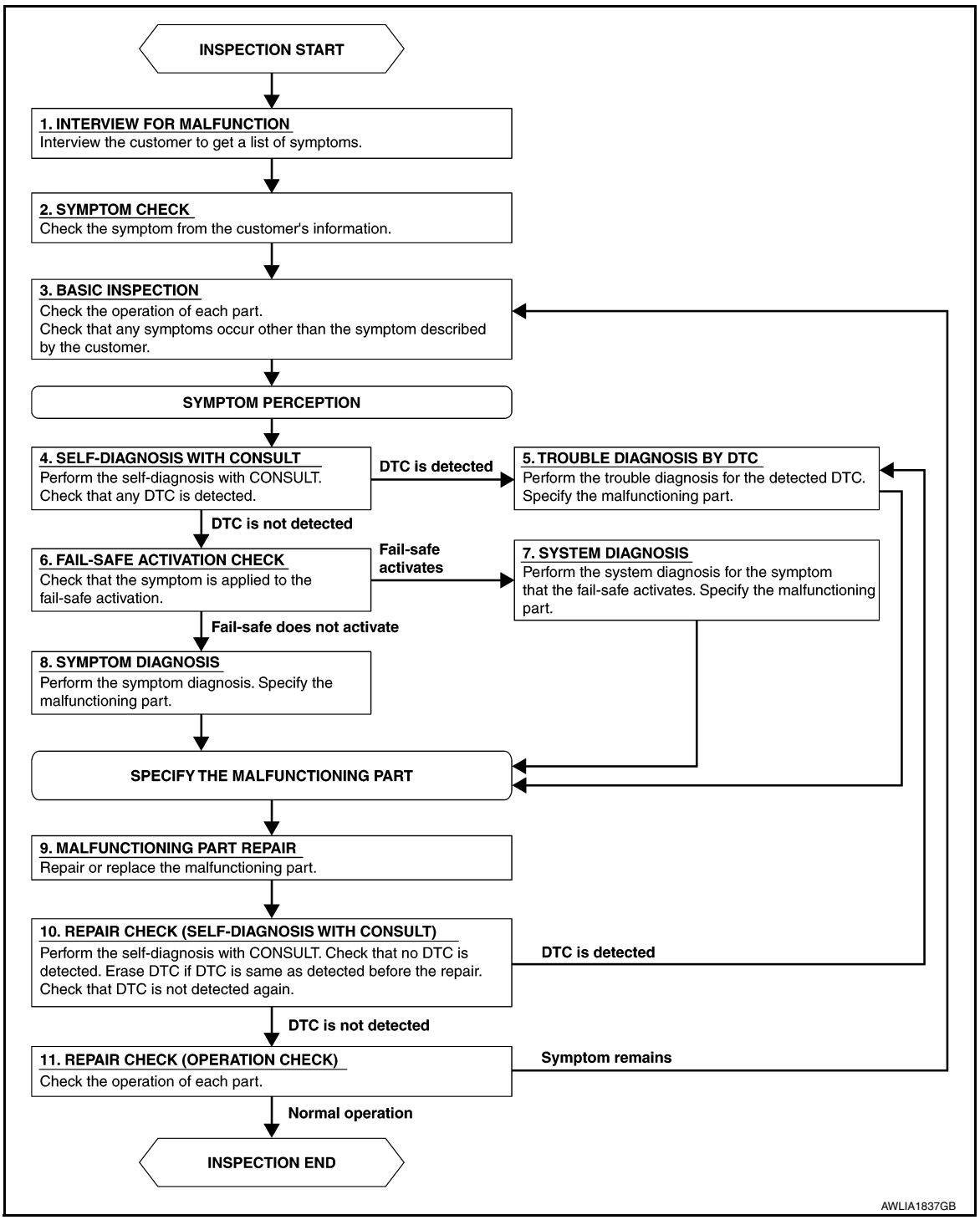
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:0000000012782831

OVERALL SEQUENCE



DETAILED FLOW

1.INTERVIEW FOR MALFUNCTION

Find out what the customer's concerns are.

>> GO TO 2

2.SYMPTOM CHECK

Verify the symptom from the customer's information.

>> GO TO 3

3.BASIC INSPECTION

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

>> GO TO 4

4.SELF-DIAGNOSIS WITH CONSULT

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

Is any DTC detected?

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

5.TROUBLE DIAGNOSIS BY DTC

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

>> GO TO 9

6.FAIL-SAFE ACTIVATION CHECK

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

Does the fail-safe activate?

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

7.SYSTEM DIAGNOSIS

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

>> GO TO 9

8.SYMPTOM DIAGNOSIS

Perform the symptom diagnosis. Specify the malfunctioning part.

>> GO TO 9

9.MALFUNCTION PART REPAIR

Repair or replace the malfunctioning part.

>> GO TO 10

10.REPAIR CHECK (SELF-DIAGNOSIS WITH CONSULT)

Perform the self diagnosis with CONSULT. Verify that no DTCs are detected. Erase all DTCs detected prior to the repair. Verify that DTC is not detected again.

Is any DTC detected?

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

11.REPAIR CHECK (OPERATION CHECK)

Check the operation of each part.

Does it operate normally?

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

DTC/CIRCUIT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT

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

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

INFOID:0000000013450310

Regarding Wiring Diagram information, refer to BCS-53, "Wiring Diagram".

1. CHECK FUSES AND FUSIBLE LINK

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

Terminal No.	Signal name	Fuses and fusible link No.
88	Battery power supply	12 (10A)
90		G (40A)

Is the fuse blown?

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

2. CHECK POWER SUPPLY CIRCUIT

1. Disconnect BCM connector M85.
2. Check voltage between BCM connector M85 and ground.

BCM		Ground	Voltage
Connector	Terminal		
M85	88	—	Battery voltage
	90		

Is the inspection result normal?

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

3. CHECK GROUND CIRCUIT

Check continuity between BCM connector M85 and ground.

BCM		Ground	Continuity
Connector	Terminal		
M85	93	—	Yes

Is the inspection result normal?

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

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

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

INFOID:0000000013450311

Regarding Wiring Diagram information, refer to BCS-117, "Wiring Diagram".

1.CHECK FUSES AND FUSIBLE LINK

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

Terminal No.	Signal name	Fuses and fusible link No.
63	Battery power supply	12 (10A)
70		G (40A)
11	Ignition switch ACC or ON	18 (10A)
38	Ignition switch ON or START	4 (10A)

Is the fuse blown?

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

2.CHECK POWER SUPPLY CIRCUIT

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

BCM		Ground	Ignition switch position		
Connector	Terminal		OFF	ACC	ON
M20	63	—	Battery voltage	Battery voltage	Battery voltage
	70				
M21	11		0 V		
	38			0 V	

Is the inspection result normal?

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

3.CHECK GROUND CIRCUIT

Check continuity between BCM connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M20	65	—	Yes

Is the inspection result normal?

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

IPDM E/R (WITH INTELLIGENT KEY SYSTEM)

IPDM E/R (WITH INTELLIGENT KEY SYSTEM) : Diagnosis Procedure

INFOID:0000000013450312

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

1. CHECK FUSE AND FUSIBLE LINKS

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

Terminal No.	Signal name	Fusible link Nos.
1	Battery	B (100A)
2		A (140A), E (100A)
24		A (140A), D (100A), J (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 connector E42 and E44.
2. Check voltage between IPDM E/R connector E42 and E44 and ground.

IPDM E/R		Ground	Voltage
Connector	Terminal		
E42	1	—	Battery voltage
	2		
E44	24		

Is the inspection result normal?

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

3. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector E47 and E48.
3. Check continuity between IPDM E/R connector E47 and E48 and ground.

IPDM E/R		Ground	Continuity
Connector	Terminal		
E47	52	—	Yes
E48	57		

Is the inspection result normal?

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

IPDM E/R (WITHOUT INTELLIGENT KEY SYSTEM)

IPDM E/R (WITHOUT INTELLIGENT KEY SYSTEM) : Diagnosis Procedure

INFOID:0000000013450340

Regarding Wiring Diagram information, refer to PCS-50, "Wiring Diagram".

1. CHECK FUSE AND FUSIBLE LINKS

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

Terminal No.	Signal name	Fusible link Nos.
1	Battery	B (100A)
2		A (140A), E (100A)
24		A (140A), D (100A), J (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 connector E42 and E44.
2. Check voltage between IPDM E/R connector E42 and E44 and ground.

IPDM E/R		Ground	Voltage
Connector	Terminal		
E42	1	—	Battery voltage
	2		
E44	24		

Is the inspection result normal?

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

3. CHECK GROUND CIRCUIT

1. Turn ignition switch OFF.
2. Disconnect IPDM E/R connector E47 and E48.
3. Check continuity between IPDM E/R connector E47 and E48 and ground.

IPDM E/R		Ground	Continuity
Connector	Terminal		
E47	52	—	Yes
E48	57		

Is the inspection result normal?

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

HEADLAMP (HI) CIRCUIT

Description

INFOID:0000000012782832

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 41 and 42, located in the IPDM E/R. Power then flows to the front combination lamps to the headlamp high beam.

Component Function Check

INFOID:0000000012782833

1.CHECK HEADLAMP (HI) OPERATION

WITHOUT CONSULT

1. Start IPDM E/R auto active test. Refer to EXL-26, "Diagnosis Description" (with Intelligent Key system) or EXL-30, "Diagnosis Description" (without Intelligent Key system).
2. Check that the headlamp switches to the high beam.

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

CONSULT

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

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

Is the inspection result normal?

YES >> Headlamp (HI) circuit is normal.
NO >> Refer to EXL-95, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012782834

Regarding Wiring Diagram information, refer to EXL-35, "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	42	10A
Headlamp HI (RH)	IPDM E/R	41	10A

Is the fuse blown?

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

2.CHECK HEADLAMP (HI) OUTPUT VOLTAGE

CONSULT ACTIVE TEST

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

(+)			(−)	Voltage
Connector		Terminal		
RH	E20	2	Ground	Battery voltage
LH	E21			

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.
3. Check continuity between the IPDM E/R harness connector and the front combination lamp harness connector.

IPDM E/R			Front combination lamp		Continuity
Connector		Terminal	Connector	Terminal	
RH	E43	5	E20	2	Yes
LH		6	E21		

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-31, "Removal and Installation" (with Intelligent Key system) or PCS-60, "Removal and Installation" (without Intelligent Key system).
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 and ground.

Connector		Terminal	—	Continuity
RH	E20	6	Ground	Yes
LH	E21			

Is the inspection result normal?

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

HEADLAMP (LO) CIRCUIT

Description

INFOID:0000000012782835

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 43 and 44, located in the IPDM E/R. Power then flows to the front combination lamps to the headlamp low beam.

Component Function Check

INFOID:0000000012782836

1.CHECK HEADLAMP (LO) OPERATION

WITHOUT CONSULT
1. Start IPDM E/R auto active test. Refer to EXL-26, "Diagnosis Description" (with Intelligent Key system) or EXL-30, "Diagnosis Description" (without Intelligent Key system).
2. Check that the headlamp is turned ON.

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

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

LO : Headlamp ON
OFF : Headlamp OFF

Is the inspection result normal?

YES >> Headlamp (LO) is normal.
NO >> Refer to EXL-97, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012782837

Regarding Wiring Diagram information, refer to EXL-35, "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	44	15A
Headlamp LO (LH)	IPDM E/R	43	15A

Is the fuse blown?

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

2.CHECK HEADLAMP (LO) OUTPUT VOLTAGE

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

(+)		(–)	Voltage
Connector	Terminal		

RH	E20	1	Ground	Battery voltage
LH	E21			

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.
3. Check continuity between the IPDM E/R harness connector and the front combination lamp harness connector.

IPDM E/R			Front combination lamp		Continuity
Connector		Terminal	Connector	Terminal	
RH	E43	8	E20	1	Yes
LH		7	E21		

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-31, "Removal and Installation" (with Intelligent Key system) or PCS-60, "Removal and Installation" (without Intelligent Key system).
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 and ground.

Connector		Terminal	—	Continuity
RH	E20	5	Ground	Yes
LH	E21			

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:0000000012782838

The BCM sends a daytime running light request to the IPDM E/R via the CAN communication lines. The power flows through fuse 29 located in fuse block J/B 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:0000000012782839

Regarding Wiring Diagram information, refer to EXL-41, "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 and ground.

Daytime running light relay		(–)	Voltage
Connector	Terminal		
E30	2	Ground	Battery voltage
	5		

Is the inspection result normal?

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

2.CHECK DAYTIME RUNNING LIGHT RELAY FUSE

Check that the following fuses are not blown.

Unit	Location	Fuse No.	Capacity
Daytime running light	Fuse block J/B	29	10A

Is the fuse blown?

YES >> Replace the blown fuse after repairing the affected circuit.
NO >> Repair or replace the harness or connector.

3.CHECK DAYTIME RUNNING LIGHT RELAY CONTROL CIRCUIT

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

Daytime running light relay		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	
E30	1	E46	42	Yes

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

Connector	Terminal	—	Continuity
E30	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-101, "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. Check continuity between the daytime running light relay harness connector and the front combination lamp harness connector.

Daytime running light relay		Front combination lamp			Continuity
Connector	Terminal		Connector	Terminals	
E30	3	LH	E21	3	Yes
		RH	E20		

2. Check continuity between the daytime running light relay harness connector and the rear combination lamp harness connector.

Daytime running light relay		Rear combination lamp			Continuity
Connector	Terminal		Connector	Terminals	
E30	3	LH	B25	1	Yes
		RH	B42		

3. Check continuity between the daytime running light relay harness connector and the license plate lamp harness connector.

Daytime running light relay		License plate lamp			Continuity
Connector	Terminal		Connector	Terminals	
E30	3	LH	B74	1	Yes
		RH	B75		

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

Daytime running light relay		(–)	Continuity
Connector	Terminal		
E30	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. Disconnect front combination lamp connector in question.
2. Check continuity between the front combination lamp connector and ground.

Connector	Terminal	—	Continuity
LH E21	7	Ground	Yes
RH E20			

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

Connector	Terminal	—	Continuity
LH B25	6	Ground	Yes
RH B42			

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

Connector	Terminal	—	Continuity
LH B74	2	Ground	Yes
RH B75			

Is the inspection result normal?

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

Component Inspection

INFOID:0000000012782840

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:0000000012782841

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:0000000012782842

1.CHECK FRONT FOG LAMP OPERATION

WITHOUT CONSULT
1. Activate IPDM E/R auto active test. Refer to EXL-26, "Diagnosis Description" (with Intelligent Key system) or EXL-30, "Diagnosis Description" (without Intelligent Key system).
2. Check that the front fog lamp is turned ON.

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

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

Is the inspection result normal?

YES >> Front fog lamp circuit is normal.
NO >> Refer to EXL-102, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012782843

Regarding Wiring Diagram information, refer to EXL-56, "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	40	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 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 and ground.

(+)			(−)	Voltage
Connector		Terminal		
LH	E27	1	Ground	Battery voltage
RH	E28			

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.
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	E47	53	E28	1	Yes
LH		54	E27		

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-31, "Removal and Installation" (with Intelligent Key system) or PCS-60, "Removal and Installation" (without Intelligent Key system).
NO >> Repair or replace the harness or connector.

4. CHECK FRONT FOG LAMP GROUND CIRCUIT

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

Connector		Terminal	—	Continuity
RH	E28	2	Ground	Yes
LH	E27			

Is the inspection result normal?

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

PARKING LAMP CIRCUIT

Description

INFOID:0000000012782844

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 fuse 36, located in the IPDM E/R. Power then flows to the front and rear combination lamps, license plate lamps.

Component Function Check

INFOID:0000000012782845

1.CHECK PARKING LAMP OPERATION

WITHOUT CONSULT
1. Activate IPDM E/R auto active test. Refer to EXL-26, "Diagnosis Description" (with Intelligent Key system) or EXL-30, "Diagnosis Description" (without Intelligent Key system).
2. Check that the parking lamp is turned ON.

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

TAIL : Parking lamp ON
OFF : Parking lamp OFF

Is the inspection result normal?

YES >> Parking lamp circuit is normal.
NO >> Refer to EXL-104, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012782846

Regarding Wiring Diagram information, refer to EXL-71, "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	36	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 parking lamp connector and ground.

(+)			(−)	Voltage (Approx.)
Connector		Terminal		
LH	E21	3	Ground	Battery voltage
RH	E20			

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

(+)			(−)	Voltage (Approx.)
Connector		Terminal		
LH	B25	1	Ground	Battery voltage
RH	B42			

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

(+)			(−)	Voltage (Approx.)
Connector		Terminal		
LH	B74	1	Ground	Battery voltage
RH	B75			

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 parking lamp harness connector.

IPDM E/R			Parking lamp		Continuity
Connector		Terminal	Connector	Terminal	
LH	E45	27	E21	3	Yes
RH			E20		

4. 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	E45	28	B25	1	Yes
RH			B42		

5. 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	E45	28	B74	1	Yes
RH			B75		

Are the inspection results normal?

YES >> Replace IPDM E/R. Refer to PCS-31, "Removal and Installation" (with Intelligent Key system) or PCS-60, "Removal and Installation" (without Intelligent Key system).
NO >> Repair or replace the harness or connector.

4. CHECK PARKING LAMP GROUND CIRCUITS

1. Check continuity between the parking lamp harness connector and ground.

(+)		(−)	Continuity
Connector	Terminal		

LH	E21	7	Ground	Yes
RH	E20			

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

(+)			(−)	Continuity
Connector		Terminal		
LH	B25	6	Ground	Yes
RH	B42			

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

(+)			(−)	Continuity
Connector		Terminal		
LH	B74	2	Ground	Yes
RH	B75			

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:0000000012782847

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:0000000012782848

1.CHECK TURN SIGNAL LAMP

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

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

Does the turn signal lamp blink?

YES >> Turn signal lamp circuit is normal.
NO >> Refer to EXL-107, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012782849

Regarding Wiring Diagram information, refer to EXL-62, "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.

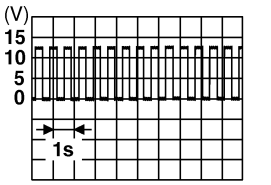
Is the bulb OK?

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

2.CHECK TURN SIGNAL LAMP OUTPUT VOLTAGE

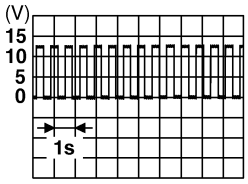
1. Turn the ignition switch OFF.
2. Disconnect the front or rear combination lamp harness connector or the door mirror harness connector (if equipped with turn signal in mirror) in question.
3. Turn the ignition switch ON.
4. Operate the turn signal switch.
5. While the turn signal is operating, check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

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

RH	E20	4	Ground	
LH	E21			

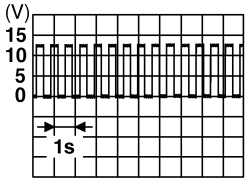
PKIC6370E

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

(+)			(−)	Voltage (Approx.)
Connector		Terminal		
RH	B42	4	Ground	
LH	B25			

PKIC6370E

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

(+)			(−)	Voltage (Approx.)
Connector		Terminal		
RH	D106	10	Ground	
LH	D7			

PKIC6370E

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

With Intelligent Key

BCM			Front combination lamp		Continuity
Connector		Terminal	Connector	Terminal	
LH	M85	85	E21	4	Yes
RH		84	E20		

Without Intelligent Key

BCM			Front combination lamp		Continuity
Connector		Terminal	Connector	Terminal	
LH	B57	41	E21	4	Yes
RH		42	E20		

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

With Intelligent Key

BCM			Rear combination lamp		Continuity
Connector		Terminal	Connector	Terminal	
LH	M85	85	B25	4	Yes
RH		84	B42		

Without Intelligent Key

BCM			Rear combination lamp		Continuity
Connector		Terminal	Connector	Terminal	
LH	B57	41	B25	4	Yes
RH		42	B42		

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

With Intelligent Key

BCM			Door mirror		Continuity
Connector		Terminal	Connector	Terminal	
LH	M85	85	D7	10	Yes
RH		84	D106		

Without Intelligent Key

BCM			Door mirror		Continuity
Connector		Terminal	Connector	Terminal	
LH	B57	41	D7	10	Yes
RH		42	D106		

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 and ground.

BCM		Ground	Continuity
Connector	Terminal		
M85 (with Intelligent Key)	84		No
	85		
B57 (without Intelligent Key)	41		
	42		

Are the inspection results normal?

YES >> Replace BCM. Refer to BCS-78, "Removal and Installation" (with Intelligent Key system) or BCS-135, "Removal and Installation" (without Intelligent Key system).
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	E21	7	Ground	Yes
RH	E20			

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

Rear combination lamp			(–)	Continuity
Connector		Terminal		
LH	B25	6	Ground	Yes
RH	B42			

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

Door mirror			(–)	Continuity
Connector		Terminal		
LH	D7	8	Ground	Yes
RH	D106			

Are the inspection results normal?

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

OPTICAL SENSOR

Description

INFOID:0000000012782850

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

Component Function Check

INFOID:0000000012782851

1.CHECK OPTICAL SENSOR SIGNAL BY CONSULT

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

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

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

Is the inspection result normal?

YES >> Optical sensor is normal.
NO >> Refer to EXL-111, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012782852

Regarding Wiring Diagram information, refer to EXL-49, "Wiring Diagram".

1.CHECK OPTICAL SENSOR POWER SUPPLY INPUT

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

(+)		(–)	Voltage (Approx.)
Connector	Terminal		
M72	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 and ground.

(+)		(–)	Continuity
Connector	Terminal		
M72	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.
3. Check continuity between optical sensor harness connector and BCM harness connector.

Optical sensor		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M72	1	M84 (with Intelligent Key) M21 (without Intelligent Key)	17	Yes

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

(+)		(–)	Continuity
Connector	Terminal		
M72	1	Ground	No

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-78, "Removal and Installation" (with Intelligent Key system) or BCS-135, "Removal and Installation" (without Intelligent Key system).
NO >> Repair or replace the harness or connectors.

4. CHECK OPTICAL SENSOR SIGNAL OPEN CIRCUIT

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

Optical sensor		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M72	2	M84 (with Intelligent Key) M21 (without Intelligent Key)	14	Yes

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

Connector	Terminal	(–)	Continuity
M72	2	Ground	No

Is the inspection result normal?

YES >> Replace the optical sensor. Refer to EXL-139, "Removal and Installation".
NO >> Repair or replace harness or connectors.

5. CHECK OPTICAL SENSOR GROUND FOR OPEN CIRCUIT

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

Optical sensor		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M72	3	M84 (with Intelligent Key) M21 (without Intelligent Key)	18	Yes

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-78, "Removal and Installation" (with Intelligent Key system) or BCS-135, "Removal and Installation" (without Intelligent Key system).
NO >> Repair or replace harness or connector.

HAZARD SWITCH

Component Function Check

INFOID:0000000012782853

1.CHECK HAZARD SWITCH SIGNAL BY CONSULT

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

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

Is the inspection result normal?

YES >> Hazard switch circuit is normal.
NO >> Refer to EXL-113, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012782854

Regarding Wiring Diagram information, refer to EXL-62, "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		
M102	2	Ground	Battery voltage

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.
3. Check continuity between hazard harness connector and BCM harness connector.

Hazard switch		BCM		Continuity
Connector	Terminal	Connector	Terminal	
M102	2	M84 (with Intelligent Key) M21 (without Intelligent Key)	29	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		
M102	2		No

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-78, "Removal and Installation" (with Intelligent Key system) or BCS-135, "Removal and Installation" (without Intelligent Key system).
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		
M102	3		Yes

Is the inspection result normal?

YES >> Replace hazard switch. Refer to EXL-138, "Removal and Installation".
NO >> Repair or replace harness or connector.

SYMPTOM DIAGNOSIS

EXTERIOR LIGHTING SYSTEM SYMPTOMS

Symptom Table

INFOID:0000000012782855

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

Symptom		Possible cause	Inspection item
Headlamp does not switch to the high beam.	One side	• Bulb • Fuse • Harness between IPDM E/R and the front combination lamp • IPDM E/R	Headlamp (HI) circuit Refer to EXL-95.
	Both sides	—	**Symptom diagnosis** "BOTH SIDE HEADLAMPS DO NOT SWITCH TO HIGH BEAM" Refer to EXL-118.
High beam indicator lamp is not turned ON. (Headlamp switches to the high beam.)		• Combination meter • BCM	• Combination meter. Data monitor "HI-BEAM IND" • BCM (HEAD LAMP) Active test "HEADLAMP"
Headlamp does not switch to the low beam.	One side	• Bulb • Fuse • Harness between IPDM E/R and the front combination lamp • IPDM E/R	Headlamp (LO) circuit Refer to EXL-97.
	Both sides	• Combination switch (lighting and turn signal switch) • Harness between the combination switch (lighting and turn signal switch) and BCM • BCM	Combination switch (lighting and turn signal switch) Refer to EXL-13 (with Intelligent Key system) or EXL-17 (without Intelligent Key system).
		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 Refer to EXL-97
	Both sides	—	**Symptom diagnosis** "BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON" Refer to EXL-120.
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 EXL-13 (with Intelligent Key system) or EXL-17 (without Intelligent Key system).
	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 EXL-13 (with Intelligent Key system) or EXL-17 (without Intelligent Key system).
		• Optical sensor • Harness between the optical sensor and BCM • BCM	Optical sensor Refer to EXL-111.
Daytime running light system does not activate.		—	**Symptom diagnosis** "DAYTIME LIGHT SYSTEM INOPERATIVE" Refer to EXL-119.
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-102.
	Both side	—	**Symptom diagnosis** "BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON" Refer to EXL-122.
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-104.
	Both sides	—	**Symptom diagnosis** "PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON" Refer to EXL-121.
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-107.
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-51 (type A) or MWI-126 (type B).
• 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-113.

NORMAL OPERATING CONDITION

Description

INFOID:0000000012782856

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:0000000012782857

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

Diagnosis Procedure

INFOID:0000000012782858

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

Check the combination switch (lighting and turn signal switch). Refer to BCS-76, "Symptom Table" (with Intelligent Key system) or BCS-133, "Symptom Table" (without Intelligent Key system).

Is the inspection results normal?

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

2.CHECK HEADLAMP (HI) REQUEST SIGNAL INPUT

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

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

Is the inspection results normal?

YES >> GO TO 3
NO >> Replace BCM. Refer to BCS-78, "Removal and Installation" (with Intelligent Key system) or BCS-135, "Removal and Installation" (without Intelligent Key system).

3.HEADLAMP (HI) CIRCUIT INSPECTION

Check the headlamp (HI) circuit. Refer to EXL-95, "Diagnosis Procedure".

Is the inspection results normal?

YES >> Replace IPDM E/R. Refer to PCS-31, "Removal and Installation" (with Intelligent Key system) or PCS-60, "Removal and Installation" (without Intelligent Key system).
NO >> Repair or replace the malfunctioning part.

DAYTIME LIGHT SYSTEM INOPERATIVE

Description

INFOID:0000000012782859

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:0000000012782860

1.CHECK DAYTIME RUNNING LIGHT OPERATION

1. Perform BCM(HEADLAMP) DAYTIME RUNNING LIGHT active test. Refer to BCS-19, "HEADLAMP : CONSULT Function (BCM - HEAD LAMP)" (with Intelligent Key system) or BCS-96, "HEADLAMP : CONSULT Function (BCM - HEAD LAMP)" (without Intelligent Key system).
2. Check that the daytime running lights turn on.

Is the inspection results normal?

YES >> Replace BCM. Refer to BCS-78, "Removal and Installation" (with Intelligent Key system) or BCS-135, "Removal and Installation" (without Intelligent Key system).
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	29	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-99, "Diagnosis Procedure".

Is the inspection results normal?

YES >> Replace IPDM E/R. Refer to PCS-31, "Removal and Installation" (with Intelligent Key system) or PCS-60, "Removal and Installation" (without Intelligent Key system).
NO >> Repair or replace the malfunctioning part.

BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

Description

INFOID:0000000012782861

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

Diagnosis Procedure

INFOID:0000000012782862

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

Check the combination switch (lighting and turn signal switch). Refer to BCS-76, "Symptom Table" (with Intelligent Key system) or BCS-133, "Symptom Table" (without Intelligent Key system).

Is the inspection result normal?

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

2.CHECK HEADLAMP (LO) REQUEST SIGNAL INPUT

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

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

Is the inspection result normal?

YES >> GO TO 3
NO >> Replace BCM. Refer to BCS-78, "Removal and Installation" (with Intelligent Key system) or BCS-135, "Removal and Installation" (without Intelligent Key system).

3.HEADLAMP (LO) CIRCUIT INSPECTION

Check the headlamp (LO) circuit. Refer to EXL-97, "Diagnosis Procedure".

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-31, "Removal and Installation" (with Intelligent Key system) or PCS-60, "Removal and Installation" (without Intelligent Key system).
NO >> Repair or replace the malfunctioning part.

PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON

Description

INFOID:0000000012782863

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

Diagnosis Procedure

INFOID:0000000012782864

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

Check the combination switch (lighting and turn signal switch). Refer to BCS-76, "Symptom Table" (with Intelligent Key system) or BCS-133, "Symptom Table" (without Intelligent Key system).

Is the inspection results normal?

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

2.CHECK TAIL LAMP RELAY REQUEST SIGNAL INPUT

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

Monitor item	Condition		Monitor status
TAIL & CLR REQ	Lighting switch	1st	ON
		OFF	OFF

Is the inspection results normal?

YES >> GO TO 3
NO >> Replace BCM. Refer to BCS-78, "Removal and Installation" (with Intelligent Key system) or BCS-135, "Removal and Installation" (without Intelligent Key system).

3.PARK LAMP CIRCUIT INSPECTION

Check the parking lamp circuit. Refer to EXL-104, "Diagnosis Procedure".

Is the inspection results normal?

YES >> Replace IPDM E/R. Refer to PCS-31, "Removal and Installation" (with Intelligent Key system) or PCS-60, "Removal and Installation" (without Intelligent Key system).
NO >> Repair or replace the malfunctioning part.

BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

Description

INFOID:0000000012782865

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

Diagnosis Procedure

INFOID:0000000012782866

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

Check the combination switch (lighting and turn signal switch). Refer to BCS-76, "Symptom Table" (with Intelligent Key system) or BCS-133, "Symptom Table" (without Intelligent Key system).

Is the inspection result normal?

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

2.CHECK FRONT FOG LAMP REQUEST SIGNAL INPUT

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

Monitor item	Condition		Monitor status
FR FOG REQ	Front fog lamp switch (Lighting switch 3rd)	ON	ON
		OFF	OFF

Is the inspection result normal?

YES >> GO TO 3.
NO >> Replace BCM. Refer to BCS-78, "Removal and Installation" (with Intelligent Key system) or BCS-135, "Removal and Installation" (without Intelligent Key system).

3.FRONT FOG LAMP CIRCUIT INSPECTION

Check the front fog lamp circuit. Refer to EXL-102, "Diagnosis Procedure".

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-31, "Removal and Installation" (with Intelligent Key system) or PCS-60, "Removal and Installation" (without Intelligent Key system).
NO >> Repair or replace the malfunctioning part.

PERIODIC MAINTENANCE

HEADLAMP

Aiming Adjustment

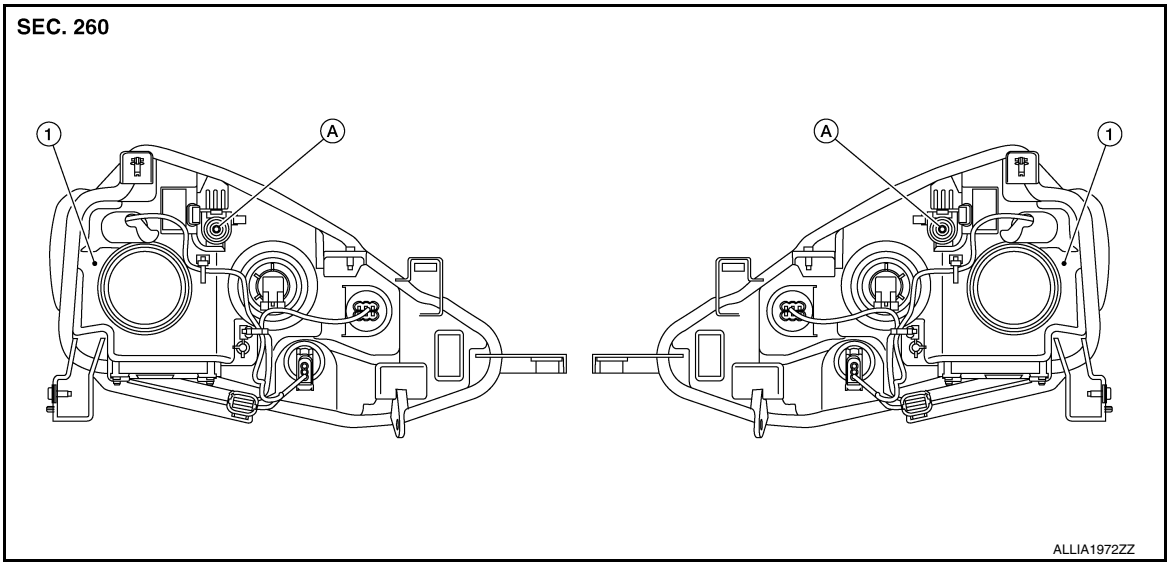
INFOID:0000000012782867

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.

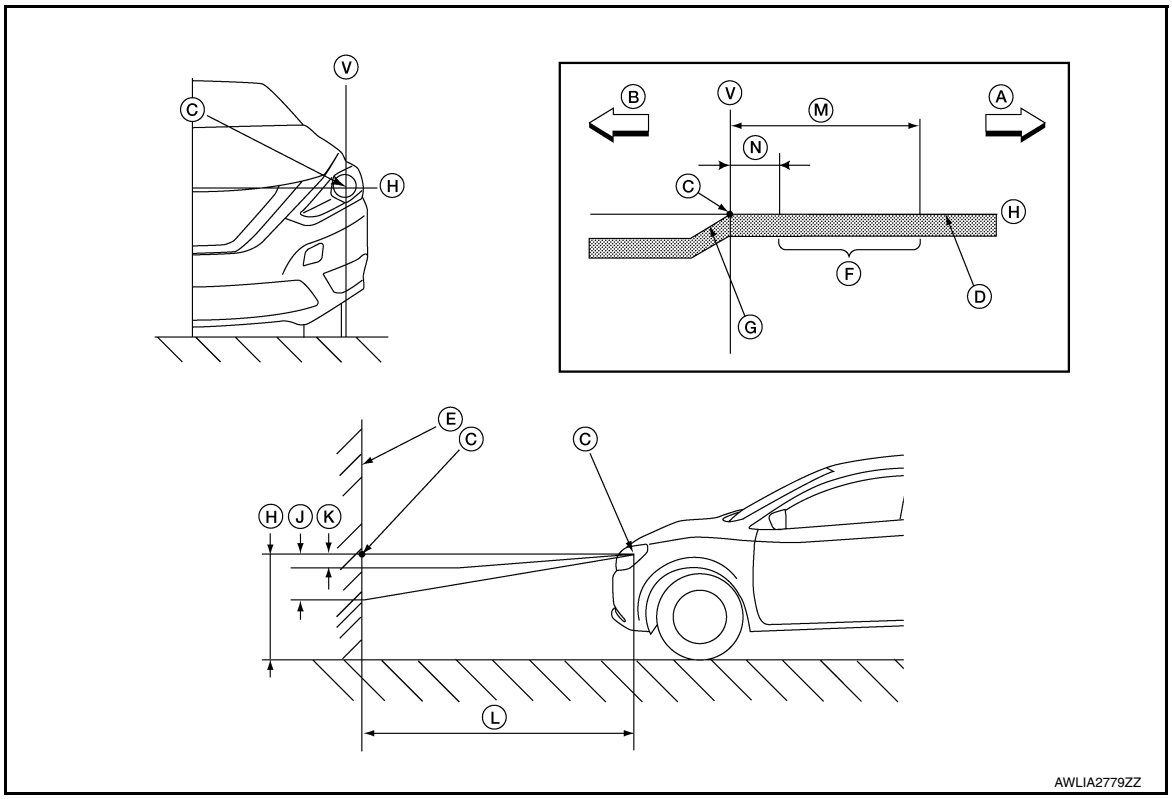


1. Front combination lamp
A. Adjusting screw

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. 26.6 mm (1.05 in)
K. -13.3 mm (-0.52 in)	L. 7.62 m (25 ft)	M. 399 mm (15.71 in)
N. 133 mm (5.24 in)	V. Vertical center line of headlamp	

- Basic illuminating area for adjustment should be within the range shown on the aiming chart. Adjust headlamps accordingly.

FRONT FOG LAMP

Aiming Adjustment

INFOID:0000000012782868

PREPARATION BEFORE ADJUSTING

The fog lamp is a semi-sealed beam type which uses a replaceable halogen bulb. Before performing aiming adjustment procedure, check the following:

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

CAUTION:

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

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

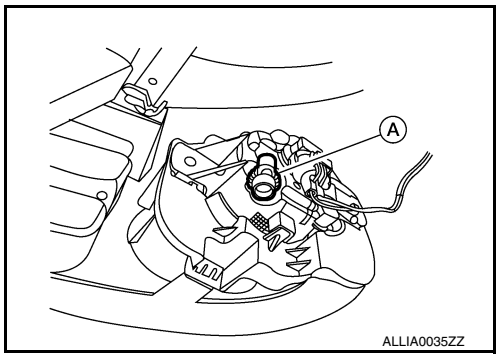
NOTE:

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

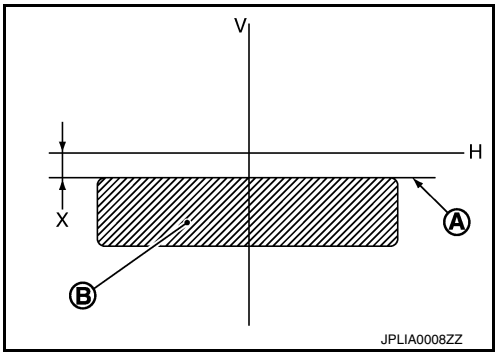
- The vehicle front body has been repaired.
- The front combination lamp has been removed or replaced.
- Any outfitting has been installed.
- The vehicle’s standard load condition has been substantially increased.

Aiming Adjustment Procedure

1. Place the screen.
   NOTE:
   - Stop the vehicle facing the wall.
   - Place the board on a plain road vertically.
2. Face the vehicle with the screen. Maintain 7.62 m (25.0 ft) between the front fog lamp center and the screen.
3. Start the engine. Turn the front fog lamp ON.
   NOTE:
   Shut off the headlamp light with the board to prevent from illuminating the adjustment screen.
   CAUTION:
   Do not cover the lens surface with tape etc. The lens is made of resin.
4. Adjust aiming in the vertical direction by turning the adjusting screw (A).



5. Adjust the cutoff line height (A) with the aiming adjustment screw so that the distance (X) between the horizontal center line of front fog lamp (H) and (A) becomes 100 mm (4 in).



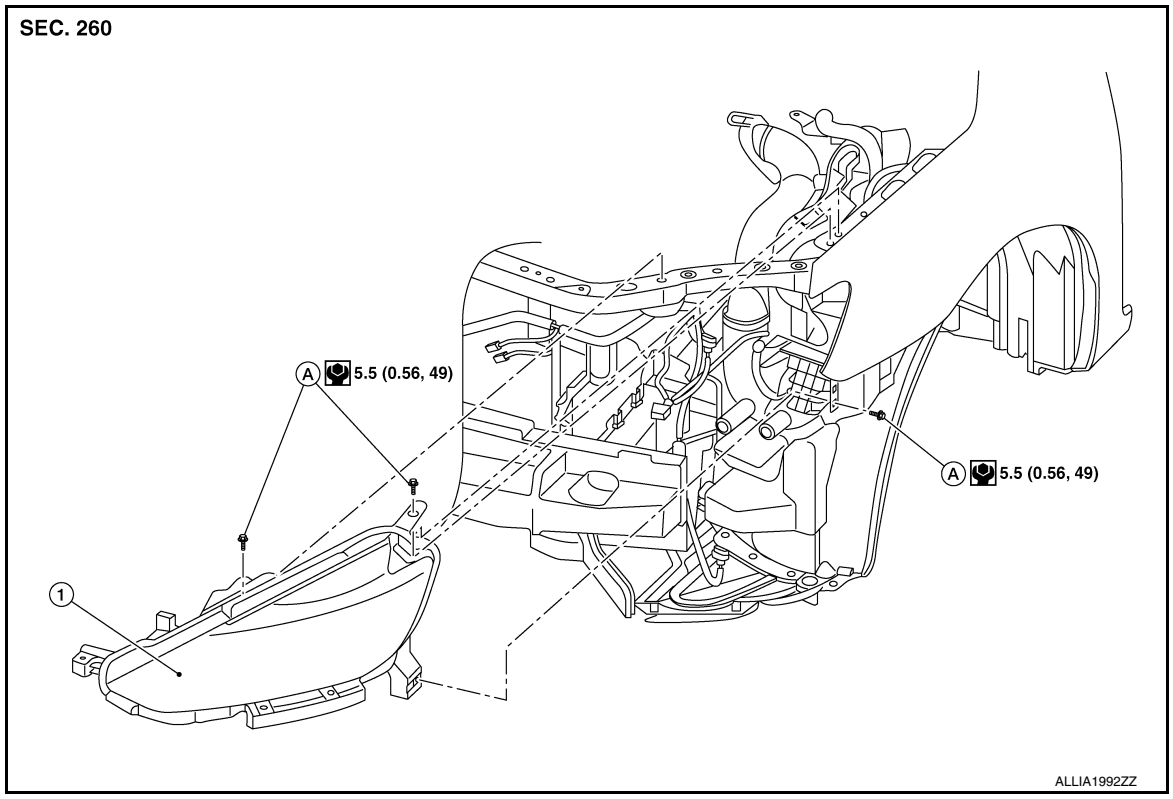
A : Cutoff line
B : High illuminance area
H : Horizontal center line of front fog lamp
V : Vertical center line of front fog lamp
X : Cutoff line height

REMOVAL AND INSTALLATION

FRONT COMBINATION LAMP

Exploded View

INFOID:0000000012782869



1. Front combination lamp
A. Bolt

Removal and Installation

INFOID:0000000012782870

REMOVAL

1. Remove the front bumper fascia. Refer to EXT-17, "Removal and Installation".
2. Remove the front combination lamp bolts.
3. Pull the front combination lamp forward.
4. Disconnect the harness connectors from the front combination lamp.

INSTALLATION

Installation is in the reverse order of removal.
After installation, perform headlamp aiming adjustment. Refer to EXL-123, "Aiming Adjustment".

Bulb Replacement

INFOID:0000000012782871

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. Remove the core support cover. Refer to EXT-23, "Exploded View".
2. Rotate the plastic cover counterclockwise and remove.
3. Rotate the headlamp high beam lamp counterclockwise and remove.
4. Disconnect the harness connector from the headlamp high beam lamp.

Installation
Installation is in the reverse order of removal.
CAUTION:
After installing, be sure to install the cover securely to ensure watertightness.

HEADLAMP LOW BEAM

Removal

1. Remove the core support cover. Refer to EXT-23, "Exploded View".
2. Rotate the plastic cover counterclockwise and remove.
3. Rotate the headlamp low beam sockets counterclockwise and remove.
4. Disconnect the harness connector from the headlamp low beam lamp.

Installation
Installation is in the reverse order of removal.
CAUTION:
After installing, be sure to install the cover securely to ensure watertightness.

SIDE MARKER LAMP

Removal

1. Remove the core support cover. Refer to EXT-23, "Exploded View".
2. Rotate the side marker lamp bulb socket counterclockwise and remove.
3. Remove the side marker bulb from the side marker 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.

TURN SIGNAL LAMP

Removal

1. Remove the core support cover. Refer to EXT-23, "Exploded View".
2. Rotate the turn signal lamp bulb socket counterclockwise and remove.
3. Remove the turn signal bulb from the turn signal 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.

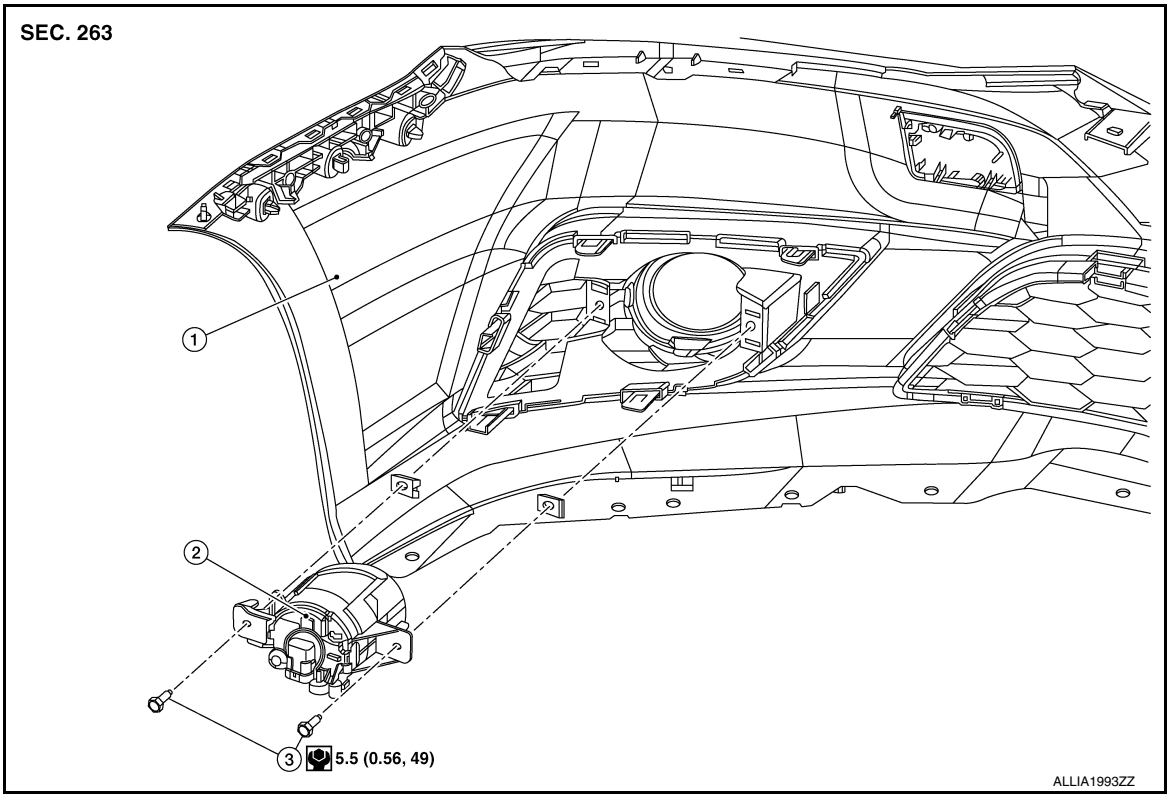
Park Lamp

The park lamp LED bulb is integrated into the front combination lamp and is serviced as an assembly. Refer to EXL-127, "Removal and Installation".

FRONT FOG LAMP

Exploded View

INFOID:0000000013473221



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

Removal and Installation

INFOID:0000000012782872

FOG LAMP

Removal

1. Position the fender protector aside. Refer to EXT-28, "FENDER PROTECTOR : Removal and Installation - Front Fender Protector".
2. Disconnect the harness connector from the front fog lamp.
3. Remove the screws and the front fog lamp.

Installation

Installation is in the reverse order of removal.

NOTE:

After installing, perform fog lamp aiming adjustment. Refer to EXL-125, "Aiming Adjustment".

FRONT FOG LAMP BULB

Removal

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.**

1. Position the front fender protector aside. Refer to EXT-28, "FENDER PROTECTOR : Removal and Installation - Front Fender Protector".

2. Disconnect the harness connector from the front fog lamp bulb.
3. 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.

DOOR MIRROR TURN SIGNAL LAMP

Removal and Installation

INFOID:0000000012782873

The door mirror side turn signal lamp is integrated into the door mirror assembly and is serviced as an assembly. Refer to MIR-19, "Exploded View".

HIGH-MOUNTED STOP LAMP

Removal and Installation

INFOID:0000000012782874

HIGH-MOUNTED STOP LAMP - WITH REAR SPOILER

Removal

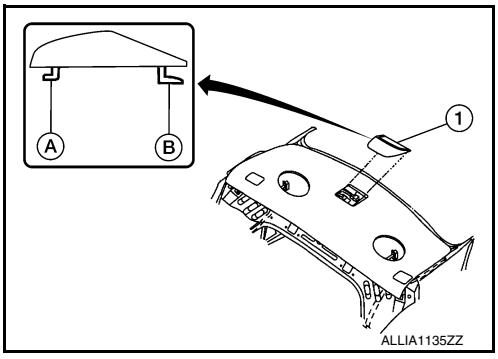
1. Remove the rear air spoiler. Refer to EXT-46, "Removal and Installation".
2. Remove the screws and the high-mount stop lamp from the rear air spoiler.

Installation
Installation is in the reverse order of removal.

HIGH-MOUNTED STOP LAMP - WITHOUT REAR SPOILER

Removal

1. Slide high-mounted stop lamp (1) rearward on parcel shelf to provide clearance for front tabs (A).
2. Lift front of lamp assembly up and pull forward to provide clearance for rear tabs (B).



3. Disconnect the harness connector from the high-mounted stop lamp and remove.

Installation
Installation is in the reverse order of removal.

Bulb Replacement

INFOID:0000000012782875

HIGH-MOUNTED STOP LAMP - WITH REAR SPOILER

The high-mounted stop lamp LED bulb is integrated into the high-mounted stop lamp and is serviced as an assembly. Refer to EXL-132, "Removal and Installation".

HIGH-MOUNTED STOP LAMP - WITHOUT REAR SPOILER

The high-mounted stop lamp LED bulb is integrated into the high-mounted stop lamp and is serviced as an assembly. Refer to EXL-132, "Removal and Installation".

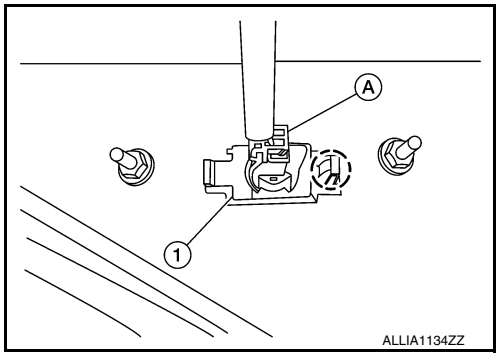
LICENSE PLATE LAMP

Removal and Installation

INFOID:0000000012782876

REMOVAL

1. Remove the license lamp finisher. Refer to EXT-44, "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:0000000012782877

WARNING:

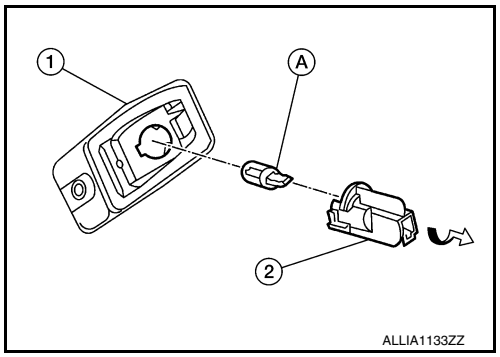
Do not touch bulb while it is lit or right after being turned off. Burning may result.

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 aside. Refer to INT-45, "Removal and Installation".
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

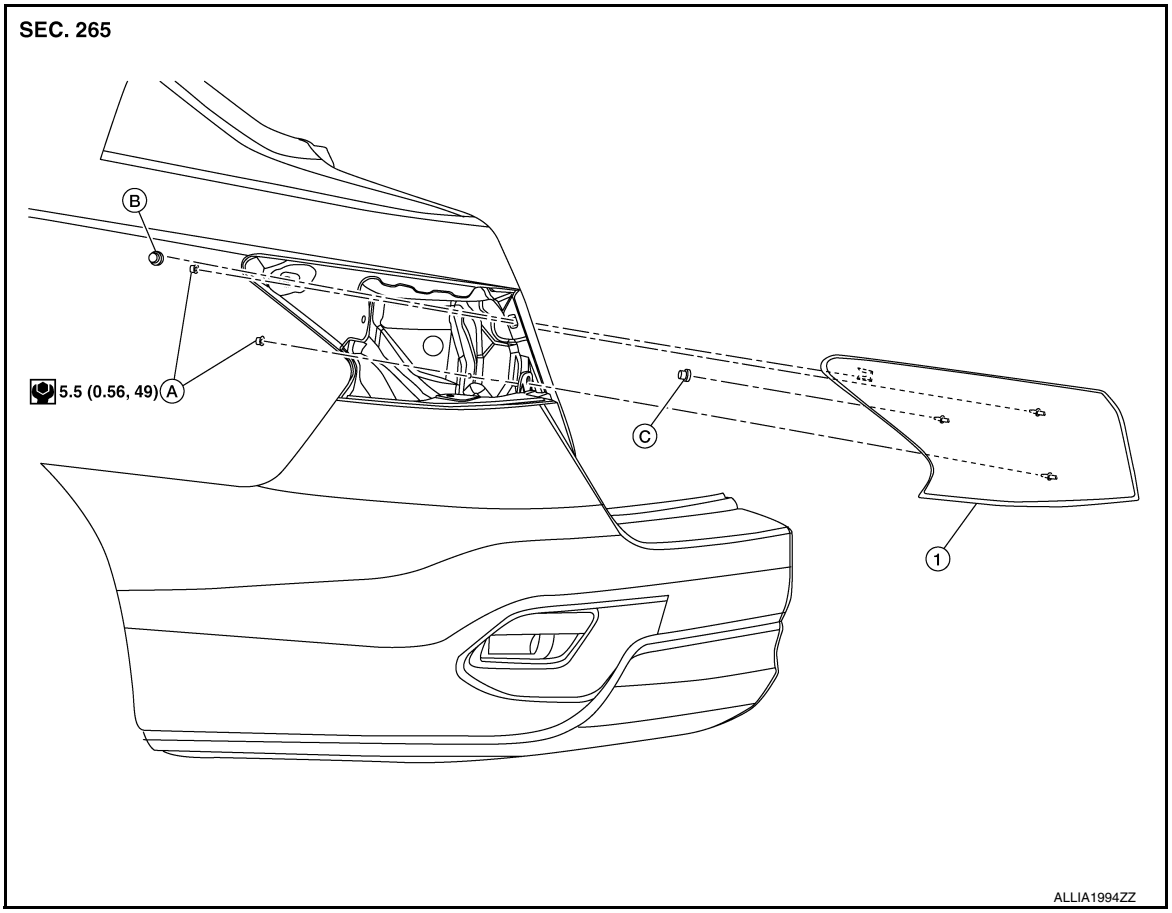
Installation is in the reverse order of removal.

REAR COMBINATION LAMP

Exploded View

INFOID:0000000012782878

REAR COMBINATION LAMP



1. Rear combination lamp
A. Bolt
B. Clip
C. Grommet

Removal and Installation

INFOID:0000000012782879

Removal

1. Partially remove trunk side finisher. Refer to INT-43, "TRUNK SIDE FINISHER : Removal and Installation".
2. Remove the rear combination lamp nuts.
3. Disconnect the harness connector from the rear combination lamp.
4. Pull the rear combination lamp rearward and remove.

Installation

Installation is the reverse order of removal.

Bulb Replacement

INFOID:0000000012782880

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-134, "Removal and Installation".
2. Rotate the rear turn signal lamp bulb socket counterclockwise and remove.
3. Remove the rear turn signal lamp bulb from 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

Removal

1. Remove the rear combination lamp. Refer to EXL-134, "Removal and Installation".
2. Rotate the stop/tail lamp bulb socket counterclockwise and remove.
3. Remove the stop/tail lamp bulb from bulb socket.

BACK-UP LAMP BULB

Removal

1. Remove the rear combination lamp. Refer to EXL-134, "Removal and Installation".
2. Rotate the back-up lamp bulb socket counterclockwise and remove.
3. Remove the back-up lamp bulb from bulb socket.

Installation

Installation is in the reverse order of removal.

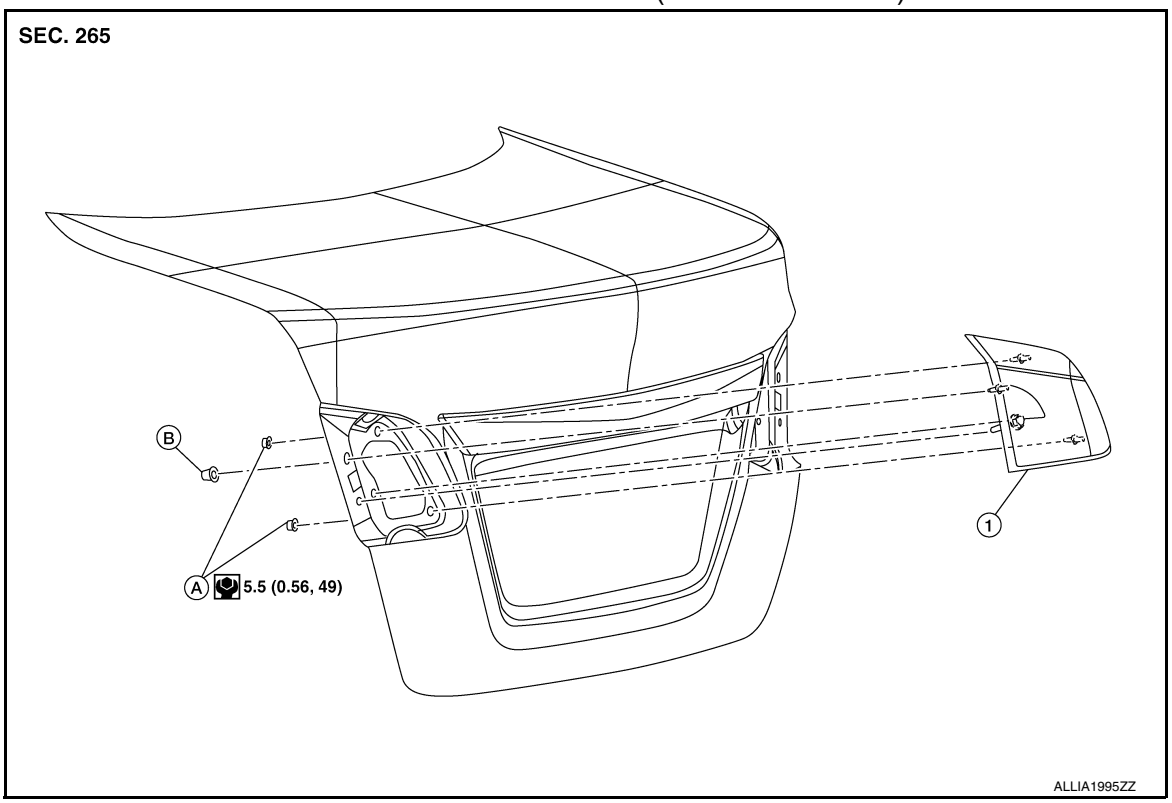
CAUTION:

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

Exploded View

INFOID:0000000013473383

REAR COMBINATION LAMP (TRUCK LID SIDE)



1. Rear combination lamp (truck lid side) A. Nut B. Grommet

NOTE:
LH shown, RH similar.

Removal and Installation

INFOID:0000000013473384

REMOVAL

1. Partially remove trunk lid trim. Refer to INT-45, "Removal and Installation".
2. Remove rear combination lamp (truck lid side) nuts then remove rear combination lamp (truck lid side).

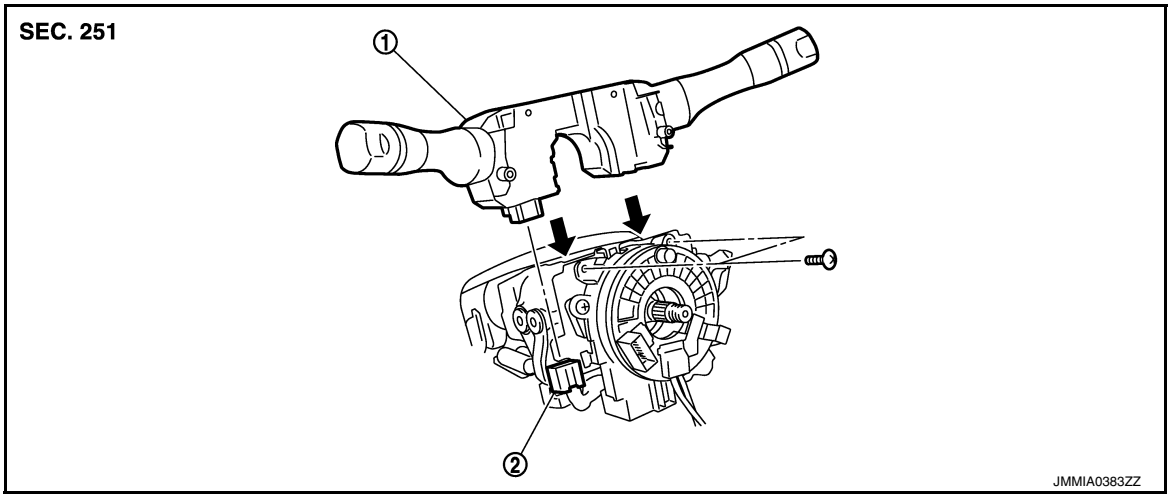
INSTALLATION

Installation is in the reverse order of removal.

COMBINATION SWITCH

Exploded View

INFOID:0000000012782881



1. Combination switch
2. Combination switch harness connector

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

Removal and Installation

INFOID:0000000012782882

REMOVAL

CAUTION:

- **Before servicing, turn the ignition switch OFF, disconnect both battery terminals and wait at least three minutes.**
- **Do not use air or electric tools when removing or installing the combination switch.**

1. Disconnect both the negative and positive battery terminals, then wait at least three minutes. Refer to PG-74, "Removal and Installation (Battery)".
2. Remove the steering column covers. Refer to IP-16, "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-41, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Special Repair Requirement".**

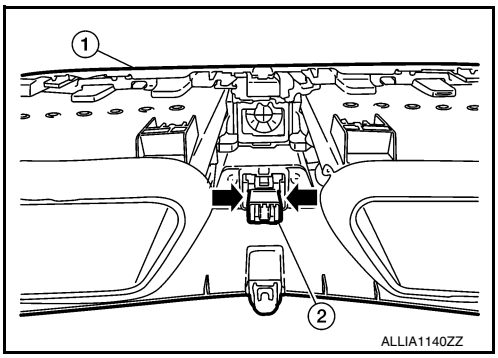
HAZARD SWITCH

Removal and Installation

INFOID:0000000012782883

REMOVAL

1. Remove cluster lid C (1). Refer to IP-20, "Removal and Installation - 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:0000000012782884

REMOVAL

1. Remove the defroster grille (LH) using a suitable tool.
2. Disconnect the harness connector from the optical sensor.
3. Release the pawls and remove the optical sensor.

INSTALLATION

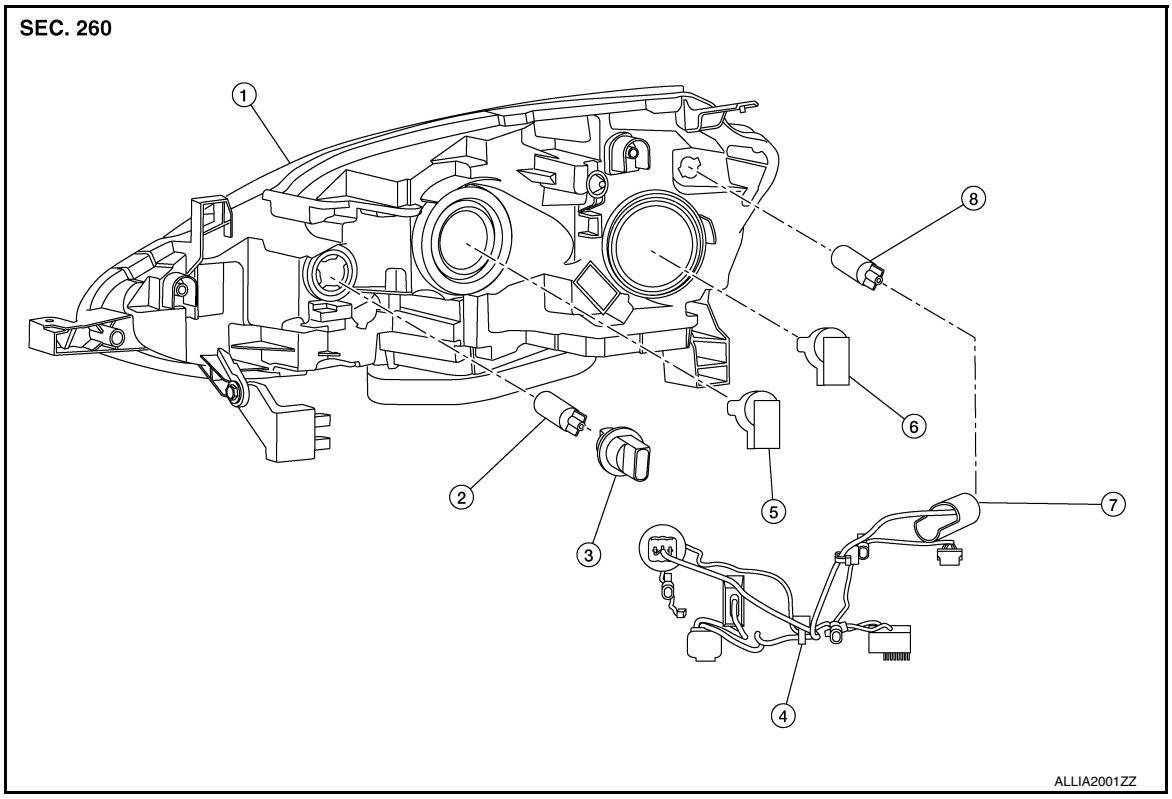
Installation is in the reverse order of removal.

UNIT DISASSEMBLY AND ASSEMBLY

FRONT COMBINATION LAMP

Exploded View

INFOID:0000000012782885



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

Disassembly and Assembly

INFOID:0000000012782886

DISSASSEMBLY

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.**

1. Remove front combination lamp. Refer to EXL-127, "Removal and Installation".
2. Rotate the covers counterclockwise and remove.
3. Rotate the halogen lamp bulb (low beam) counterclockwise and remove.
4. Disconnect the harness connector from the halogen lamp bulb (low beam) and remove.
5. Rotate the halogen lamp bulb (high beam) counterclockwise and remove.
6. Disconnect the harness connector from the halogen lamp bulb (high beam) and remove.
7. Rotate the side marker bulb socket counterclockwise and remove.
8. Remove the side marker bulb from the side marker bulb socket.
9. Rotate the turn signal bulb socket counterclockwise and remove.
10. Remove the turn signal bulb from the turn signal bulb socket.

ASSEMBLY

Assembly is in the reverse order of disassembly.

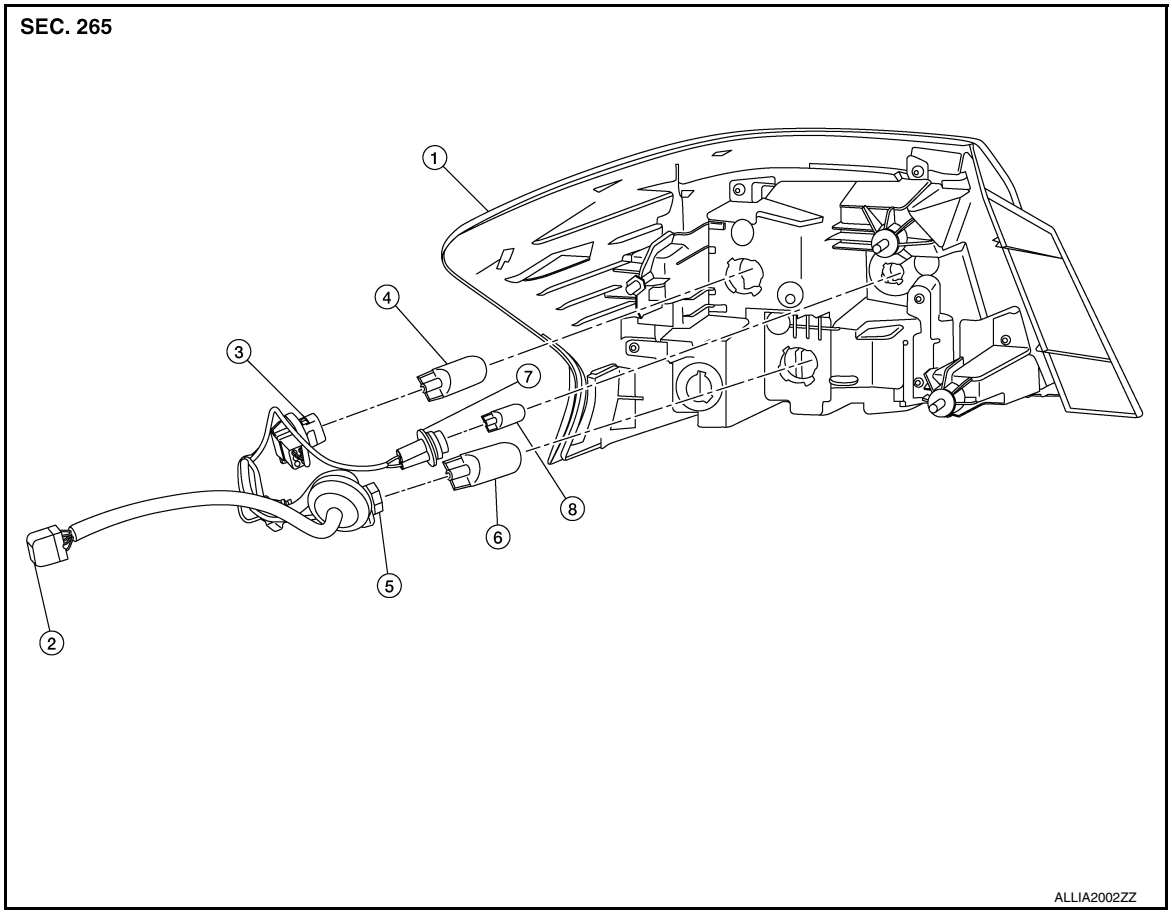
CAUTION:

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

REAR COMBINATION LAMP

Exploded View

INFOID:0000000012782887



1. Rear combination lamp
2. Rear combination lamp harness connector
3. Rear turn signal lamp
4. Rear turn signal lamp bulb
5. Stop/tail lamp bulb
6. Stop/tail lamp bulb socket
7. Back-up lamp bulb socket
8. Back-up lamp bulb

Disassembly and Assembly

INFOID:0000000012782888

DISASSEMBLY

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.**

1. Remove rear combination lamp. Refer to EXL-134, "Removal and Installation".
2. Rotate rear turn signal lamp bulb socket counterclockwise to remove from rear combination lamp.
3. Remove the rear turn signal lamp bulb from bulb socket.
4. Rotate back-up lamp bulb socket counterclockwise to remove from rear combination lamp.
5. Remove the back-up lamp bulb from bulb socket.
6. Rotate stop/tail lamp bulb socket counterclockwise to remove from rear combination lamp.
7. Remove the stop/tail lamp bulb from bulb socket.

ASSEMBLY

Assembly is in the reverse order of disassembly.

CAUTION:

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

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Bulb Specifications

INFOID:0000000012782889

Item		Wattage (W)*
Front combination lamp	Low beam	55
	High beam	65
	Side marker lamp	5
	Turn signal lamp	27/7
Door mirror side turn signal lamp (if equipped)		LED
Rear combination lamp	Stop/Tail lamp	21/5
	Turn signal lamp (amber)	21
	Back-up lamp	16
Fog lamp (if equipped)		55
License plate lamp		5
High-mounted stop lamp	Without rear spoiler	LED
	With rear spoiler	LED

*: 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:0000000013475444

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 Air Bag Diagnosis Sensor Unit or other Air Bag 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:0000000013402461

- 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.

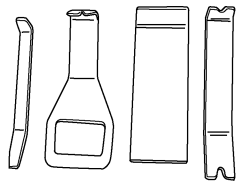
PREPARATION

PREPARATION

Special Service Tool

INFOID:0000000013402462

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

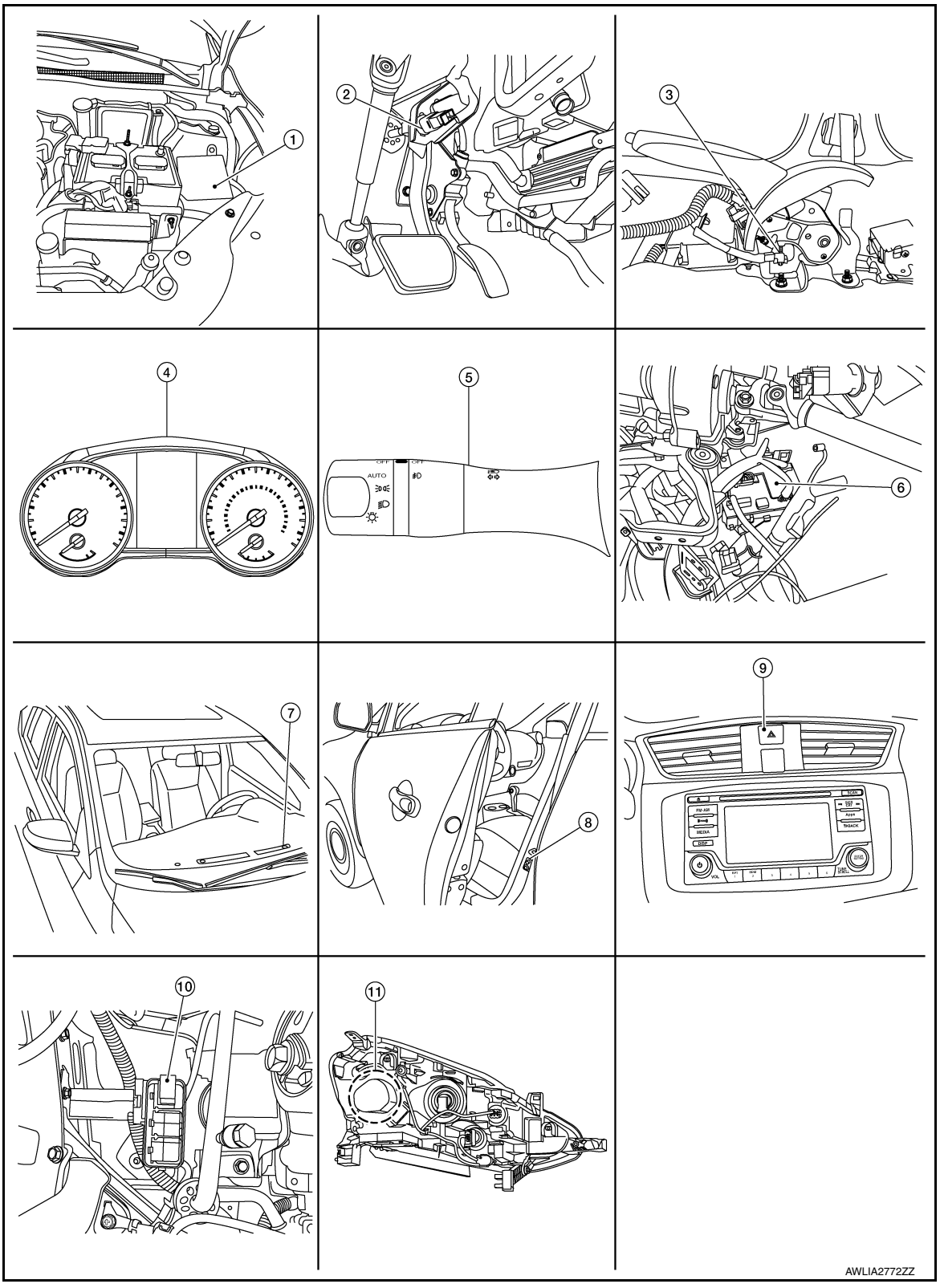
Tool number (TechMate No.) Tool name	Description
— (J-46534) Trim Tool Set  AWJIA0483ZZ	Removing trim components

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:0000000013402463

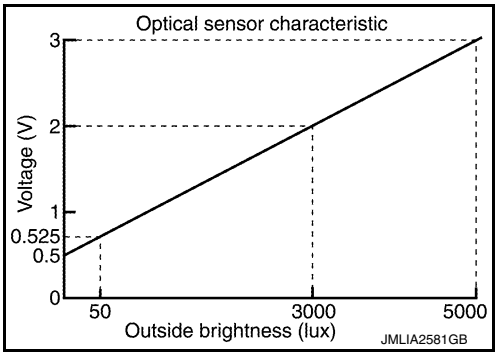


No.	Part	Function
1.	IPDM E/R (Headlamp high relay, Headlamp low relay, Tail lamp relay and Front fog lamp relay)	• Supplies voltage to the load according to the request from BCM (via CAN communication). • Refer to PCS-5, "Component Parts Location" for detailed installation location.
2.	Stop lamp switch	Transmits power when the brake pedal is pressed to operate stop lamps.
3.	Parking brake switch	Transmits the parking brake switch signal to the combination meter to operate the daytime running light system.
4.	Combination meter	Refer to MWI-80, "METER SYSTEM : Component Parts Location".
5.	Combination switch (lighting and turn signal switch)	Refer to BCS-6, "COMBINATION SWITCH READING SYSTEM : Component Parts Location" for detailed installation location.
6.	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-6, "BODY CONTROL SYSTEM : Component Parts Location" for detailed installation location.
7.	Optical sensor	Refer to EXL-148, "Optical Sensor".
8.	Front door switch LH (Other doors similar)	Transmits the door open signal to the BCM to operate the autolight system.
9.	Hazard switch	Refer to EXL-149, "Hazard Switch" for detailed installation location.
10.	Daytime running light relay (if equipped)	• Supplies voltage to the daytime running lamps according to request from IPDM E/R. • Refer to EXL-149, "Daytime Running Light Relay".
11.	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:0000000013402464

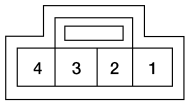
Optical sensor converts the outside brightness (lux) to voltage and transmits the optical sensor signal to BCM.



Hazard Switch

INFOID:0000000013402465

Inputs the hazard switch ON/OFF signal to BCM.



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

AWLIA2773GB

Daytime Running Light Relay

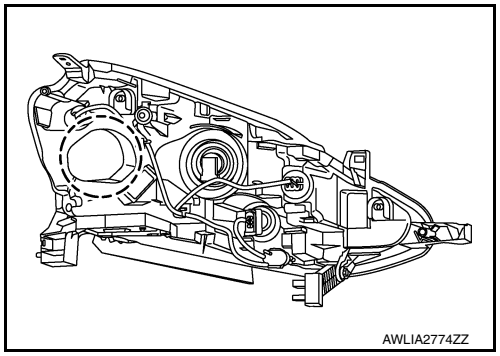
INFOID:0000000013402466

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

LED Headlamp Control Module

INFOID:0000000013402467

- 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.

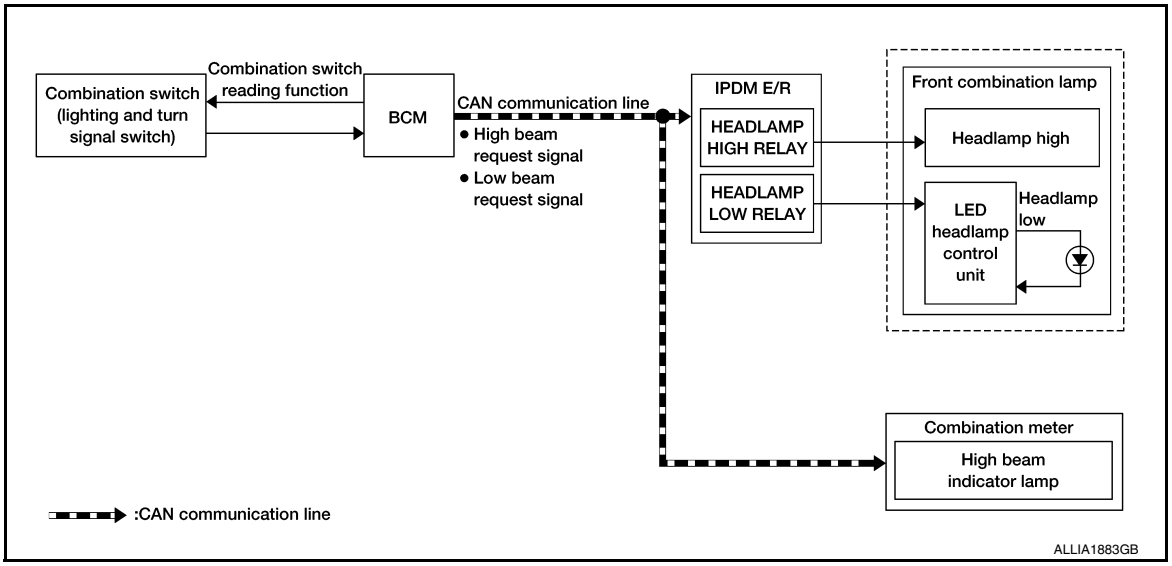


AWLIA2774ZZ

SYSTEM
HEADLAMP SYSTEM
HEADLAMP SYSTEM : System Description

INFOID:0000000013402468

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-151, "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-151, "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 45 seconds 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-88, "INFORMATION DISPLAY : System Description".

HEADLAMP SYSTEM : Fail-safe

INFOID:0000000013402469

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

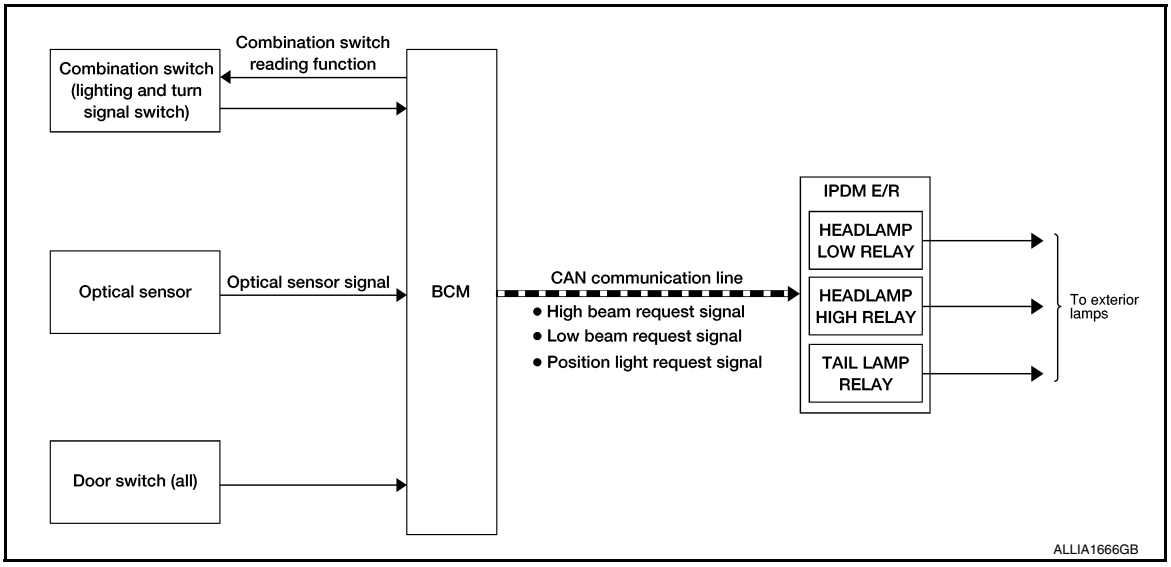
Control part	Fail-safe operation
Headlamp	• Turns ON the headlamp low relay when the ignition switch is turned ON • Turns OFF the headlamp low relay when the ignition switch is turned OFF • Headlamp high relay OFF

AUTO LIGHT SYSTEM

AUTO LIGHT SYSTEM : System Description

INFOID:0000000013402470

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 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-19, "HEADLAMP : CONSULT Function (BCM - HEAD LAMP)".

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-151, "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-19, "HEADLAMP : CONSULT Function (BCM - HEAD LAMP)".

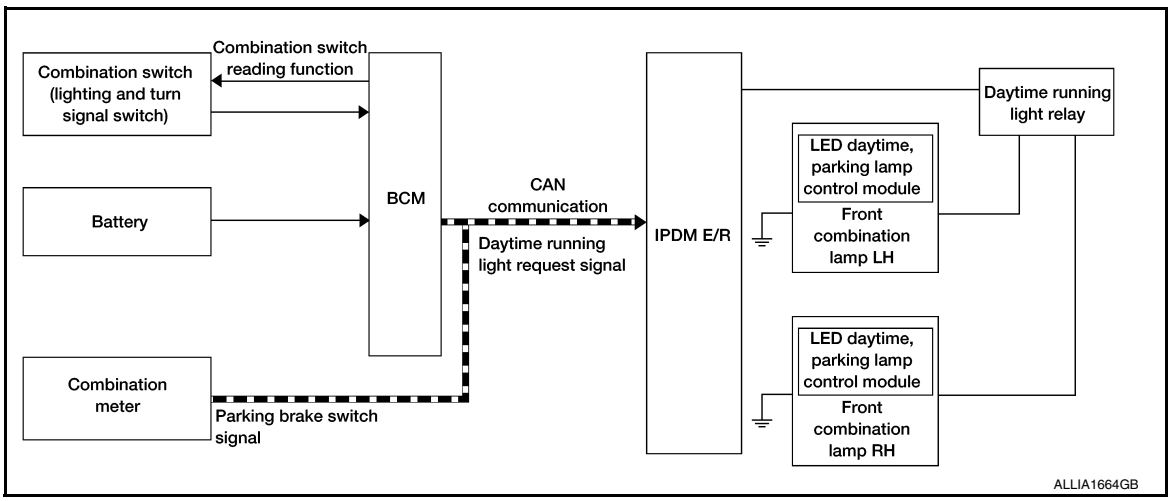
NOTE:
When any position other than the light switch AUTO is set, the auto light system function switches to the exterior lamp battery saver function.

DAYTIME RUNNING LIGHT SYSTEM

DAYTIME RUNNING LIGHT SYSTEM : System Description

INFOID:0000000013402471

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

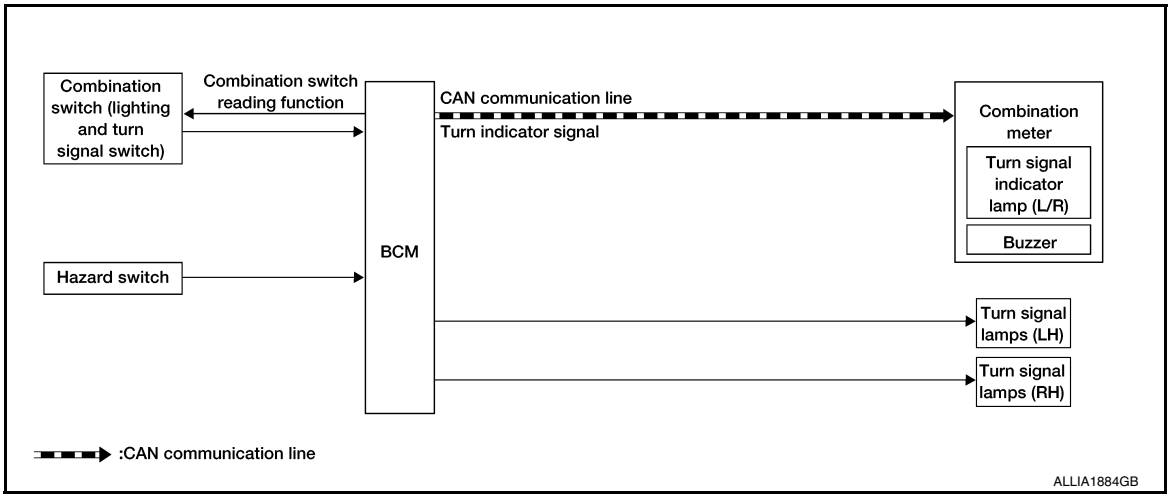
- IPDM E/R controls the daytime running light relay (ground-side) to turn ON according to the daytime running light request signal.
- Power is supplied from the daytime running light relay to front combination lamp RH and LH, and then daytime running lamps are illuminated.

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM : System Description

INFOID:0000000013402472

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.

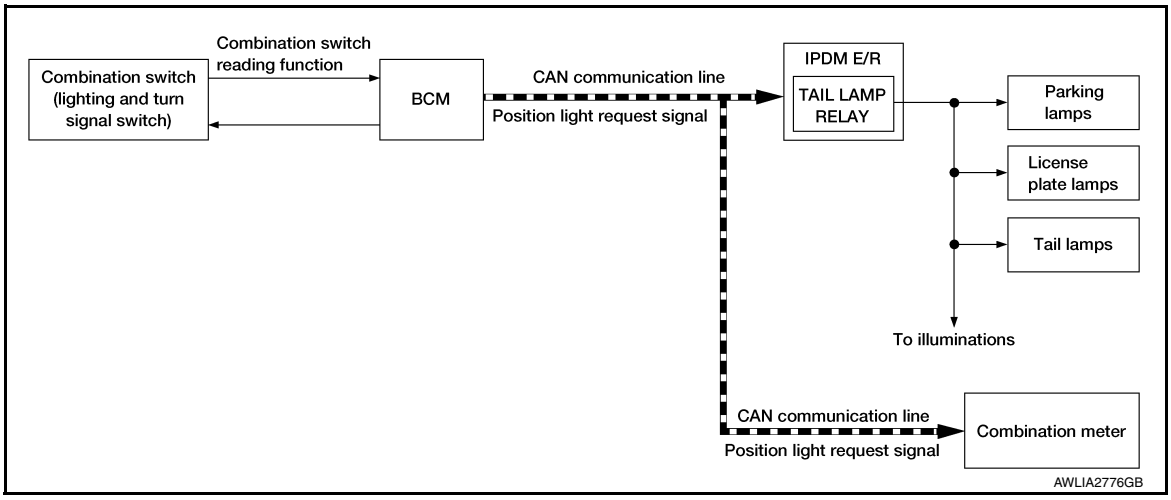
NOTE:
The blinking speed is normal while operating the hazard warning lamp.

PARKING, LICENSE PLATE AND TAIL LAMP SYSTEM

PARKING, LICENSE PLATE AND TAIL LAMP SYSTEM : System Description

INFOID:0000000013402473

SYSTEM DIAGRAM



OUTLINE

Parking, license plate 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 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 and tail lamps.

Parking, license plate 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 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 AND TAIL LAMP SYSTEM : Fail-Safe

INFOID:0000000013402474

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

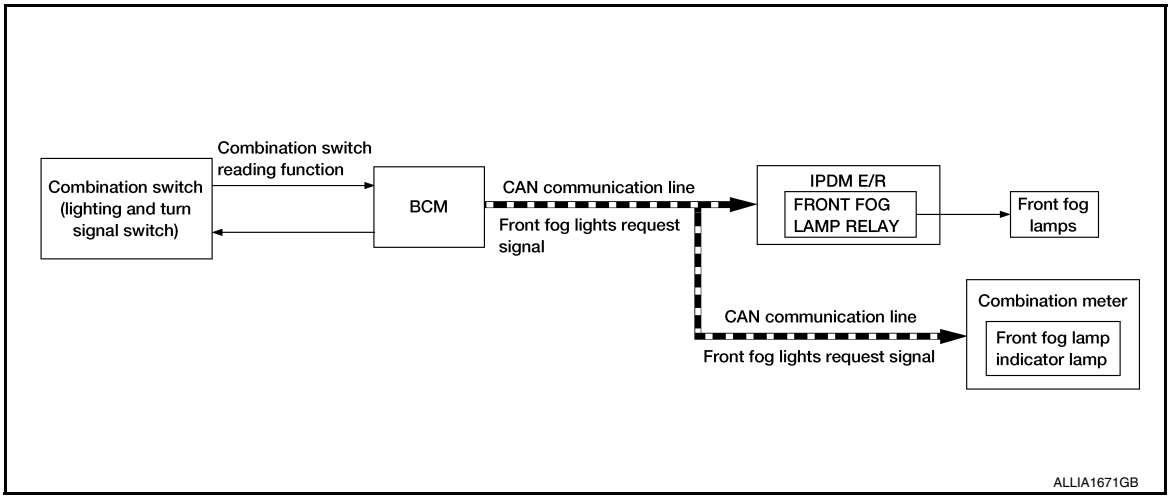
Control part	Fail-safe operation
• Parking lamps • License plate lamps • Illumination • Tail lamps	• Turns ON the tail lamp relay when the ignition switch is turned ON • Turns OFF the tail lamp relay when the ignition switch is turned OFF

FRONT FOG LAMP SYSTEM

FRONT FOG LAMP SYSTEM : System Description

INFOID:0000000013402476

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:0000000013402477

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

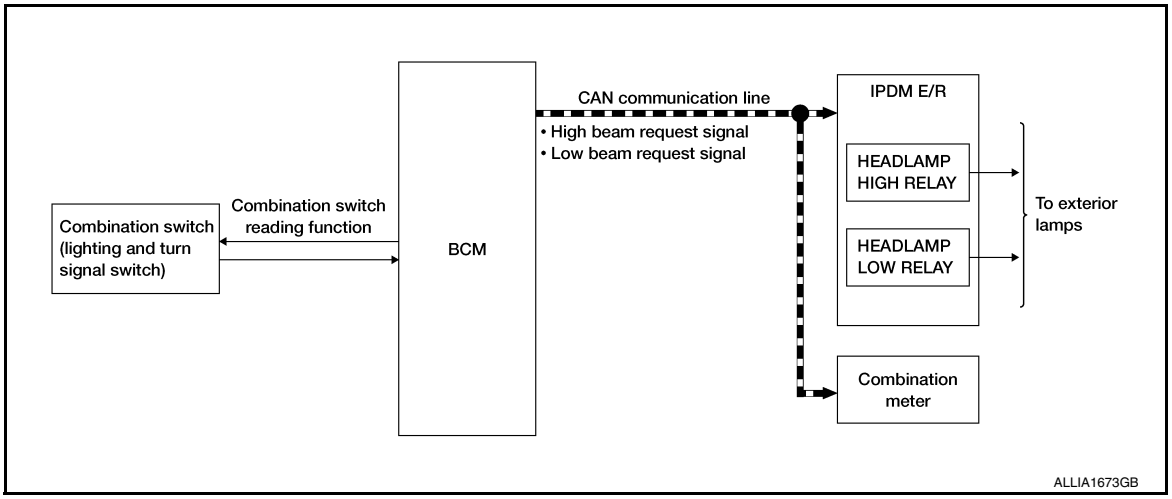
Control part	Fail-safe operation
Front fog lamp	Front fog lamp relay OFF

EXTERIOR LAMP BATTERY SAVER SYSTEM

EXTERIOR LAMP BATTERY SAVER SYSTEM : System Description

INFOID:0000000013402478

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:0000000013421340

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

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

SYSTEM APPLICATION
BCM can perform the following functions.

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

HEAD LAMP

HEAD LAMP : CONSULT Function (BCM - HEAD LAMP)

INFOID:0000000013421342

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].
HEAD LAMP	This test is able to check head lamp operation [Hi/Low/Off].
ILL DIM SIGNAL	This test is able to check head lamp illumination dimming operation [On/Off].
TAIL LAMP	This test is able to check tail lamp operation [On/Off].

WORK SUPPORT

Support Item	Setting	Description
AUTO LIGHT LOGIC SET	MODE 1*	With twilight ON custom & with wiper INT, LO and HI
	MODE 2	Witt twilight ON custom & with wiper LO and HI
	MODE 3	With twilight ON custom & without
	MODE 4	Without twilight ON custom & with wiper INT, LO and HI
	MODE 5	Without twilight ON custom & with wiper LO and HI
	MODE 6	Without twilight ON custom & without
BATTERY SAVER SET	On*	Exterior lamp battery saver function ON.
	Off	Exterior lamp battery saver function OFF.

Support Item	Setting		Description
CUSTOM A/LIGHT SETTING	MODE 1*		Normal
	MODE 2		More sensitive setting than normal setting (Turns ON earlier than normal operation)
	MODE 3		More sensitive setting than MODE 2 (Turns ON earlier than MODE 2)
	MODE 4		Less sensitive setting than normal setting (Turns ON later than normal operation)
ILL DELAY SET	MODE 8	180 sec.	Sets delay timer function operation time (All doors closed).
	MODE 7	150 sec.	
	MODE 6	120 sec.	
	MODE 4	60 sec.	
	MODE 5	90 sec.	
	MODE 3	30 sec.	
	MODE 2	OFF	
	MODE 1*	45 sec.	

*: Initial setting

FLASHER

FLASHER : CONSULT Function (BCM - FLASHER)

INFOID:0000000013421347

DATA MONITOR

Monitor Item [Unit]	Description
REQ SW -DR [On/Off]	Indicates condition of door request switch LH.
REQ SW -AS [On/Off]	Indicates condition of door request switch RH.
PUSH SW [On/Off]	Indicates condition of push-button ignition switch.
TURN SIGNAL R [On/Off]	Indicates condition of turn signal function of combination switch.
TURN SIGNAL L [On/Off]	
HAZARD SW [On/Off]	Indicates condition of hazard switch.
RKE-LOCK [On/Off]	Indicates condition of lock signal from Intelligent Key.
RKE-UNLOCK [On/Off]	Indicates condition of unlock signal from Intelligent Key.
RKE-PANIC [On/Off]	Indicates condition of panic alarm signal from Intelligent Key.

ACTIVE TEST

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

WORK SUPPORT

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

* : Initial setting

INT LAMP

INT LAMP : CONSULT Function (BCM - INT LAMP)

INFOID:0000000013421509

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 driver 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 lid 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].

WORK SUPPORT

Support Item	Setting		Description
R LAMP TIMER LOGIC SET	MODE 2		Interior room lamp timer activates with all doors.
	MODE 1*		Interior room lamp timer activates with the driver door only.
SET I/L D-UNLCK INTCON	On*		Interior room lamp timer function ON.
	Off		Interior room lamp timer function OFF.
ROOM LAMP TIMER SET	MODE 4	30 sec.	Sets the interior room lamp ON time. (Timer operating time).
	MODE 3*	15 sec.	
	MODE 2	7.5 sec.	
FOG LAMP OVERRIDE	On*		With fog override function.
	Off		Without fog override function.

*: Initial setting

DOOR LOCK

DOOR LOCK : CONSULT Function (BCM - DOOR LOCK)

INFOID:0000000013421513

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 open 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 [OTR ULK/AS UNLK/DR UNLK/ALL UNLK/ALL LOCK].

WORK SUPPORT

Support Item	Setting	Description
DOOR LOCK-UNLOCK SET	On*	Automatic door locks function ON.
	Off	Automatic door locks function OFF.
AUTOMATIC LOCK/UNLOCK SELECT	Lock/Unlock*	Automatic door locks function operates in lock and unlock.
	Lock Only	Automatic door locks function operates in lock only.
	Unlock Only	Automatic door locks function operates in unlock only.
	Off	Automatic door locks function OFF.
AUTOMATIC DOOR LOCK SELECT	P RANGE	Doors lock automatically when shifted out of Park (P).
	VH SPD*	Doors lock automatically when vehicle speed reaches 24 km/h (15 mph).
AUTOMATIC DOOR UNLOCK SELECT	MODE6*	Drivers door unlocks automatically when key is removed.
	MODE5	Drivers door unlocks automatically when shifted into Park (P).
	MODE4	Drivers door unlocks automatically when ignition is switched from ON to OFF.
	MODE3	Doors unlock automatically when key is removed.
	MODE2	Doors unlock automatically when shifted into Park (P).
	MODE1	Doors unlock automatically when ignition is switched from ON to OFF.

*: Initial setting

DIAGNOSIS SYSTEM (IPDM E/R)

Diagnosis Description

INFOID:0000000013421517

AUTO ACTIVE TEST

Description

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

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

Operation Procedure

NOTE:

Never perform auto active test in the following conditions.

- Passenger door is open
- CONSULT is connected

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

NOTE:

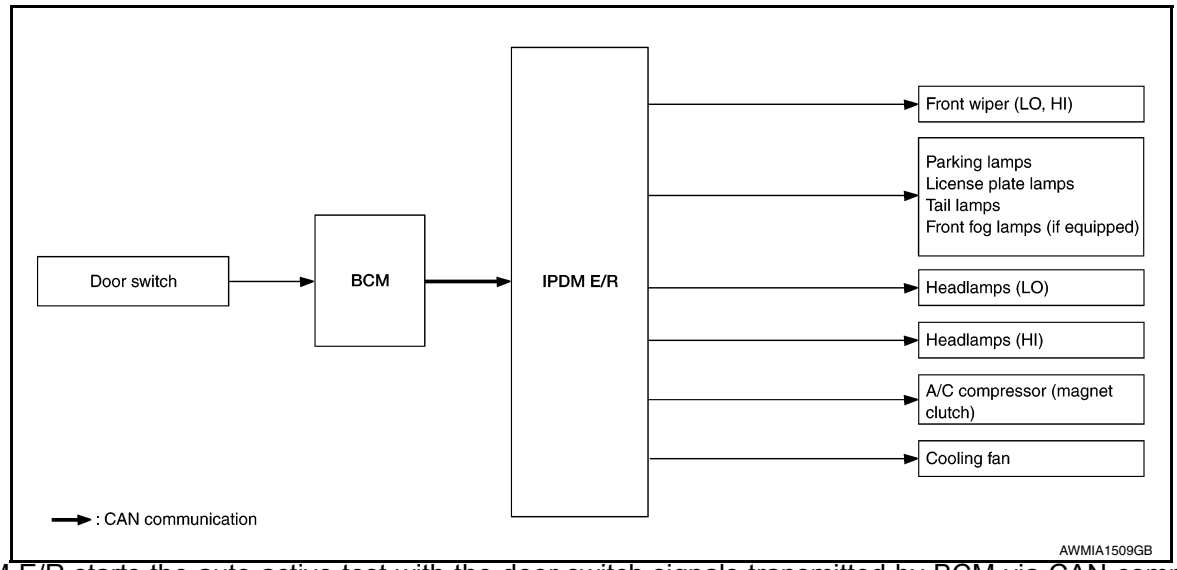
- When auto active test has to be cancelled halfway through test, turn the ignition switch OFF.
- When auto active test is not activated, door switch may be the cause. Check door switch. Refer to DLK-109, "Component Inspection".

Inspection in Auto Active Test

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

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

Concept of Auto Active Test



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

Diagnosis Chart in Auto Active Test

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

CONSULT Function (IPDM E/R)

INFOID:0000000013421518

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.

Direct Diagnostic Mode	Description
Active Test	The IPDM E/R activates outputs to test components.
CAN Diag Support Mntr	The result of transmit/receive diagnosis of CAN communication is displayed.

ECU IDENTIFICATION

The IPDM E/R part number is displayed.

SELF DIAGNOSTIC RESULT

Refer to PCS-20, "DTC Index".

DATA MONITOR

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

ACTIVE TEST

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

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

CAN DIAG SUPPORT MNTR

Refer to LAN-14, "CAN Diagnostic Support Monitor".

ECU DIAGNOSIS INFORMATION

BCM, IPDM E/R

List of ECU Reference

INFOID:0000000013402486

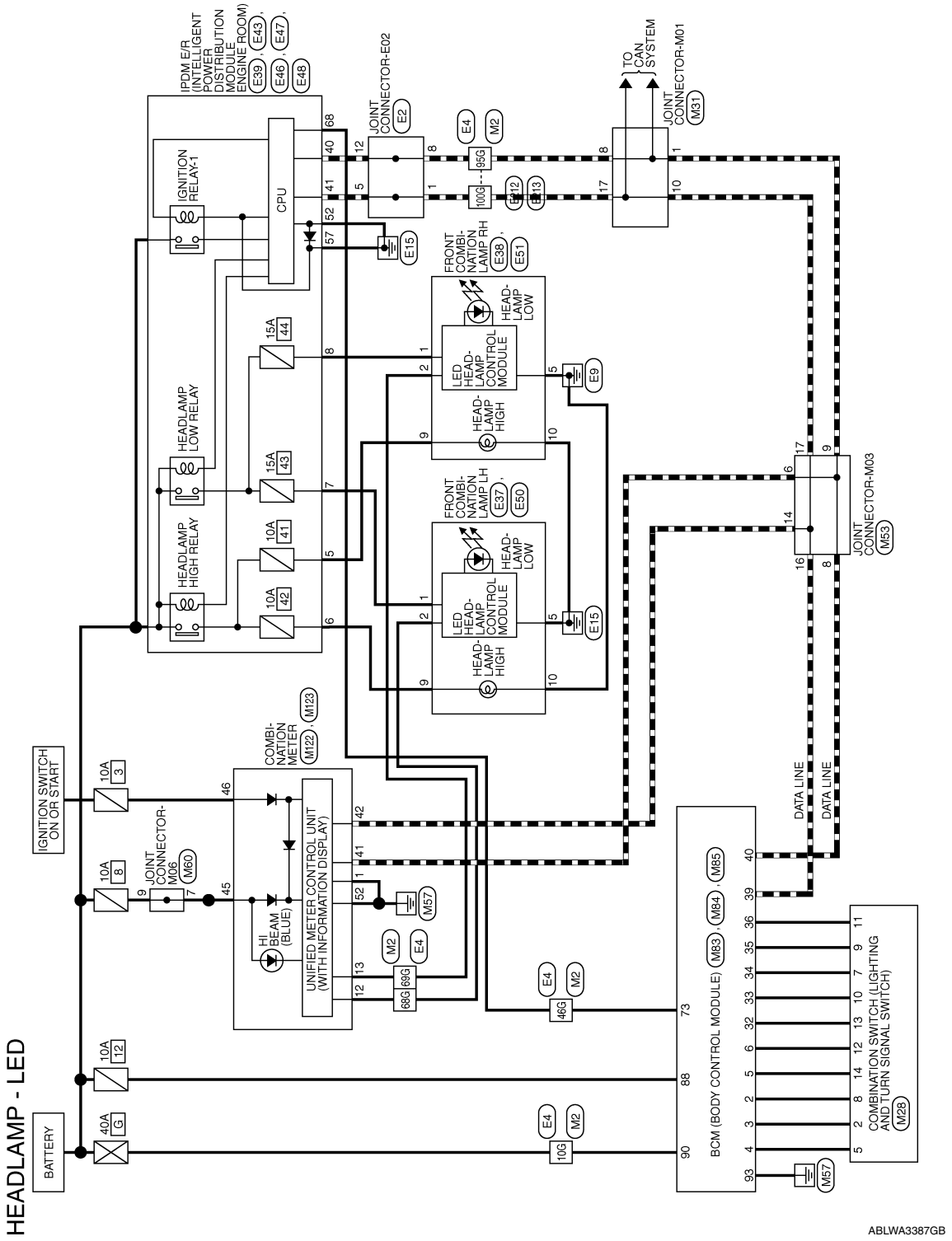
ECU	Reference
BCM	BCS-30, "Reference Value"
	BCS-48, "Fail-safe"
	BCS-49, "DTC Inspection Priority Chart"
	BCS-50, "DTC Index"
IPDM E/R	PCS-13, "Reference Value"
	PCS-19, "Fail-safe"
	PCS-20, "DTC Index"

WIRING DIAGRAM

HEADLAMP

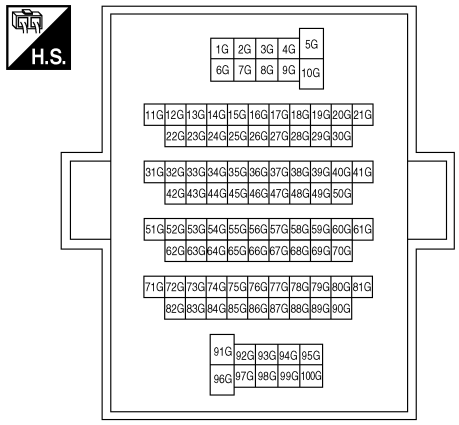
Wiring Diagram

INFOID:0000000013402487



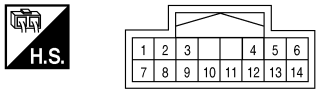
HEADLAMP CONNECTORS - LED

Connector No.	M2
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
10G	Y	–
46G	Y	–
68G	Y	–
69G	GR	–
95G	P	–
100G	L	–

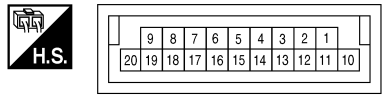
Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
2	GR	–
5	BR	–
7	V	–
8	L	–

Terminal No.	Color of Wire	Signal Name
9	R	–
10	Y	–
11	SB	–
12	W	–
13	LG	–
14	BG	–

Connector No.	M31
Connector Name	JOINT CONNECTOR-M01
Connector Color	BLUE



Terminal No.	Color of Wire	Signal Name
1	P	–
8	P	–
10	L	–
17	L	–

ABLIA8433GB

Connector No.	M53
Connector Name	JOINT CONNECTOR-M03
Connector Color	BLUE

H.S.

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

Terminal No.	Color of Wire	Signal Name
6	P	–
8	P	–
9	P	–
14	L	–
16	L	–
17	L	–

Connector No.	M60
Connector Name	JOINT CONNECTOR-M06
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
7	W	–
9	W	–

Connector No.	M83
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

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
73	V	IGN RELAY OUTPUT1 (USM)

Connector No.	M84
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	BLACK

H.S.

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

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

Connector No.	M85
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

H.S.

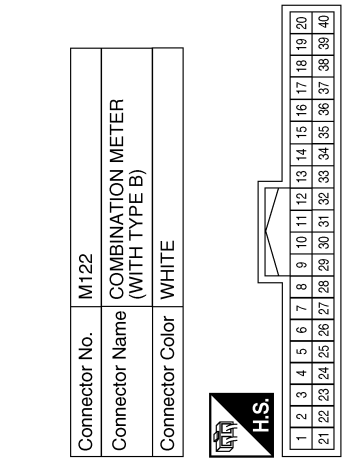
89	88	87	86	85	84	83	82	81
95	94	93	92	91	90			

Terminal No.	Color of Wire	Signal Name
88	BG	BATTERY (FUSE)
90	Y	BATTERY (F/L)
93	B	GND

ABLIA8434GB

Connector No.	M122
Connector Name	COMBINATION METER (WITH TYPE B)
Connector Color	WHITE

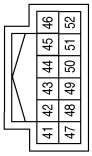
H.S.



Terminal No.	Color of Wire	Signal Name
1	B	GND

Connector No.	M123
Connector Name	COMBINATION METER (WITH TYPE B)
Connector Color	WHITE

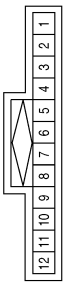
H.S.



Terminal No.	Color of Wire	Signal Name
41	L	CAN-H
42	P	CAN-L
45	LG	BAT
46	GR	IGN
52	B	GND

Connector No.	E2
Connector Name	JOINT CONNECTOR-E02
Connector Color	BLUE

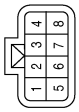
H.S.



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

Connector No.	E37
Connector Name	FRONT COMBINATION LAMP LH
Connector Color	BLACK

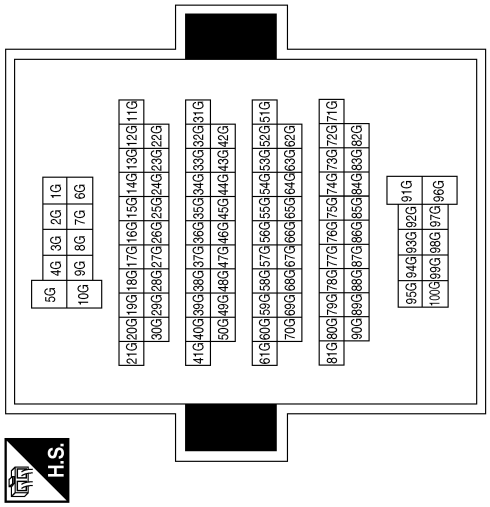
H.S.



Terminal No.	Color of Wire	Signal Name
1	L	–
2	SB	–
5	B/R	–

Connector No.	E4
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
10G	G	–
46G	O	–
68G	BR	–
69G	SB	–
95G	P	–
100G	L	–

ABLIA8435GB

Connector No.	E38
Connector Name	FRONT COMBINATION LAMP RH
Connector Color	BLACK

H.S.

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

Connector No.	E39
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
68	O	IGN SIGNAL

Connector No.	E43
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
5	R	H/LAMP HI RH
6	G	H/LAMP HI LH
7	L	H/LAMP LO LH
8	P	H/LAMP LO RH

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

H.S.

Terminal No.	Color of Wire	Signal Name
40	P	CAN-L
41	L	CAN-H

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

H.S.

Terminal No.		Signal Name
52	B/Y	SIGNAL GND

Connector No.	E48
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
57	B/Y	POWER GND

ABLIA8436GB

Connector No.	E51
Connector Name	FRONT COMBINATION LAMP RH
Connector Color	BLACK

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

Connector No.	E50
Connector Name	FRONT COMBINATION LAMP LH
Connector Color	BLACK

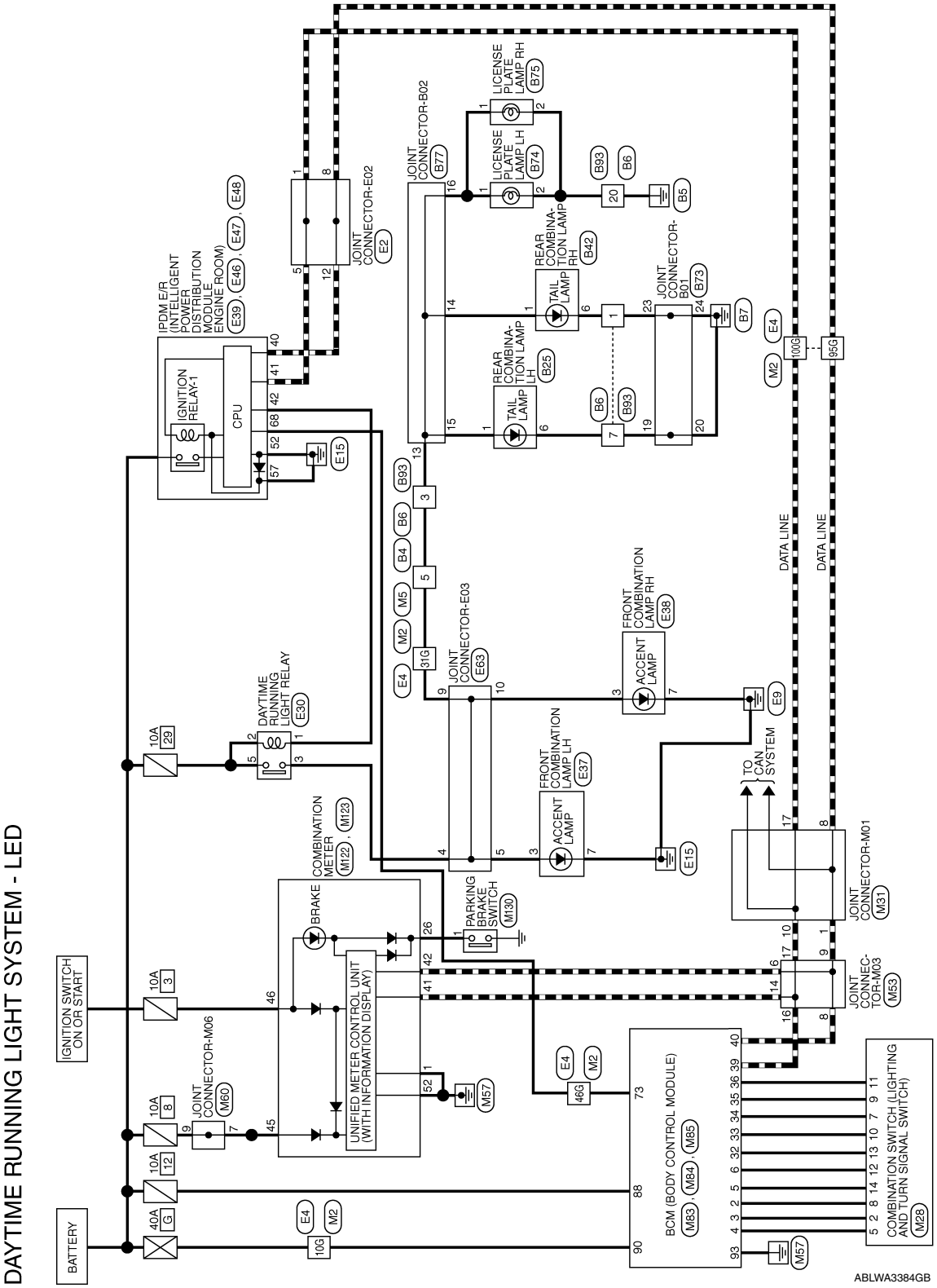
Terminal No.	Color of Wire	Signal Name
9	G	–
10	B	–

ABLIA8437GB

DAYTIME RUNNING LIGHT SYSTEM

Wiring Diagram

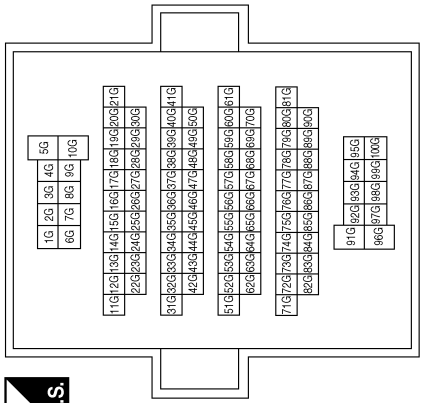
INFOID:0000000013402488



DAYTIME RUNNING LIGHT SYSTEM CONNECTORS - LED

Connector No.	M2
Connector Name	WIRE TO WIRE
Connector Color	WHITE

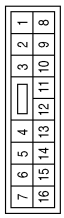
H.S.



Terminal No.	Color of Wire	Signal Name
10G	Y	–
31G	V	–
46G	V	–
95G	P	–
100G	L	–

Connector No.	M5
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
5	V	–

Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE

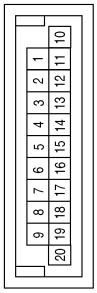
H.S.

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

Terminal No.	Color of Wire	Signal Name
13	LG	–
14	BG	–

Connector No.	M31
Connector Name	JOINT CONNECTOR-M01
Connector Color	BLUE

H.S.



Terminal No.	Color of Wire	Signal Name
1	P	–
8	P	–
10	L	–
17	L	–

ABLIA8417GB

Connector No.	M53
Connector Name	JOINT CONNECTOR-M03
Connector Color	BLUE

H.S.

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

Terminal No.	Color of Wire	Signal Name
6	P	–
8	P	–
9	P	–
14	L	–
16	L	–
17	L	–

Connector No.	M60
Connector Name	JOINT CONNECTOR-M06
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
7	W	–
9	W	–

Connector No.	M83
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

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
73	V	IGN RELAY OUTPUT1 (USM)

Connector No.	M84
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	BLACK

H.S.

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

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

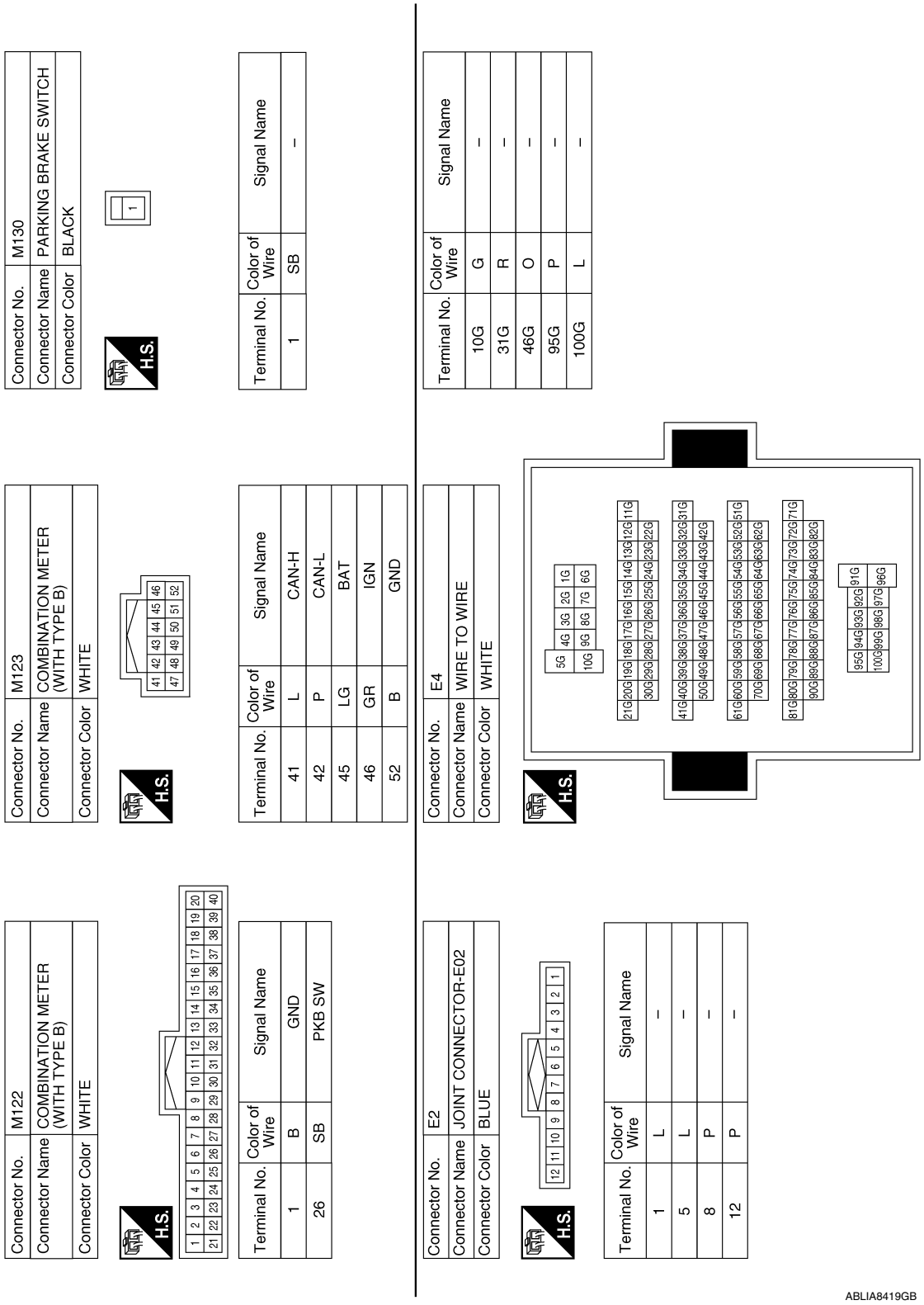
Connector No.	M85
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

H.S.

89	88	87	86	85	84	83	82	81
95	94	93	92	91	90

Terminal No.	Color of Wire	Signal Name
88	BG	BATTERY (FUSE)
90	Y	BATTERY (F/L)
93	B	GND

ABLIA8418GB


Connector No. M122
Connector Name COMBINATION METER (WITH TYPE B)
Connector Color WHITE
H.S.
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40
Terminal No. Color of Wire Signal Name
1 B GND
26 SB PKB SW
Connector No. M123
Connector Name COMBINATION METER (WITH TYPE B)
Connector Color WHITE
H.S.
41 42 43 44 45 46
47 48 49 50 51 52
Terminal No. Color of Wire Signal Name
41 L CAN-H
42 P CAN-L
45 LG BAT
46 GR IGN
52 B GND
Connector No. M130
Connector Name PARKING BRAKE SWITCH
Connector Color BLACK
H.S.
1
Terminal No. Color of Wire Signal Name
1 SB –
Connector No. E2
Connector Name JOINT CONNECTOR-E02
Connector Color BLUE
H.S.
12 11 10 9 8 7 6 5 4 3 2 1
Terminal No. Color of Wire Signal Name
1 L –
5 L –
8 P –
12 P –
Connector No. E4
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
10G G –
31G R –
46G O –
95G P –
100G L –
ABLIA8419GB

Connector No.	E30
Connector Name	DAYTIME RUNNING LIGHT RELAY
Connector Color	BLUE

H.S.

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

Connector No.	E37
Connector Name	FRONT COMBINATION LAMP LH
Connector Color	BLACK

H.S.

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

Connector No.	E38
Connector Name	FRONT COMBINATION LAMP RH
Connector Color	BLACK

H.S.

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

Connector No.	E39
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
68	O	IGN SIGNAL

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

H.S.

Terminal No.	Color of Wire	Signal Name
40	P	CAN-L
41	L	CAN-H
42	Y	DTRL RLY DRIVE

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

H.S.

Terminal No.	Color of Wire	Signal Name
52	B/Y	SIGNAL GND

ABLIA8420GB

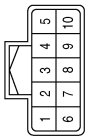
Connector No.	E48
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
57	B/Y	POWER GND

Connector No.	E63
Connector Name	JOINT CONNECTOR-E03
Connector Color	BLACK

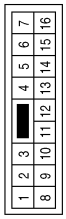
H.S.



Terminal No.	Color of Wire	Signal Name
4	L	–
5	L	–
9	R	–
10	L	–

Connector No.	B4
Connector Name	WIRE TO WIRE
Connector Color	WHITE

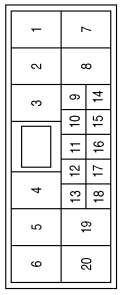
H.S.



Terminal No.	Color of Wire	Signal Name
5	LG	–

Connector No.	B6
Connector Name	WIRE TO WIRE
Connector Color	WHITE

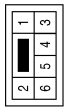
H.S.



Terminal No.	Color of Wire	Signal Name
1	L	–
3	LG	–
7	BG	–
20	B	–

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

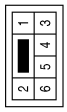
H.S.



Terminal No.	Color of Wire	Signal Name
1	LG	–
6	BG	–

Connector No.	B42
Connector Name	REAR COMBINATION LAMP RH
Connector Color	WHITE

H.S.



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

ABLIA8421GB

Connector No.	B75
Connector Name	LICENSE PLATE LAMP RH
Connector Color	BROWN

H.S.

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

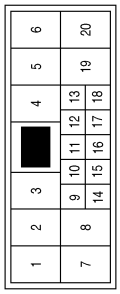
Connector No.	B74
Connector Name	LICENSE PLATE LAMP LH
Connector Color	BROWN

H.S.

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

Connector No.	B93
Connector Name	WIRE TO WIRE
Connector Color	WHITE

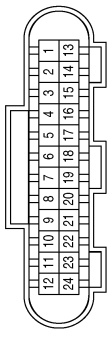
H.S.



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

Connector No.	B73
Connector Name	JOINT CONNECTOR-B01
Connector Color	BLACK

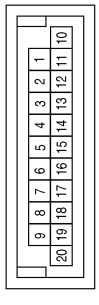
H.S.



Terminal No.	Color of Wire	Signal Name
19	B	–
20	B	–
23	L	–
24	B	–

Connector No.	B77
Connector Name	JOINT CONNECTOR-B02
Connector Color	GREEN

H.S.



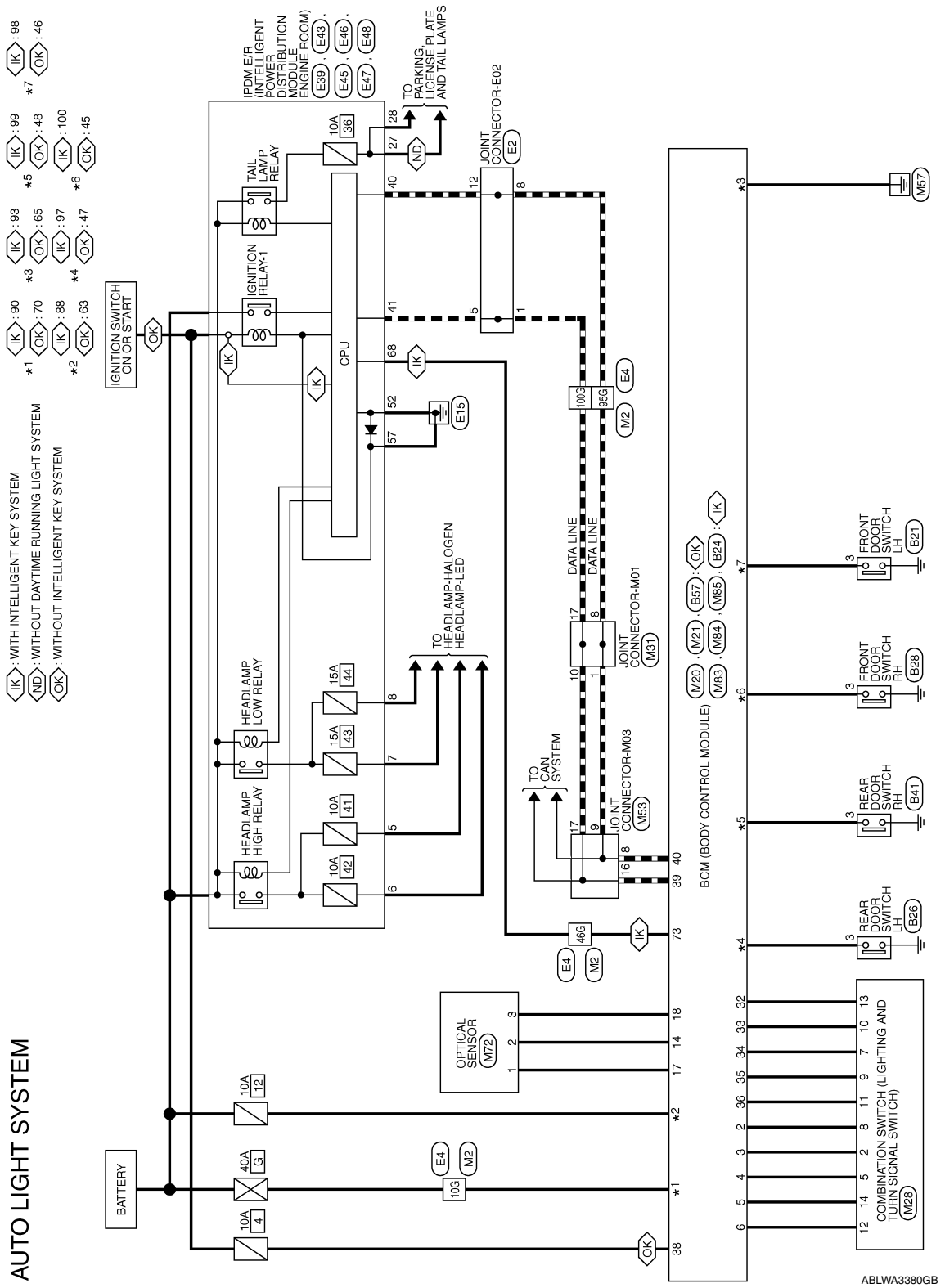
Terminal No.	Color of Wire	Signal Name
13	G	–
14	BR	–
15	LG	–
16	GR	–

ABLIA8422GB

AUTO LIGHT SYSTEM

Wiring Diagram

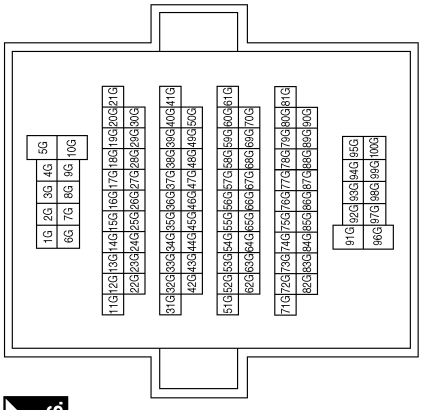
INFOID:0000000013402489



AUTO LIGHT SYSTEM CONNECTORS

Connector No.	M2
Connector Name	WIRE TO WIRE
Connector Color	WHITE

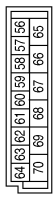
H.S.



Terminal No.	Color of Wire	Signal Name
10G	Y	–
46G	V	–
95G	P	–
100G	L	–

Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

H.S.

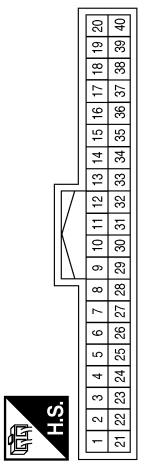


Terminal No.	Color of Wire	Signal Name
63	BG	BATTERY (FUSE)
65	B	GND
70	Y	BATTERY (F/L)

Terminal No.	Color of Wire	Signal Name
35	R	COMBINATION SW OUTPUT 2
36	SB	COMBINATION SW OUTPUT 1
38	R	IGN SW
39	L	CAN-H
40	P	CAN-L

Connector No.	M21
Connector Name	BCM (BODY CONTROL MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

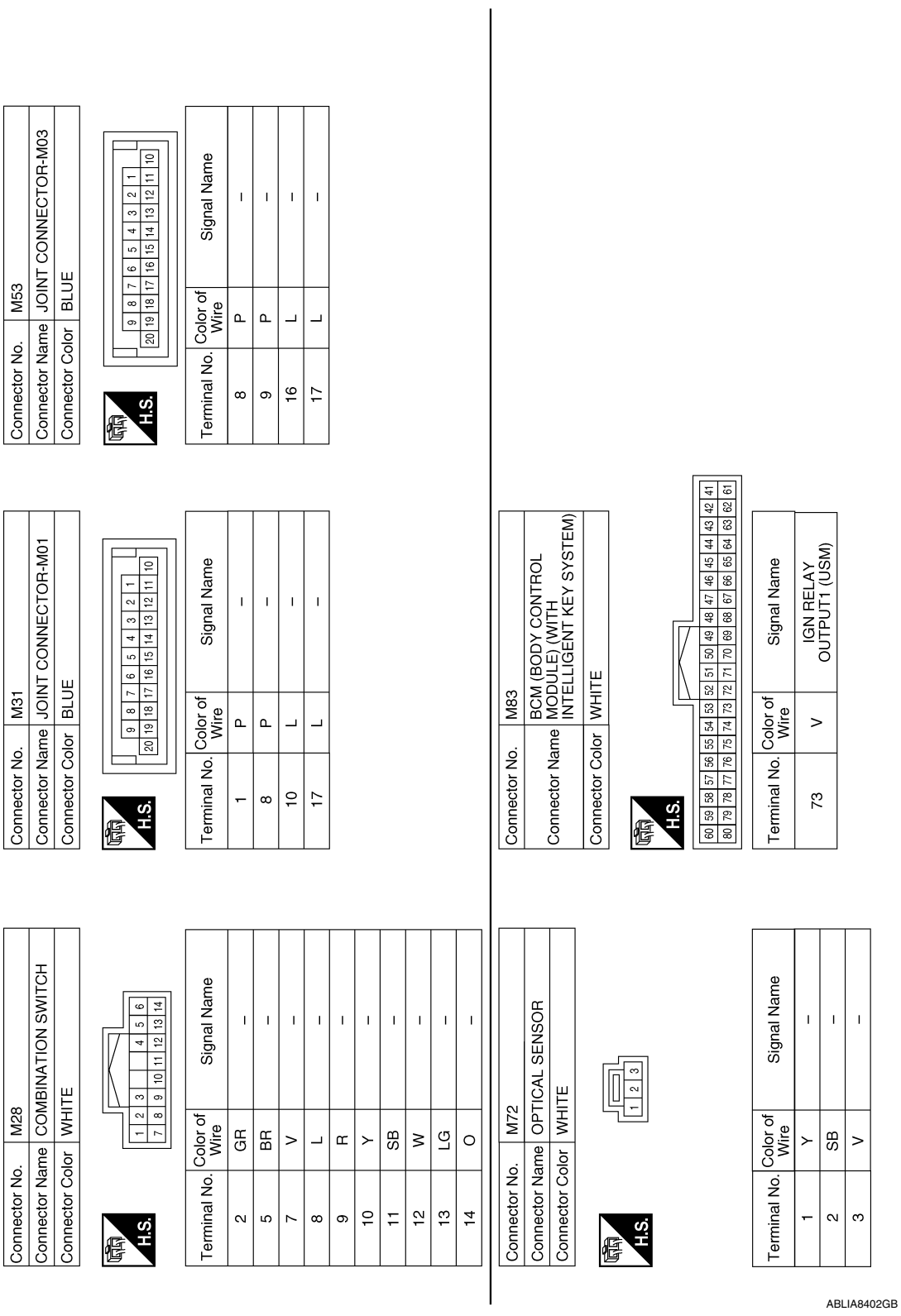
H.S.



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

Terminal No.	Color of Wire	Signal Name
5	BG	COMBINATION SW INPUT 2
6	W	COMBINATION SW INPUT 1
14	SB	AUTO LIGHT SENSOR INPUT 1 (& 2)
17	Y	AUTO LIGHT SENSOR POWER SUPPLY OUTPUT
18	V	KEYLESS & AUTO LIGHT SENSOR GND
32	LG	COMBINATION SW OUTPUT 5
33	Y	COMBINATION SW OUTPUT 4
34	V	COMBINATION SW OUTPUT 3

ABLIA8401GB


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 GR –
5 BR –
7 V –
8 L –
9 R –
10 Y –
11 SB –
12 W –
13 LG –
14 O –
Connector No. M31
Connector Name JOINT CONNECTOR-M01
Connector Color BLUE
H.S.
9 8 7 6 5 4 3 2 1
20 19 18 17 16 15 14 13 12 11 10
Terminal No. Color of Wire Signal Name
1 P –
8 P –
10 L –
17 L –
Connector No. M53
Connector Name JOINT CONNECTOR-M03
Connector Color BLUE
H.S.
9 8 7 6 5 4 3 2 1
20 19 18 17 16 15 14 13 12 11 10
Terminal No. Color of Wire Signal Name
8 P –
9 P –
16 L –
17 L –
Connector No. M72
Connector Name OPTICAL SENSOR
Connector Color WHITE
H.S.
1 2 3
Terminal No. Color of Wire Signal Name
1 Y –
2 SB –
3 V –
Connector No. M83
Connector Name BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color WHITE
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
73 V IGN RELAY OUTPUT1 (USM)
ABLIA8402GB

Terminal No.	Color of Wire	Signal Name
35	R	COMBINATION SW OUTPUT 2
36	SB	COMBINATION SW OUTPUT 1
39	L	CAN-H
40	P	CAN-L

Terminal No.	Color of Wire	Signal Name
5	BG	COMBINATION SW INPUT 2
6	W	COMBINATION SW INPUT 1
14	SB	AUTO LIGHT SENSOR INPUT
17	Y	AUTO LIGHT SENSOR POWER SUPPLY OUTPUT
18	V	KEYLESS TUNER, AUTO LIGHT SENSOR GND
32	LG	COMBINATION SW OUTPUT 5
33	Y	COMBINATION SW OUTPUT 4
34	V	COMBINATION SW OUTPUT 3

Connector No.	E2
Connector Name	JOINT CONNECTOR-E02
Connector Color	BLUE

H.S.

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

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

Connector No.	M84
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	BLACK

H.S.

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

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

Connector No.	M85
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

H.S.

89	88	87	86	85	84	83	82	81
95	94	93	92	91	90			

Terminal No.	Color of Wire	Signal Name
88	BG	BATTERY (FUSE)
90	Y	BATTERY (F/L)
93	B	GND

ABLIA8403GB

Connector No.	E4
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
10G	G	–
46G	O	–
95G	P	–
100G	L	–

Connector No.	E39
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK

H.S.

67	66	65	64	63
72	71	70	69	68

Terminal No.	Color of Wire	Signal Name
68	O	IGN SIGNAL

Connector No.	E43
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
5	R	H/LAMP HI RH
6	G	H/LAMP HI LH
7	L	H/LAMP LO LH
8	P	H/LAMP LO RH

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

H.S.

29	28	27	26	25
36	35	34	33	32	31	30

Terminal No.	Color of Wire	Signal Name
27	L	CLEARANCE/L RH
28	R	TAIL 1

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

H.S.

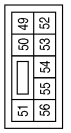
42	41	40	39	38	37
48	47	46	45	44	43

Terminal No.	Color of Wire	Signal Name
40	P	CAN-L
41	L	CAN-H

ABLIA8404GB

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

H.S.



Terminal No.	Color of Wire	Signal Name
52	B/Y	SIGNAL GND

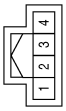
Connector No.	E48
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
57	B/Y	POWER GND

Connector No.	B21
Connector Name	FRONT DOOR SWITCH LH
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
3	Y	–

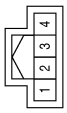
Connector No.	B24
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
97	GR	DOOR SW (RL)
98	Y	DOOR SW (DR)
99	P	DOOR SW (RR)
100	R	DOOR SW (AS)

Connector No.	B26
Connector Name	REAR DOOR SWITCH LH
Connector Color	WHITE

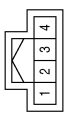
H.S.



Terminal No.	Color of Wire	Signal Name
3	GR	–

Connector No.	B28
Connector Name	FRONT DOOR SWITCH RH
Connector Color	WHITE

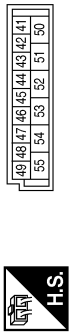
H.S.



Terminal No.	Color of Wire	Signal Name
3	R	–

ABLIA8508GB

Connector No.	B57
Connector Name	BCM (BODY CONTROL MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)
Connector Color	BLACK



Terminal No.	Color of Wire	Signal Name
45	R	DOOR SW (AS)
46	Y	DOOR SW (DR)
47	GR	DOOR SW (RL)
48	P	DOOR SW (RR)

Connector No.	B41
Connector Name	REAR DOOR SWITCH RH
Connector Color	WHITE

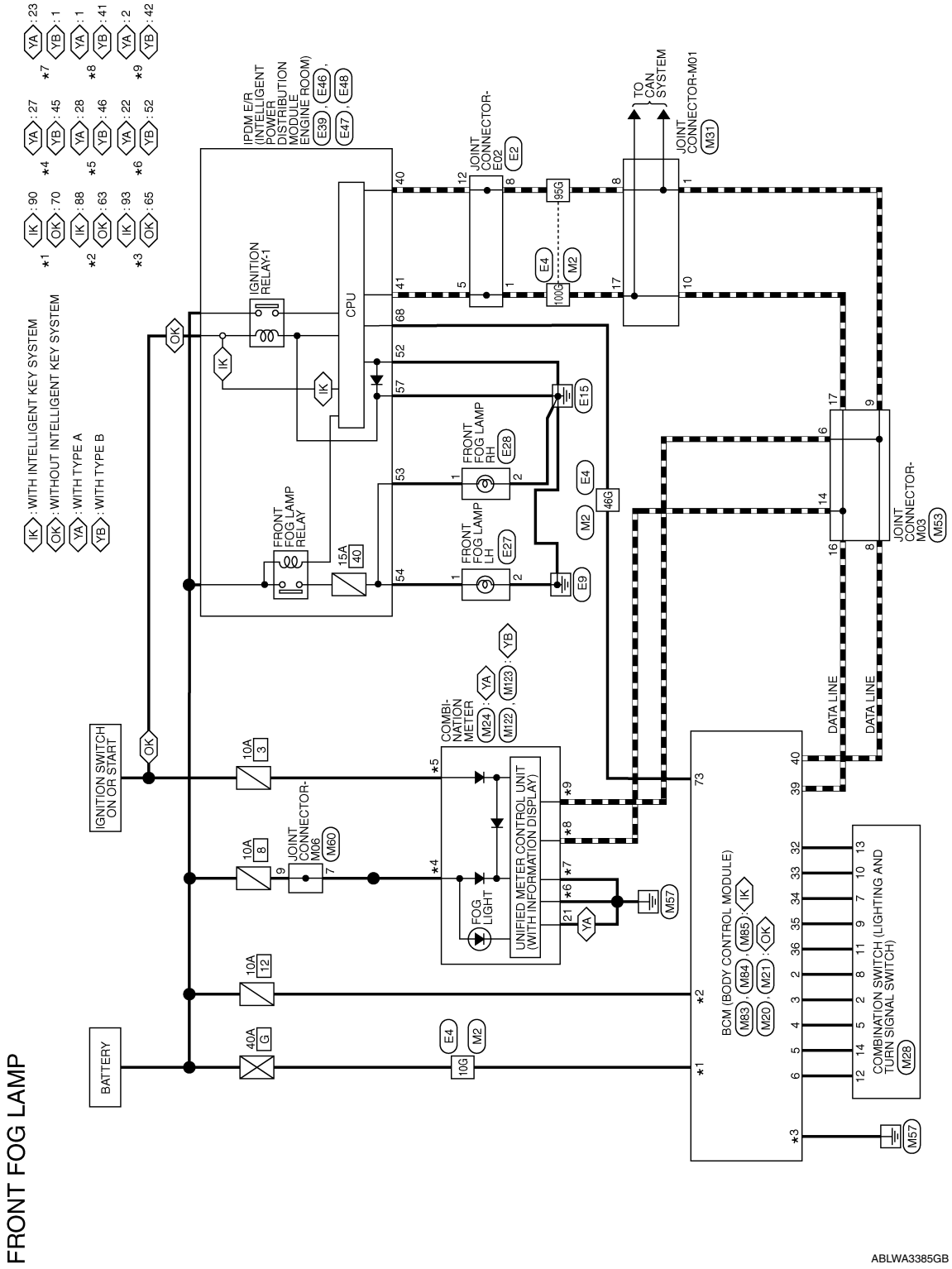
Terminal No.	Color of Wire	Signal Name
3	P	–

ABLIA8509GB

FRONT FOG LAMP

Wiring Diagram

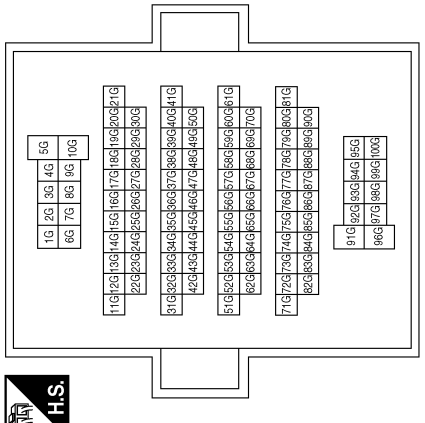
INFOID:0000000013402490



FRONT FOG LAMP CONNECTORS

Connector No.	M2
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
10G	Y	–
46G	V	–
95G	P	–
100G	L	–

Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
63	BG	BATTERY (FUSE)
65	B	GND
70	Y	BATTERY (F/L)

Connector No.	M21
Connector Name	BCM (BODY CONTROL MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

H.S.

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

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

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

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

H.S.

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

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

ABLIA8424GB

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	GR	–
5	BR	–
7	V	–
8	L	–
9	R	–
10	Y	–
11	SB	–
12	W	–
13	LG	–
14	BG	–

Connector No.	M31
Connector Name	JOINT CONNECTOR-M01
Connector Color	BLUE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	P	–
8	P	–
10	L	–
17	L	–

Connector No.	M53
Connector Name	JOINT CONNECTOR-M03
Connector Color	BLUE

H.S.

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

Terminal No.	Color of Wire	Signal Name
6	P	–
8	P	–
9	P	–
14	L	–
16	L	–
17	L	–

Connector No.	M83
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

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
73	V	IGN RELAY OUTPUT1 (USM)

Connector No.	M60
Connector Name	JOINT CONNECTOR-M06
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
7	W	–
9	W	–

ABLIA8425GB

Connector No.	M84
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	BLACK

H.S.

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

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

Connector No.	M122
Connector Name	COMBINATION METER (WITH TYPE B)
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	B	GND

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

Connector No.	M123
Connector Name	COMBINATION METER (WITH TYPE B)
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
41	L	CAN-H
42	P	CAN-L
45	LG	BAT
46	GR	IGN
52	B	GND

Connector No.	M85
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

H.S.

89	88	87	86	85	84	83	82	81
95	94	93	92	91	90			

Terminal No.	Color of Wire	Signal Name
88	BG	BATTERY (FUSE)
90	Y	BATTERY (F/L)
93	B	GND

Connector No.	E2
Connector Name	JOINT CONNECTOR-E02
Connector Color	BLUE

H.S.

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

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

ABLIA8426GB

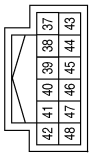
Connector No.	E27
Connector Name	FRONT FOG LAMP LH
Connector Color	BLACK

H.S.

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

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

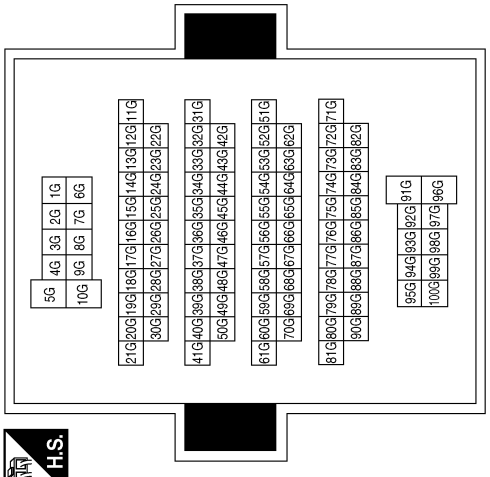
H.S.



Terminal No.	Color of Wire	Signal Name
40	P	CAN-L
41	L	CAN-H

Connector No.	E4
Connector Name	WIRE TO WIRE
Connector Color	WHITE

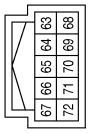
H.S.



Terminal No.	Color of Wire	Signal Name
10G	G	–
46G	O	–
95G	P	–
100G	L	–

Connector No.	E39
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK

H.S.



Terminal No.	Color of Wire	Signal Name
68	O	IGN SIGNAL

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

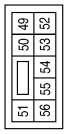
H.S.

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

ABLIA8427GB

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

H.S.



Terminal No.	Color of Wire	Signal Name
52	B/Y	SIGNAL GND
53	W	FR FOG/L RH
54	V	FR FOG/L LH

Connector No.	E48
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK

H.S.

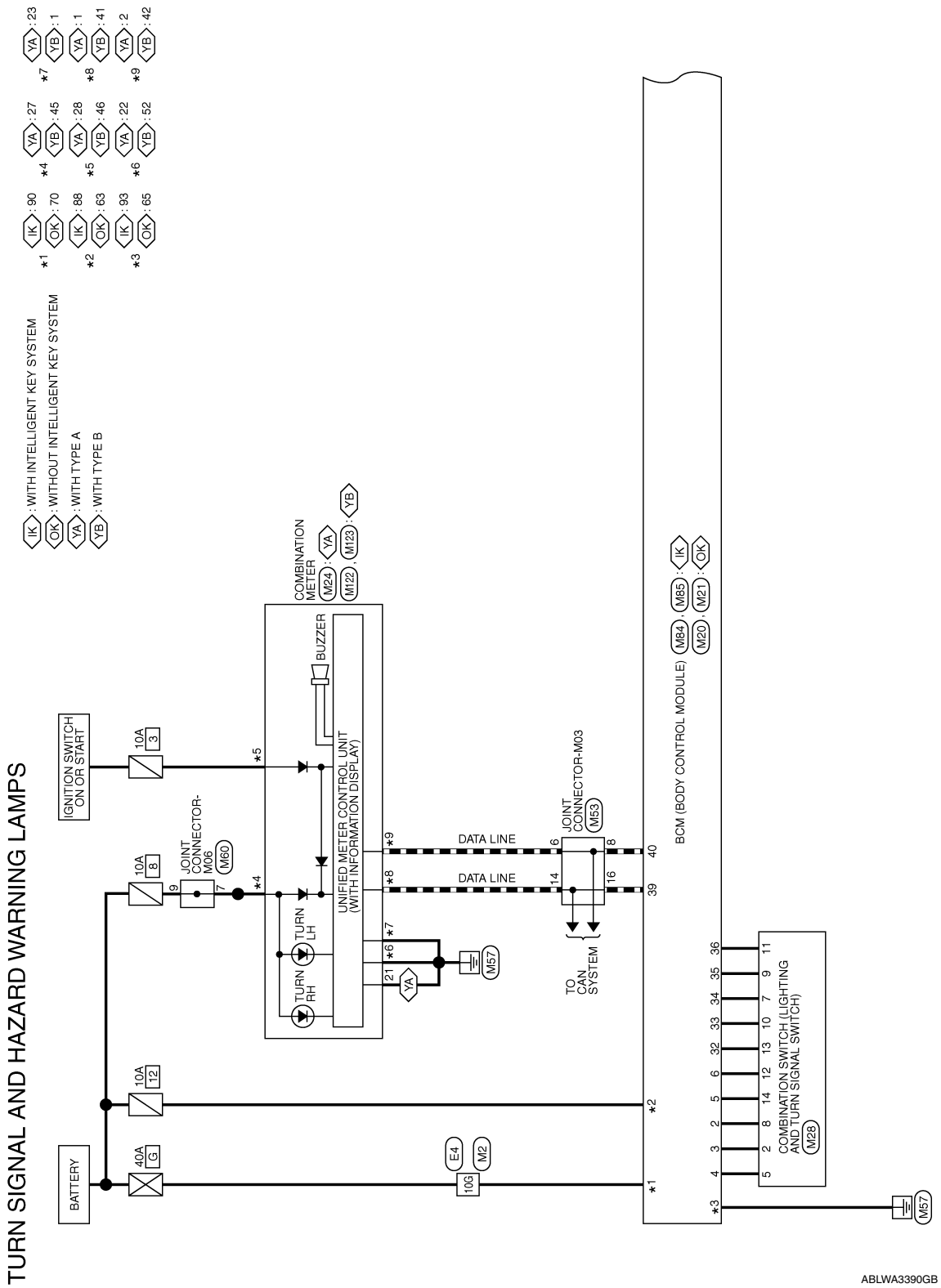
Terminal No.	Color of Wire	Signal Name
57	B/Y	POWER GND

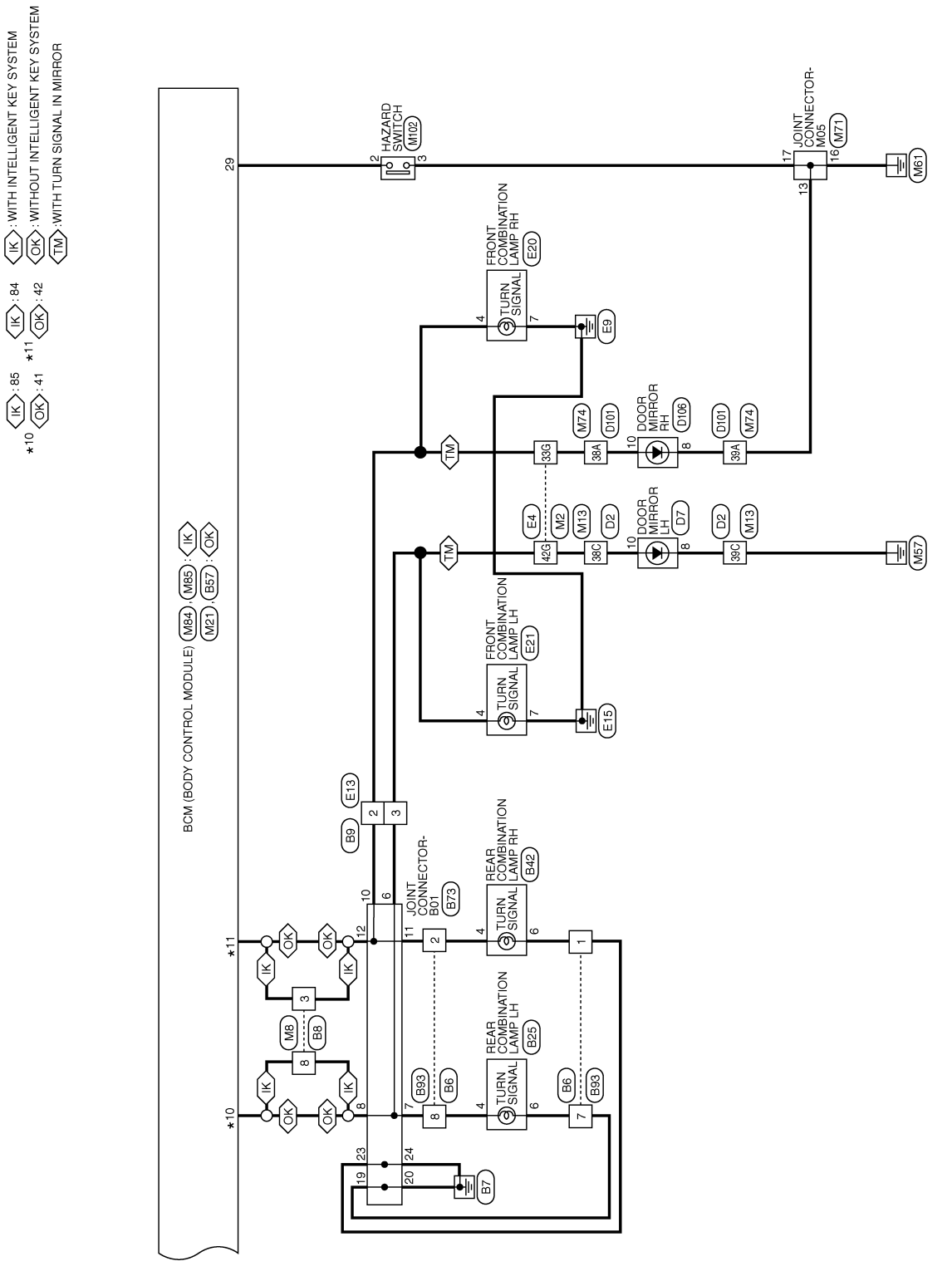
ABLIA8579GB

TURN SIGNAL AND HAZARD WARNING LAMPS

Wiring Diagram

INFOID:0000000013402491





ABLWA3391GB

TURN SIGNAL AND HAZARD WARNING LAMPS CONNECTORS

Connector No.	M2
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
10G	Y	–
33G	Y	–
42G	W	–

Connector No.	M13
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

1C	2C	3C	4C	5C	6C	7C	8C	9C	10C	11C	12C	13C	14C	15C
16C	17C	18C	19C	20C	21C	22C	23C	24C	25C	26C	36C	37C	38C	39C	40C	41C	42C	43C	44C	45C	46C
27C	28C	29C	30C	31C	32C	33C	34C	35C			47C	48C	49C	50C	51C	52C	53C	54C	55C		

Terminal No.	Color of Wire	Signal Name
38C	W	–
39C	B	–

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
3	W	–
8	Y	–

Connector No.	M20
Connector Name	BCM (BODY CONTROL MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
63	BG	BATTERY (FUSE)
65	B	GND
70	Y	BATTERY (F/L)

ABLIA8447GB

Connector No.	M21
Connector Name	BCM (BODY CONTROL MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
2	L	COMBINATION SW INPUT 5
3	GR	COMBINATION SW INPUT 4
4	BR	COMBINATION SW INPUT 3
5	BG	COMBINATION SW INPUT 2
6	W	COMBINATION SW INPUT 1

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

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	GR	–
5	BR	–
7	V	–
8	L	–

Terminal No.	Color of Wire	Signal Name
9	R	–
10	Y	–
11	SB	–
12	W	–
13	LG	–
14	BG	–

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

H.S.

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

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

Connector No.	M53
Connector Name	JOINT CONNECTOR-M03
Connector Color	BLUE

H.S.

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

Terminal No.	Color of Wire	Signal Name
6	P	–
8	P	–
14	L	–
16	L	–

ABLIA8448GB

Connector No.	M74
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

36A	37A	38A	39A	40A	41A	42A	43A	44A	45A	46A
47A	48A	49A	50A	51A	52A	53A	54A	55A		

Terminal No.	Color of Wire	Signal Name
38A	Y	–
39A	B	–

Connector No.	M71
Connector Name	JOINT CONNECTOR-M05
Connector Color	BLUE

H.S.

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

Terminal No.	Color of Wire	Signal Name
13	B	–
16	B	–
17	B	–

Connector No.	M60
Connector Name	JOINT CONNECTOR-M06
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
7	W	–
9	W	–

Connector No.	M85
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

H.S.

89	88	87	86	85	84	83	82	81
95	94	93	92	91	90

Terminal No.	Color of Wire	Signal Name
84	W	FLASHER OUTPUT (RIGHT)
85	Y	FLASHER OUTPUT (LEFT)
88	BG	BATTERY (FUSE)
90	Y	BATTERY (F/L)
93	B	GND

Connector No.	M84
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	BLACK

H.S.

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

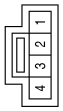
Terminal No.	Color of Wire	Signal Name
2	L	COMBINATION SW INPUT 5
3	GR	COMBINATION SW INPUT 4
4	BR	COMBINATION SW INPUT 3
5	BG	COMBINATION SW INPUT 2
6	W	COMBINATION SW INPUT 1

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

ABLIA8449GB

Connector No.	M102
Connector Name	HAZARD SWITCH
Connector Color	WHITE

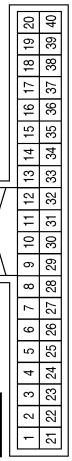
H.S.



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

Connector No.	M122
Connector Name	COMBINATION METER (WITH TYPE B)
Connector Color	WHITE

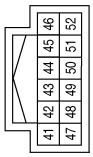
H.S.



Terminal No.	Color of Wire	Signal Name
1	B	GND

Connector No.	M123
Connector Name	COMBINATION METER (WITH TYPE B)
Connector Color	WHITE

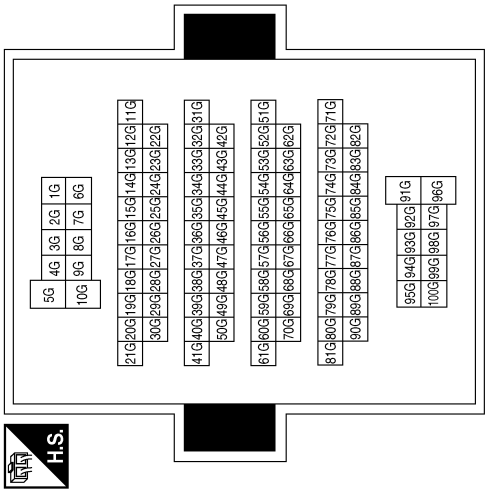
H.S.



Terminal No.	Color of Wire	Signal Name
41	L	CAN-H
42	P	CAN-L
45	LG	BAT
46	GR	IGN
52	B	GND

Connector No.	E4
Connector Name	WIRE TO WIRE
Connector Color	WHITE

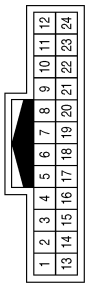
H.S.



Terminal No.	Color of Wire	Signal Name
10G	G	–
33G	Y	–
42G	V	–

Connector No.	E13
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



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

ABLIA8450GB

Connector No.	B6
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	L	–
2	R	–
7	BG	–
8	SB	–

Connector No.	E21
Connector Name	FRONT COMBINATION LAMP LH
Connector Color	BLACK

H.S.

1	2	3	4
5	6	7	8

Terminal No.	Color of Wire	Signal Name
4	V	–
7	B/R	–

Connector No.	E20
Connector Name	FRONT COMBINATION LAMP RH
Connector Color	BLACK

H.S.

1	2	3	4
5	6	7	8

Terminal No.	Color of Wire	Signal Name
4	Y	–
7	B/W	–

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

H.S.

2		1
6	5	4	3

Terminal No.	Color of Wire	Signal Name
4	SB	–
6	BG	–

Connector No.	B9
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
2	Y	–
3	SB	–

Connector No.	B8
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
3	BG	–
8	LG	–

ABLIA8451GB

Connector No.	B42
Connector Name	REAR COMBINATION LAMP RH
Connector Color	WHITE

H.S.

2		1
6	5	4	3

Terminal No.	Color of Wire	Signal Name
4	R	–
6	L	–

Connector No.	B57
Connector Name	BCM (BODY CONTROL MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)
Connector Color	BLACK

H.S.

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

Terminal No.	Color of Wire	Signal Name
41	LG	FLASHER OUTPUT (LEFT)
42	BG	FLASHER OUTPUT (RIGHT)

Connector No.	B73
Connector Name	JOINT CONNECTOR-B01
Connector Color	BLACK

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
6	SB	–
7	BR	–
8	LG	–
10	Y	–
11	R	–
12	BG	–
19	B	–
20	B	–
23	L	–
24	B	–

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

H.S.

15C	14C	13C	12C	11C	10C	9C	8C	7C	6C	5C	4C	3C	2C	1C
46C	45C	44C	43C	42C	41C	40C	39C	38C	37C	36C	26C	25C	24C	23C	22C	21C	20C	19C	18C	17C	16C
55C	54C	53C	52C	51C	50C	49C	48C	47C			35C	34C	33C	32C	31C	30C	29C	28C	27C		

Terminal No.	Color of Wire	Signal Name
38C	G	–
39C	B	–

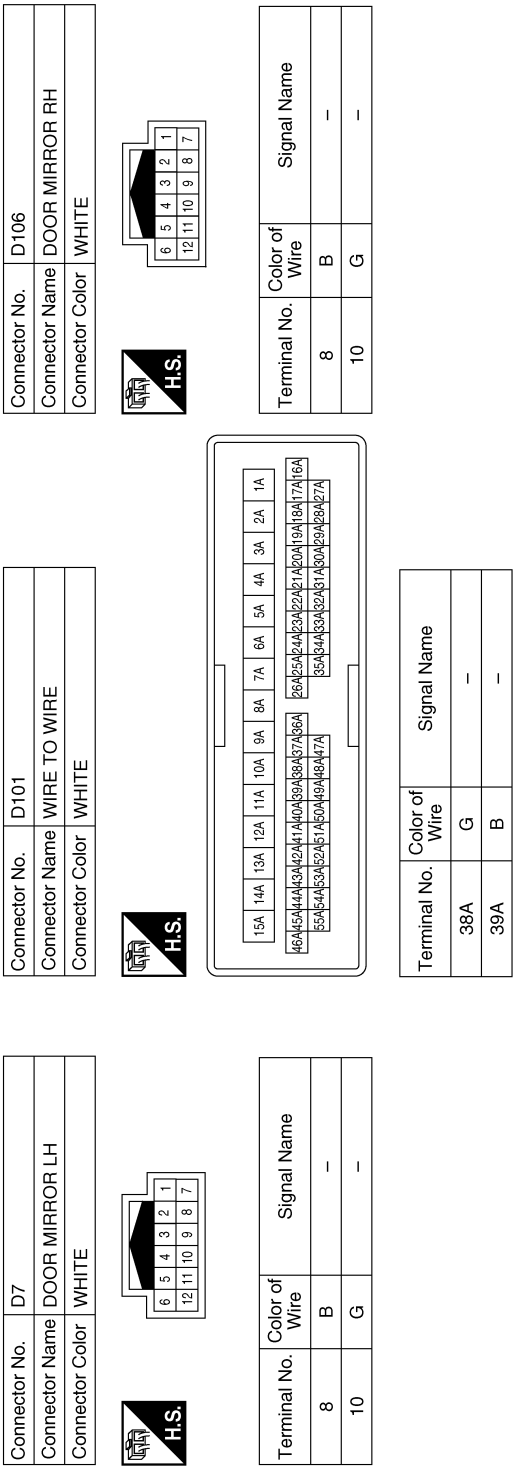
Connector No.	B93
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	L	–
2	R	–
7	B	–
8	BR	–

ABLIA8452GB

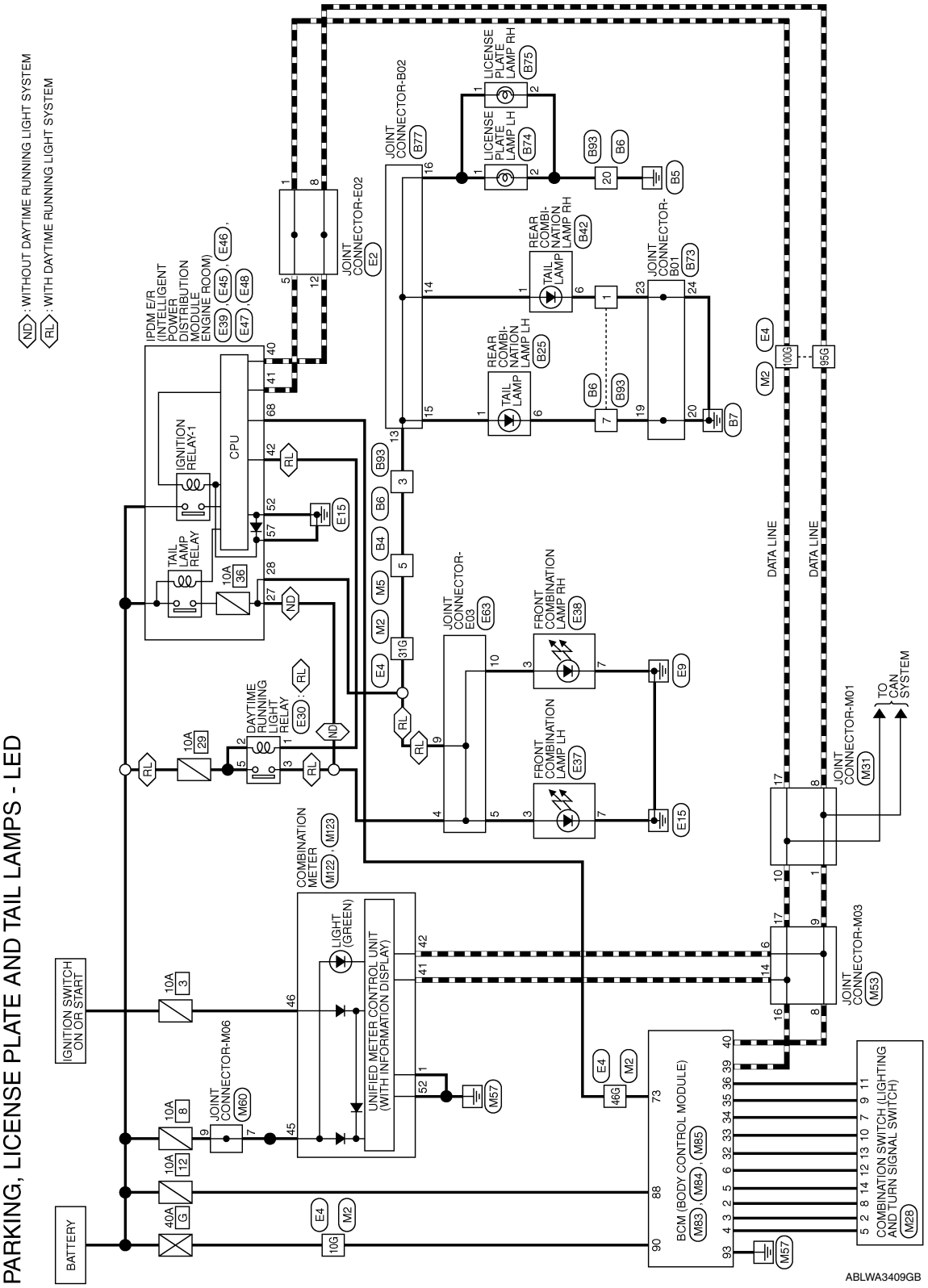


ABLIA8453GB

PARKING, LICENSE PLATE AND TAIL LAMPS

Wiring Diagram

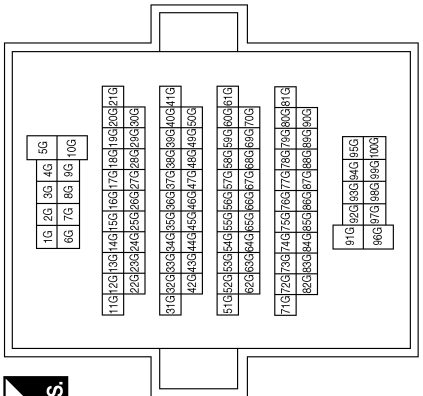
INFOID:0000000013402492



PARKING, LICENSE PLATE AND TAIL LAMPS CONNECTORS - LED

Connector No.	M2
Connector Name	WIRE TO WIRE
Connector Color	WHITE

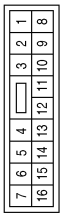
H.S.



Terminal No.	Color of Wire	Signal Name
10G	Y	–
31G	V	–
46G	V	–
95G	P	–
100G	L	–

Connector No.	M5
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
5	V	–

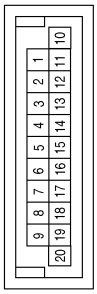
Connector No.	M28
Connector Name	COMBINATION SWITCH
Connector Color	WHITE

H.S.

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

Connector No.	M31
Connector Name	JOINT CONNECTOR-M01
Connector Color	BLUE

H.S.



Terminal No.	Color of Wire	Signal Name
1	P	–
8	P	–
10	L	–
17	L	–

ABLIA8478GB

Connector No.	M53
Connector Name	JOINT CONNECTOR-M03
Connector Color	BLUE

H.S.

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

Terminal No.	Color of Wire	Signal Name
6	P	–
8	P	–
9	P	–
14	L	–
16	L	–
17	L	–

Connector No.	M60
Connector Name	JOINT CONNECTOR-M06
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
7	W	–
9	W	–

Connector No.	M83
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

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
73	V	IGN RELAY OUTPUT1 (USM)

Connector No.	M84
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	BLACK

H.S.

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

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

Connector No.	M85
Connector Name	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	WHITE

H.S.

89	88	87	86	85	84	83	82	81
95	94	93	92	91	90
---	---	---	---	---	---

Terminal No.	Color of Wire	Signal Name
88	BG	BATTERY (FUSE)
90	Y	BATTERY (F/L)
93	B	GND

ABLIA8479GB

Connector No.	E2
Connector Name	JOINT CONNECTOR-E02
Connector Color	BLUE

H.S.

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

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

Connector No.	E30
Connector Name	DAYTIME RUNNING LIGHT RELAY
Connector Color	BLUE

H.S.

3	
5	
2	1

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

Connector No.	M123
Connector Name	COMBINATION METER (WITH TYPE B)
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
41	L	CAN-H
42	P	CAN-L
45	LG	BAT
46	GR	IGN
52	B	GND

Terminal No.	Color of Wire	Signal Name
10G	G	–
31G	R	–
46G	O	–
95G	P	–
100G	L	–

Connector No.	M122
Connector Name	COMBINATION METER (WITH TYPE B)
Connector Color	WHITE

H.S.

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

Terminal No.	Color of Wire	Signal Name
1	B	GND

Connector No.	E4
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

ABLIA8480GB

Connector No.	E37
Connector Name	FRONT COMBINATION LAMP LH
Connector Color	BLACK

H.S.

1	2	3	4
5	6	7	8

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

Connector No.	E38
Connector Name	FRONT COMBINATION LAMP RH
Connector Color	BLACK

H.S.

1	2	3	4
5	6	7	8

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

Connector No.	E39
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK

H.S.

67	66	65	64	63
72	71	70	69	68

Terminal No.	Color of Wire	Signal Name
68	O	IGN SIGNAL

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

H.S.

29	28		27	26	25
36	35	34	33	32	31	30

Terminal No.	Color of Wire	Signal Name
27	L	CLEARANCE/L RH
28	R	TAIL 1

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

H.S.

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

Terminal No.	Color of Wire	Signal Name
40	P	CAN-L
41	L	CAN-H
42	Y	DTRL RLY DRIVE

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

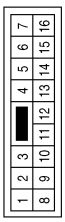
H.S.

51		50	49
56	55	54	53	52

Terminal No.	Color of Wire	Signal Name
52	B/Y	SIGNAL GND

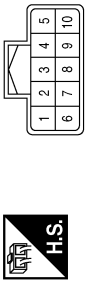
ABLIA8481GB

Connector No.	B4
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
5	LG	–

Connector No.	E63
Connector Name	JOINT CONNECTOR-E03
Connector Color	BLACK

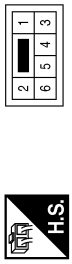


Terminal No.	Color of Wire	Signal Name
4	L	–
5	L	–
9	R	–
10	L	–

Connector No.	E48
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BLACK

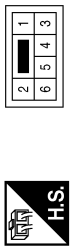
Terminal No.	Color of Wire	Signal Name
57	B/Y	POWER GND

Connector No.	B42
Connector Name	REAR COMBINATION LAMP RH
Connector Color	WHITE



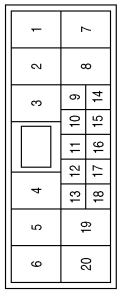
Terminal No.	Color of Wire	Signal Name
1	BR	–
6	L	–

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



Terminal No.	Color of Wire	Signal Name
1	LG	–
6	BG	–

Connector No.	B6
Connector Name	WIRE TO WIRE
Connector Color	WHITE



Terminal No.	Color of Wire	Signal Name
1	L	–
3	LG	–
7	BG	–
20	B	–

ABLIA8482GB

Connector No.	B75
Connector Name	LICENSE PLATE LAMP RH
Connector Color	BROWN

H.S.

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

Connector No.	B74
Connector Name	LICENSE PLATE LAMP LH
Connector Color	BROWN

H.S.

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

Connector No.	B73
Connector Name	JOINT CONNECTOR-B01
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
19	B	–
20	B	–
23	L	–
24	B	–

Connector No.	B93
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

Connector No.	B77
Connector Name	JOINT CONNECTOR-B02
Connector Color	GREEN

H.S.

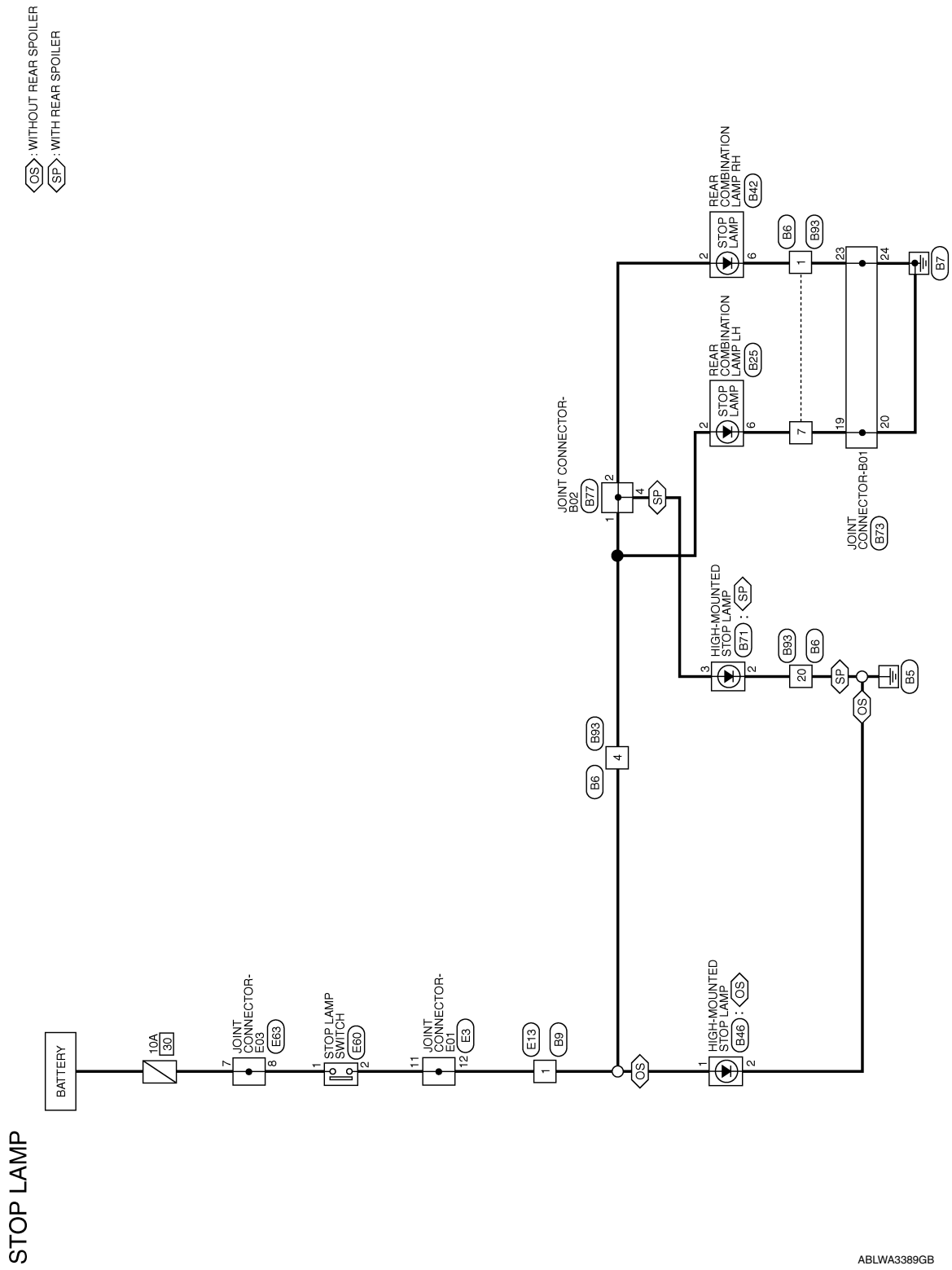
Terminal No.	Color of Wire	Signal Name
13	G	–
14	BR	–
15	LG	–
16	GR	–

ABLIA8483GB

STOP LAMP

Wiring Diagram

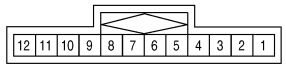
INFOID:0000000013402493



STOP LAMP CONNECTORS

Connector No.	E3
Connector Name	JOINT CONNECTOR-E01
Connector Color	BLUE

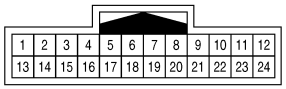
H.S.



Terminal No.	Color of Wire	Signal Name
11	SB	–
12	SB	–

Connector No.	E13
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
1	SB	–

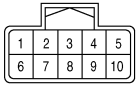
Connector No.	E60
Connector Name	STOP LAMP SWITCH
Connector Color	WHITE

H.S.

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

Connector No.	E63
Connector Name	JOINT CONNECTOR-E03
Connector Color	BLACK

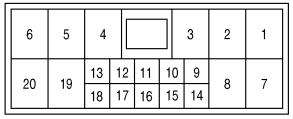
H.S.



Terminal No.	Color of Wire	Signal Name
7	W	–
8	W	–

Connector No.	B6
Connector Name	WIRE TO WIRE
Connector Color	WHITE

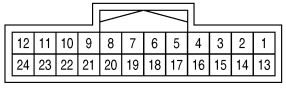
H.S.



Terminal No.	Color of Wire	Signal Name
1	L	–
4	Y	–
7	BG	–
20	B	–

Connector No.	B9
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.



Terminal No.	Color of Wire	Signal Name
1	Y	–

ABLIA8445GB

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

H.S.

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

Connector No.	B42
Connector Name	REAR COMBINATION LAMP RH
Connector Color	WHITE

H.S.

Terminal No.	Color of Wire	Signal Name
2	V	–
6	L	–

Connector No.	B46
Connector Name	HIGH-MOUNTED STOP LAMP (WITHOUT REAR SPOILER)
Connector Color	BLACK

H.S.

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

Connector No.	B71
Connector Name	HIGH-MOUNTED STOP LAMP (WITH REAR SPOILER)
Connector Color	WHITE

H.S.

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

Connector No.	B73
Connector Name	JOINT CONNECTOR-B01
Connector Color	BLACK

H.S.

Terminal No.	Color of Wire	Signal Name
19	B	–
20	B	–
23	L	–
24	B	–

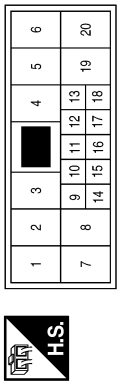
Connector No.	B77
Connector Name	JOINT CONNECTOR-B02
Connector Color	GREEN

H.S.

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

ABLIA8446GB

Connector No.	B93
Connector Name	WIRE TO WIRE
Connector Color	WHITE



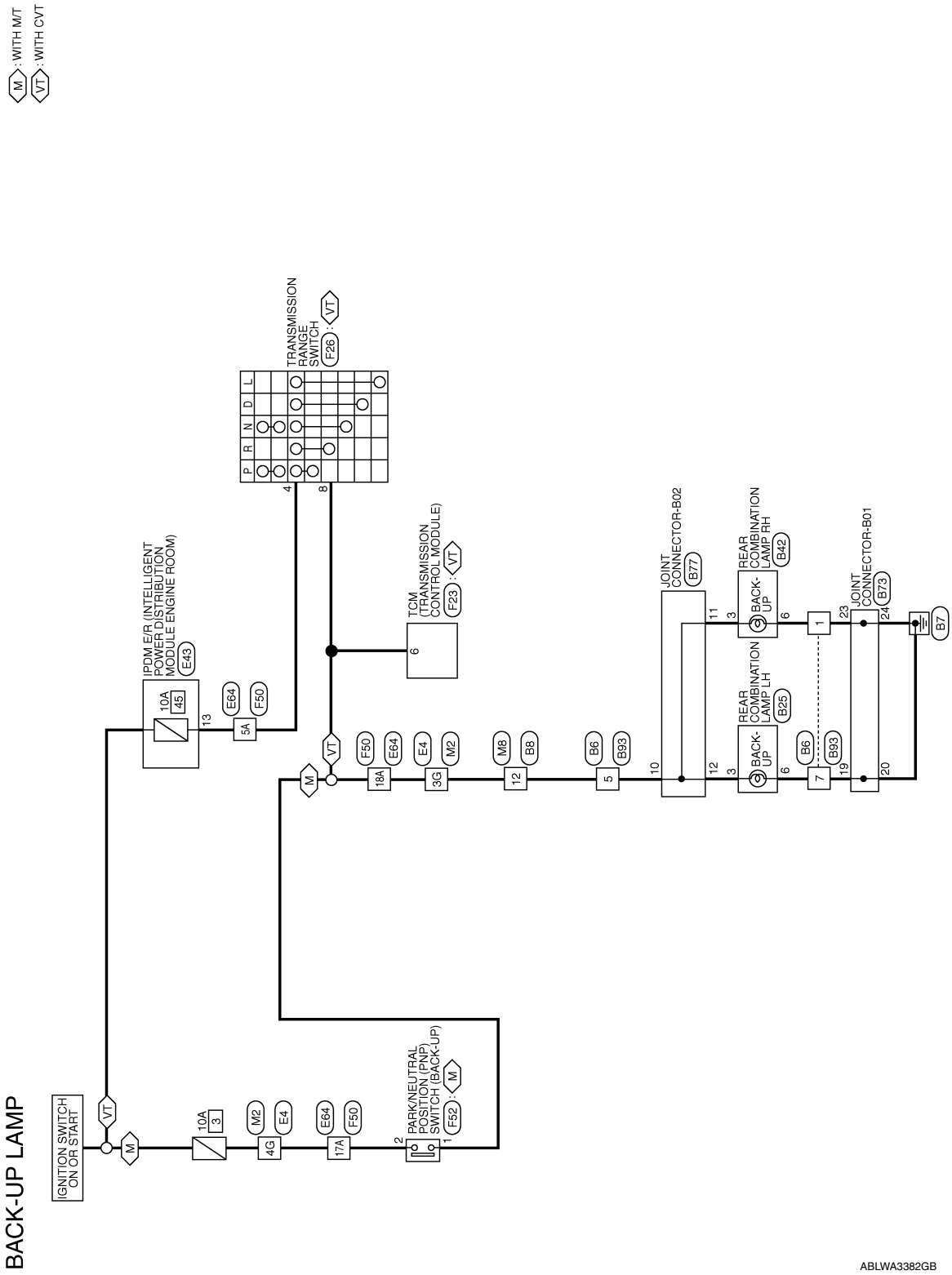
Terminal No.	Color of Wire	Signal Name
1	L	–
4	Y	–
7	B	–
20	B	–

AALIA1022GB

BACK-UP LAMP

Wiring Diagram

INFOID:0000000013434543



BACK-UP LAMP CONNECTORS

Connector No.	M2
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

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

H.S.

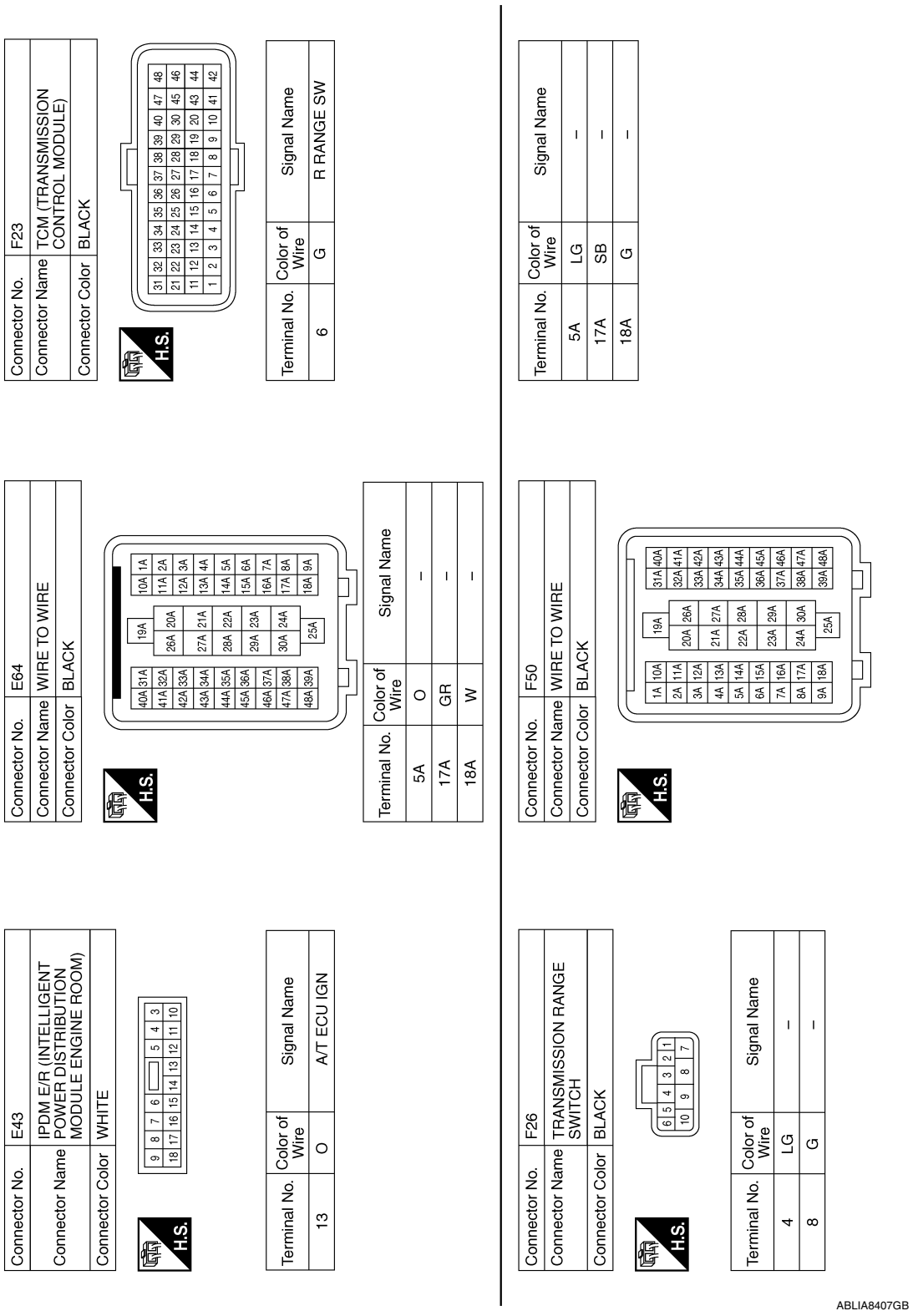
Terminal No.	Color of Wire	Signal Name
12	G	–

Connector No.	E4
Connector Name	WIRE TO WIRE
Connector Color	WHITE

H.S.

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

ABLIA8406GB


Connector No. E43
Connector Name IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color WHITE
H.S.
9 8 7 6 5 4 3
18 17 16 15 14 13 12 11 10
Terminal No. Color of Wire Signal Name
13 O A/T ECU IGN
Connector No. E64
Connector Name WIRE TO WIRE
Connector Color BLACK
H.S.
40A 31A 19A 10A 1A
41A 32A 11A 2A
42A 33A 26A 20A 12A 3A
43A 34A 27A 21A 13A 4A
44A 35A 28A 22A 14A 5A
45A 36A 29A 23A 15A 6A
46A 37A 30A 24A 16A 7A
47A 38A 25A 17A 8A
48A 39A 18A 9A
Terminal No. Color of Wire Signal Name
5A O –
17A GR –
18A W –
Connector No. F23
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 G R RANGE SW
Connector No. F50
Connector Name WIRE TO WIRE
Connector Color BLACK
H.S.
31A 40A
32A 41A
33A 42A
34A 43A
35A 44A
36A 45A
37A 46A
38A 47A
39A 48A
19A
20A 26A
21A 27A
22A 28A
23A 29A
24A 30A
25A
1A 10A
2A 11A
3A 12A
4A 13A
5A 14A
6A 15A
7A 16A
8A 17A
9A 18A
Terminal No. Color of Wire Signal Name
5A LG –
17A SB –
18A G –
Connector No. F26
Connector Name TRANSMISSION RANGE SWITCH
Connector Color BLACK
H.S.
6 5 4 3 2 1
10 9 8 7
Terminal No. Color of Wire Signal Name
4 LG –
8 G –
ABLIA8407GB

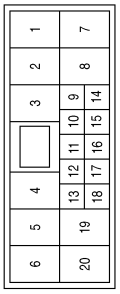
Connector No.	F52
Connector Name	PARK/NEUTRAL POSITION (PNP) SWITCH
Connector Color	GREEN

H.S.

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

Connector No.	B6
Connector Name	WIRE TO WIRE
Connector Color	WHITE

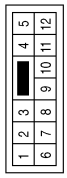
H.S.



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

Connector No.	B8
Connector Name	WIRE TO WIRE
Connector Color	WHITE

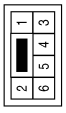
H.S.



Terminal No.	Color of Wire	Signal Name
12	W	–

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

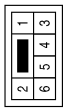
H.S.



Terminal No.	Color of Wire	Signal Name
3	P	–
6	BG	–

Connector No.	B42
Connector Name	REAR COMBINATION LAMP RH
Connector Color	WHITE

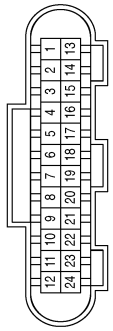
H.S.



Terminal No.	Color of Wire	Signal Name
3	SB	–
6	L	–

Connector No.	B73
Connector Name	JOINT CONNECTOR-B01
Connector Color	BLACK

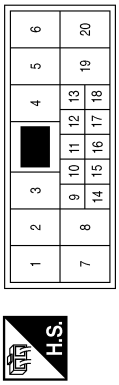
H.S.



Terminal No.	Color of Wire	Signal Name
19	B	–
20	B	–
23	L	–
24	B	–

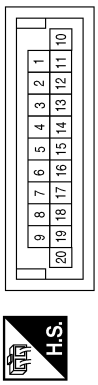
ABLIA8408GB

Connector No.	B93
Connector Name	WIRE TO WIRE
Connector Color	WHITE



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

Connector No.	B77
Connector Name	JOINT CONNECTOR-B02
Connector Color	GREEN



Terminal No.	Color of Wire	Signal Name
10	W	–
11	SB	–
12	P	–

ABLIA8409GB

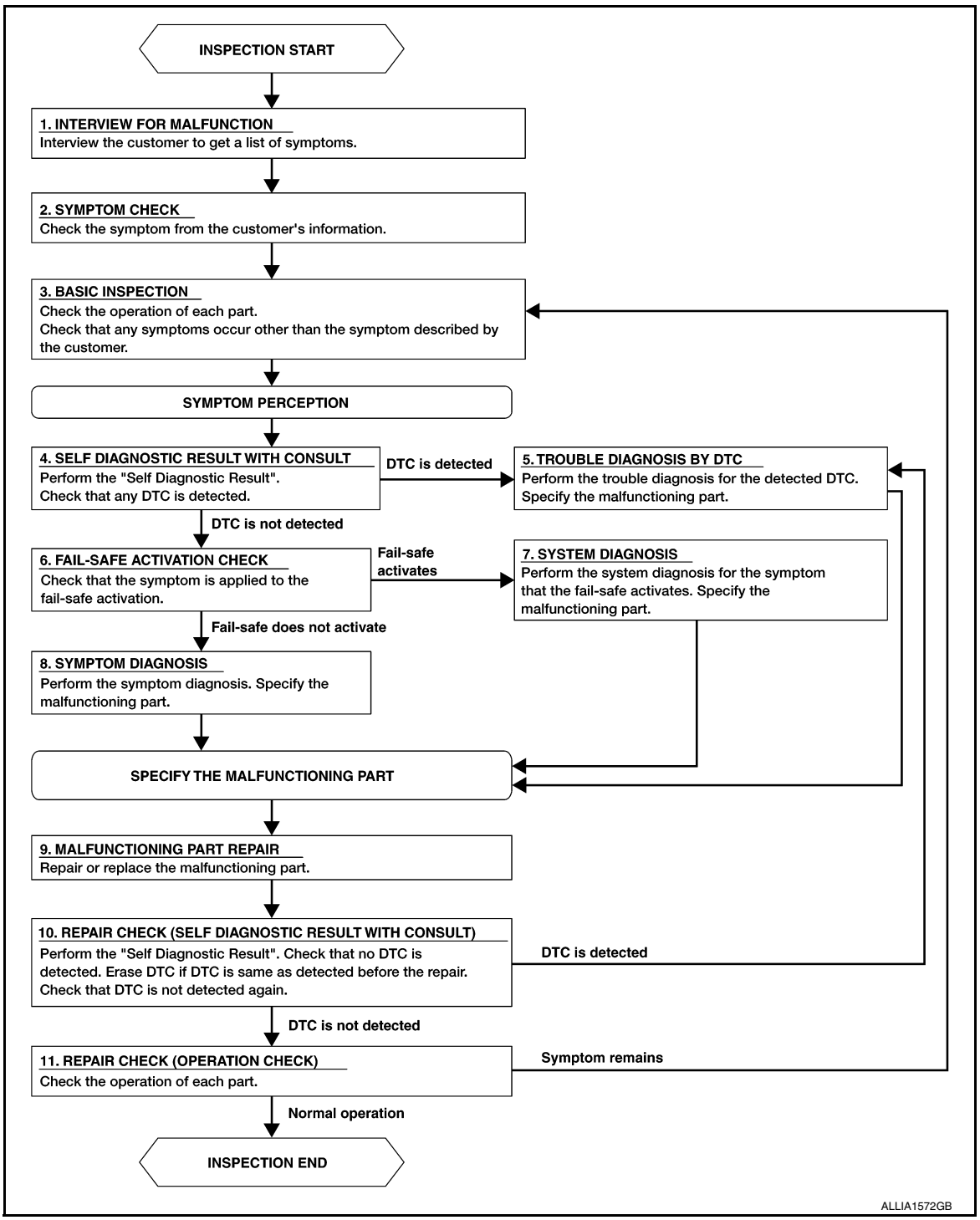
BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:0000000013402495

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:0000000013402496

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-245, "Symptom Table".

DTC/CIRCUIT DIAGNOSIS

HEADLAMP (HI) CIRCUIT

Component Function Check

INFOID:0000000013402497

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-222, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000013402498

Regarding Wiring Diagram information, refer to EXL-167, "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	41	10 A
Headlamp HI (LH)		42	

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	E51	9	Ground	EXTERNAL LAMPS	Hi	Battery voltage
					Off	0
LH	E50				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	E51	9	E43	5	Yes
LH	E50			6	

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-31, "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 10 and ground.

Front combination lamp			—	Continuity
Connector		Terminal		
RH	E51	10	Ground	Yes
LH	E50			

Is the inspection result normal?

YES >> Replace the headlamp bulb. Refer to EXL-257, "Bulb Replacement".
NO >> Repair or replace the harness or connector.

HEADLAMP (LO) CIRCUIT

Component Function Check

INFOID:0000000013402499

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-224, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000013402500

Regarding Wiring Diagram information, refer to EXL-167, "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	43	15A
Headlamp LO (LH)		44	

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	E38	1	Ground	EXTERNAL LAMPS	Lo	Battery voltage
					Off	0
LH	E37				Lo	Battery voltage
					Off	0

Is the inspection result normal?

YES >> Perform the LED headlamp diagnosis. Refer to EXL-228, "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	E38	1	E43	8	Yes
LH	E37			7	

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-31, "Removal and Installation".
NO >> Repair or replace harness.

DAYTIME RUNNING LIGHT RELAY CIRCUIT

Component Function Check

INFOID:0000000013402501

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-226, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000013402502

Regarding Wiring Diagram information, refer to EXL-173, "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	29	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		
E30	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-227, "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				
E46	42	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-31, "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	
E46	42	E30	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		
E46	42		No

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-31, "Removal and Installation".
NO >> Repair or replace harness.

Component Inspection

INFOID:0000000013402503

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:0000000013402504

Regarding Wiring Diagram information, refer to EXL-167, "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	E38	5		Yes
LH	E37			

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-149, "LED Headlamp Control Module".

Is the headlamp turned ON?

YES >> Replace LED headlamp control module. Refer to EXL-257, "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-228, "Diagnosis Procedure".

Is the headlamp turned ON?

YES >> Replace headlamp. Refer to EXL-257, "Removal and Installation".
NO >> LED headlamp is normal. Check headlamp control system.

PARKING LAMP CIRCUIT

Component Function Check

INFOID:0000000013402505

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-229, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000013402506

Regarding Wiring Diagram information, refer to EXL-202, "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	IPDM E/R	36	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		No
E45	27		

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				
E45	27	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-31, "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	E38	3	E45	27	Yes
LH	E37				

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	E38	7		Yes
LH	E37			

Is the inspection result normal?

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

TAIL LAMP CIRCUIT

Component Function Check

INFOID:0000000013402509

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-231, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000013402510

Regarding Wiring Diagram information. Refer to EXL-202, "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-229, "Component Function Check".

2.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	B42	1	Ground	EXTERNAL LAMPS	TAIL	Battery voltage
					Off	0 V
LH	B25				TAIL	Battery voltage
					Off	0 V

Is the inspection result normal?

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

3.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	B42	1	E45	28	Yes
LH	B25				

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-31, "Removal and Installation".
NO >> Repair or replace harness.

4. CHECK TAIL LAMP GROUND CIRCUIT

Check continuity between rear combination lamp harness connector and ground.

Rear combination lamp			Ground	Continuity
Connector		Terminal		
RH	B42	6		Yes
LH	B25			

Is the inspection result normal?

YES >> Replace rear combination lamp. Refer to EXL-264, "Removal and Installation".
NO >> Repair or replace harness.

LICENSE PLATE LAMP CIRCUIT

Component Function Check

INFOID:0000000013402511

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-231, "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-233, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000013402512

Regarding Wiring Diagram information, refer to EXL-202, "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-263, "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	B75	1	E45	28	Yes
LH	B74				

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	B75	2		Yes
LH	B74			

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:0000000013402513

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-235, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000013402514

Regarding Wiring Diagram information, refer to EXL-187, "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	40	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	E28	1	Ground	EXTERNAL LAMPS	Fog	Battery voltage
					Off	0 V
LH	E27	1			Fog	Battery voltage
					Off	0 V

Is the inspection result normal?

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

3.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	E28	1	E47	53	Yes
LH	E27	1		54	

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-31, "Removal and Installation".
NO >> Repair or replace harness.

4. CHECK FRONT FOG LAMP GROUND CIRCUIT

Check continuity between front fog lamp harness connector and ground.

Front fog lamp			Ground	Continuity
Connector		Terminal		
RH	E28	2		Yes
LH	E27	2		

Is the inspection result normal?

YES >> Replace bulb. Refer to EXL-259, "Removal and Installation".
NO >> Repair or replace harness.

TURN SIGNAL LAMP CIRCUIT

Component Function Check

INFOID:0000000013402515

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-237, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000013402516

Regarding Wiring Diagram information, refer to EXL-193, "Wiring Diagram".

1.CHECK TURN SIGNAL LAMP BULB

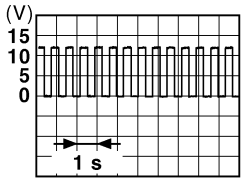
Check the applicable lamp bulb to be sure the proper bulb standard is in use and the bulb is not open.

Is the bulb OK?

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

2.CHECK TURN SIGNAL LAMP OUTPUT VOLTAGE

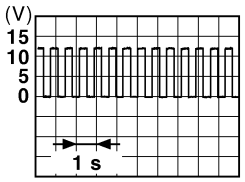
1. Turn ignition switch OFF.
2. Disconnect the front combination lamp connector, door mirror connector and the rear combination lamp connector.
3. Turn ignition switch ON.
4. With turn signal switch operating, check the voltage between the front combination lamp harness connector and ground.

Front combination lamp			(–)	Voltage
Connector		Terminal		
LH	E21	4	Ground	
RH	E20			

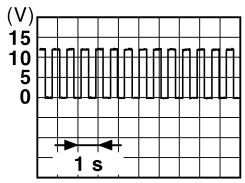
PKID0926E

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

Door mirror		(–)	Voltage
Connector	Terminal		

LH	D7	10	Ground	 PKID0926E
RH	D106			

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	B25	4	Ground	 PKID0926E
RH	B42			

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 or the rear combination lamp harness connector or the door mirror harness connector.

Front combination lamp			BCM		Continuity
Connector		Terminal	Connector	Terminal	
LH	E21	4	M85	85	Yes
RH	E20			84	

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

Door mirror lamp			BCM		Continuity
Connector		Terminal	Connector	Terminal	
LH	D7	10	M85	85	Yes
RH	D106			84	

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	B25	4	M85	85	Yes
RH	B42			84	

Is the inspection result normal?

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

4. CHECK TURN SIGNAL LAMP SHORT CIRCUIT

1. Check continuity between the BCM harness connector and ground.

BCM		Ground	Continuity
Connector	Terminal		
M85	84		No
	85		

Are the inspection results normal?

YES >> Replace BCM. Refer to BCS-78, "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	E21	7	Ground	Yes
RH	E20			

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

Rear combination lamp			(–)	Continuity
Connector		Terminal		
LH	B25	6	Ground	Yes
RH	B42			

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

Door mirror			(–)	Continuity
Connector		Terminal		
LH	D7	8	Ground	Yes
RH	D106			

Are the inspection results normal?

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

OPTICAL SENSOR

Component Function Check

INFOID:0000000013402517

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-240, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000013402518

Regarding Wiring Diagram information, refer to EXL-180, "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		
M72	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		
M72	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				
M72	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-269, "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	
M72	1	M84	17	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		
M72	1		No

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-78, "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	
M72	3	M84	18	Yes

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-78, "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	
M72	2	M84	14	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		
M72	2		No

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-78, "Removal and Installation".
NO >> Repair or replace harness.

HAZARD SWITCH

Component Function Check

INFOID:0000000013402519

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-243, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000013402520

Regarding Wiring Diagram information, refer to EXL-193, "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		
M102	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	
M102	2	M84	29	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		
M102	2		No

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-78, "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		
M102	3		Yes

Is the inspection result normal?

YES >> Replace hazard switch. Refer to EXL-268, "Removal and Installation".
NO >> Repair or replace harness.

SYMPTOM DIAGNOSIS

EXTERIOR LIGHTING SYSTEM SYMPTOMS

Symptom Table

INFOID:0000000013402521

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-222, "Component Function Check".
	Both sides	**Symptom diagnosis** “BOTH SIDE HEADLAMPS (HI) ARE NOT TURNED ON” Refer to EXL-249, "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-224, "Component Function Check".
	Both sides	**Symptom diagnosis** “BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON” Refer to EXL-250, "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-228, "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-150, "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-76, "Symptom Table".
		• Optical sensor power supply/ground/signal circuit • Optical sensor • BCM	Optical sensor Refer to EXL-240, "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-229, "Component Function Check".
Tail lamp is not turned ON	• Fuse • Tail lamp power supply/ground circuit • Rear combination lamp internal circuit - Tail lamp - Harness • IPDM E/R	Tail lamp circuit Refer to EXL-231, "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-233, "Component Function Check".
Parking lamp, license plate lamp and tail lamp are not turned ON	**Symptom diagnosis** “PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON” Refer to EXL-251, "Diagnosis Procedure".	
Position lamp indicator is not turned ON (Parking lamp, license plate 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-226, "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 • Transmission range switch	—

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-237, "Component Function Check".
	Indicator lamp is included	• Combination switch input/output signal circuit • Combination switch • BCM	Combination switch Refer to BCS-76, "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-126, "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-243, "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-235, "Component Function Check".
	Both sides	**Symptom diagnosis** "BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON" Refer to EXL-252, "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:0000000013402522

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:0000000013402523

Both side headlamps (HI) are not turned ON when setting to the lighting switch HI or PASS.

Diagnosis Procedure

INFOID:0000000013402524

1.COMBINATION SWITCH INSPECTION

Check combination switch. Refer to BCS-76, "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-31, "Removal and Installation".
NO >> Replace BCM. Refer to BCS-78, "Removal and Installation".

BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

Description

INFOID:0000000013402525

Both side headlamps (LO) are not turned ON in any condition.

Diagnosis Procedure

INFOID:0000000013402526

1.CHECK COMBINATION SWITCH

Check combination switch. Refer to BCS-76, "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-31, "Removal and Installation".
NO >> Replace BCM. Refer to BCS-78, "Removal and Installation".

PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON

Description

INFOID:0000000013402527

The parking, license plate and tail lamps are not turned ON in any condition.

Diagnosis Procedure

INFOID:0000000013402528

1.COMBINATION SWITCH INSPECTION

Check combination switch. Refer to BCS-76, "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-31, "Removal and Installation".
NO >> Replace BCM. Refer to BCS-78, "Removal and Installation".

BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

Description

INFOID:0000000013402529

Both side front fog lamps are not turned ON in any condition.

Diagnosis Procedure

INFOID:0000000013402530

1.COMBINATION SWITCH INSPECTION

Check combination switch. Refer to BCS-76, "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-235, "Diagnosis Procedure".
NO >> Replace BCM. Refer to BCS-78, "Removal and Installation".

PERIODIC MAINTENANCE

HEADLAMP AIMING ADJUSTMENT

Aiming Adjustment

INFOID:0000000013402531

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:

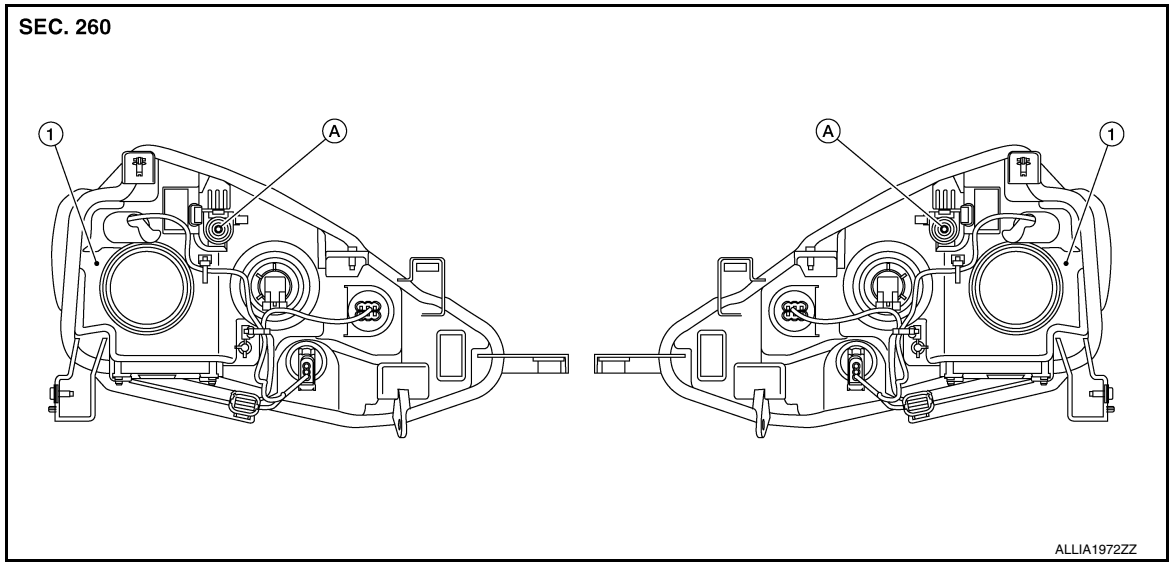
Do not use organic solvent (thinner, gasoline etc.)

- 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. Adjusting screw

Aiming Adjustment procedure

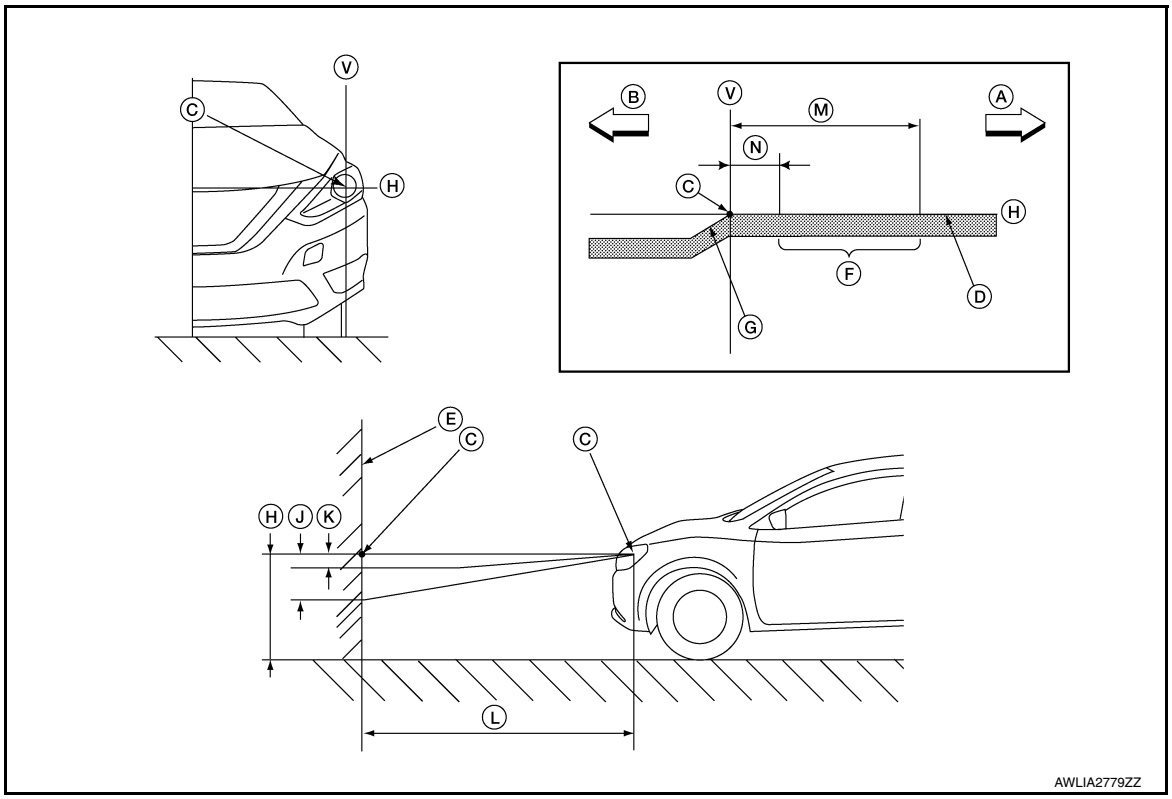
1. Position the screen.
   NOTE:
   - Stop the vehicle facing the screen.
   - Place the screen on a plain road vertically.
2. Face the screen with the vehicle. Maintain 10 m (33 ft) between the headlamp bulb center and the screen.
3. Start the engine. Turn the headlamp (LO) ON.

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. 26.6 mm (1.05 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:0000000013402532

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.

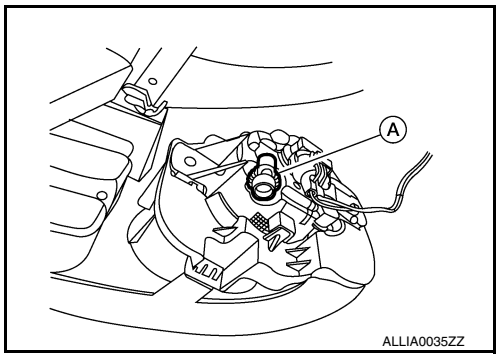
NOTE:

- 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:

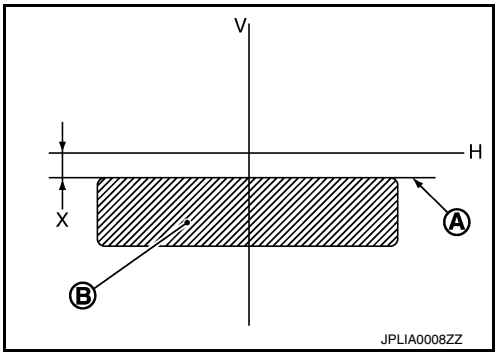
- The vehicle front body has been repaired.
- The front fog lamp has been removed or replaced.
- Any outfitting has been installed.
- The vehicle’s standard load condition has been substantially increased.

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).



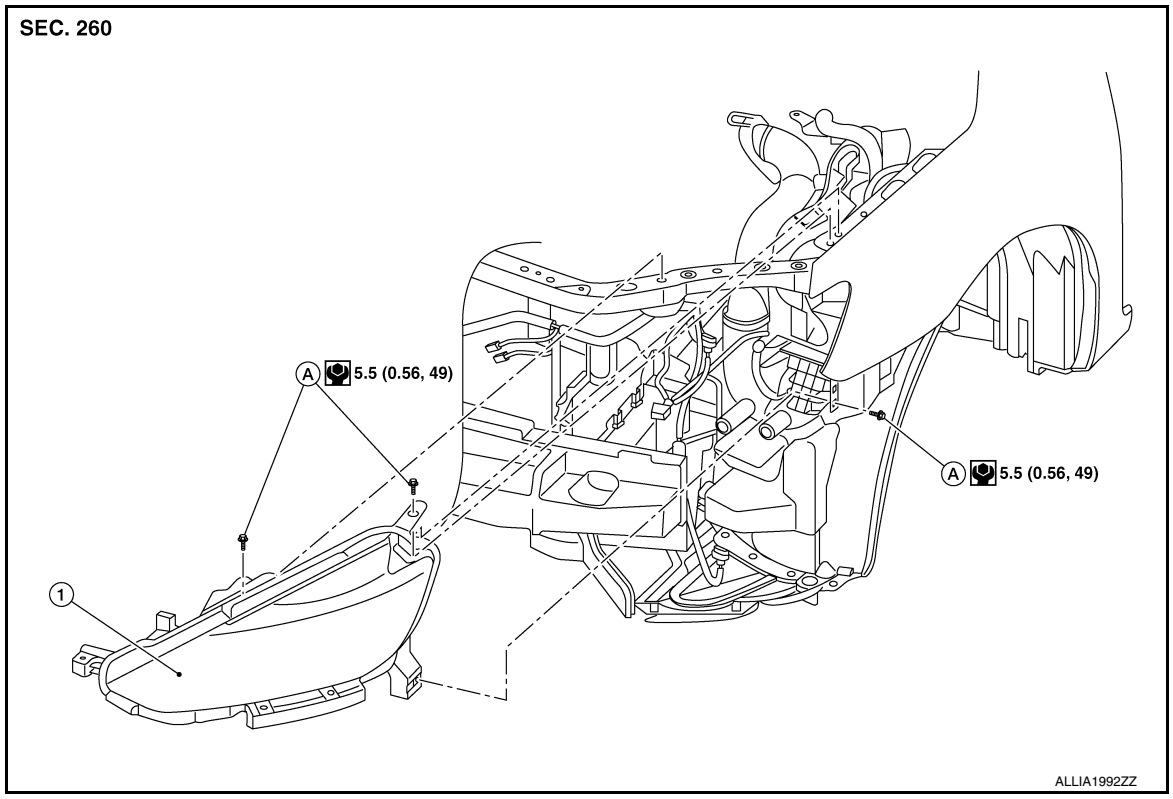
A : Cutoff line
B : High illuminance area
H : Horizontal center line of front fog lamp
V : Vertical center line of front fog lamp
X : Cutoff line height

REMOVAL AND INSTALLATION

FRONT COMBINATION LAMP

Exploded View

INFOID:0000000013402533



1. Front combination lamp
A. Bolt

NOTE:
LH shown, RH similar.

Removal and Installation

INFOID:0000000013402534

REMOVAL

1. Remove front bumper fascia. Refer to EXT-17, "Removal and Installation".
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-253, "Aiming Adjustment".

Bulb Replacement

INFOID:0000000013402535

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-257, "Removal and Installation".

HEADLAMP (HIGH BEAM) BULB

Removal

1. Remove front combination lamp. Refer to EXL-257, "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-257, "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-257, "Removal and Installation".
2. Rotate bulb socket counterclockwise and remove from front combination lamp.
3. Remove bulb from bulb socket.

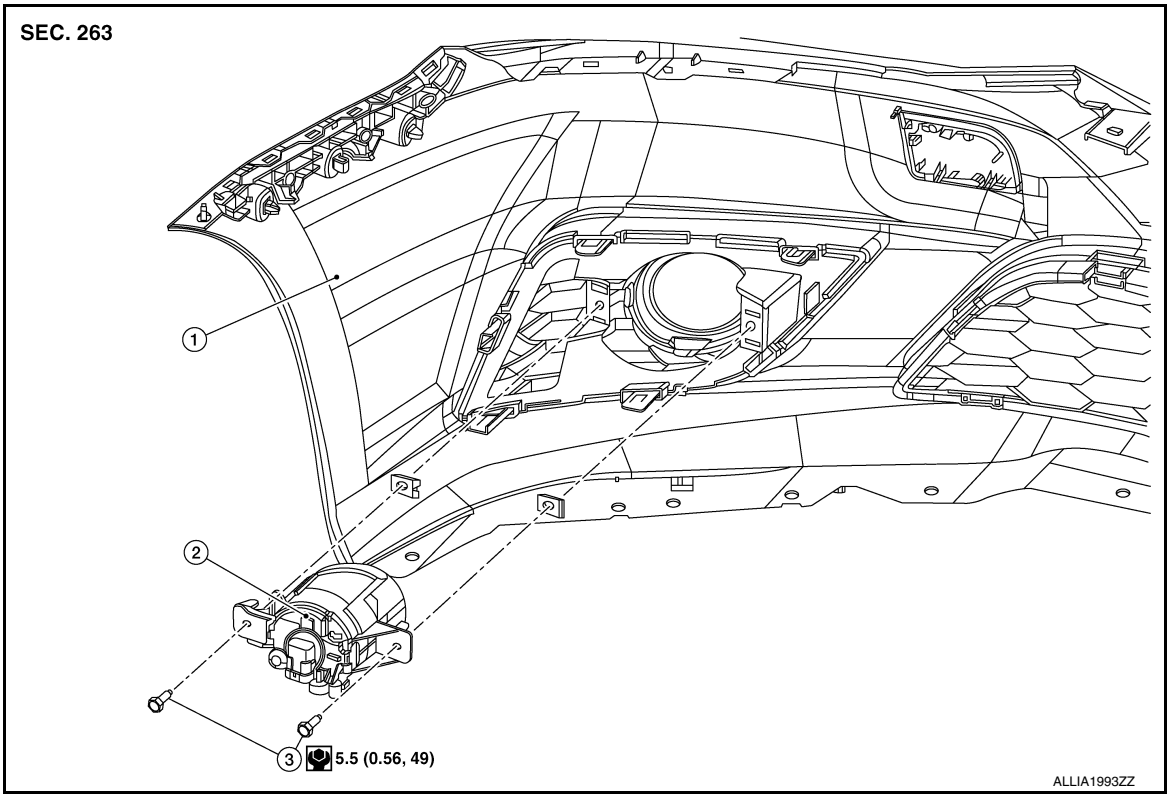
Installation

Installation is in the reverse order of removal.

FRONT FOG LAMP

Exploded View

INFOID:0000000013475448



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

Removal and Installation

INFOID:0000000013402536

FOG LAMP

Removal

1. Position the fender protector aside. Refer to EXT-28, "FENDER PROTECTOR : Removal and Installation - Front Fender Protector".
2. Disconnect the harness connector from the front fog lamp.
3. Remove the screws and the front fog lamp.

Installation

Installation is in the reverse order of removal.

NOTE:

After installing, perform fog lamp aiming adjustment. Refer to EXL-125, "Aiming Adjustment".

FRONT FOG LAMP BULB

Removal

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.**

1. Position the front fender protector aside. Refer to EXT-28, "FENDER PROTECTOR : Removal and Installation - Front Fender Protector".

2. Disconnect the harness connector from the front fog lamp bulb.
3. 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.

DOOR MIRROR TURN SIGNAL LAMP

Removal and Installation

INFOID:0000000013480157

The door mirror side turn signal lamp is integrated into the door mirror assembly and is serviced as an assembly. Refer to MIR-19, "Exploded View".

HIGH-MOUNTED STOP LAMP

Removal and Installation

INFOID:0000000013402541

HIGH-MOUNTED STOP LAMP - WITH REAR SPOILER

Removal

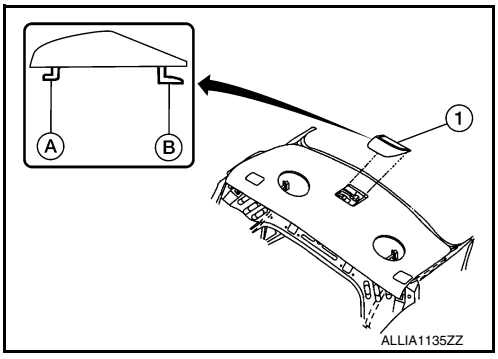
1. Remove the rear air spoiler. Refer to EXT-46, "Removal and Installation".
2. Remove the screws and the high-mount stop lamp from the rear air spoiler.

Installation
Installation is in the reverse order of removal.

HIGH-MOUNTED STOP LAMP - WITHOUT REAR SPOILER

Removal

1. Slide high-mounted stop lamp (1) rearward on parcel shelf to provide clearance for front tabs (A).
2. Lift front of lamp assembly up and pull forward to provide clearance for rear tabs (B).



3. Disconnect the harness connector from the high-mounted stop lamp and remove.

Installation
Installation is in the reverse order of removal.

Bulb Replacement

INFOID:0000000013402542

HIGH-MOUNTED STOP LAMP - WITH REAR SPOILER

The high-mounted stop lamp LED bulb is integrated into the high-mounted stop lamp and is serviced as an assembly. Refer to EXL-132, "Removal and Installation".

HIGH-MOUNTED STOP LAMP - WITHOUT REAR SPOILER

The high-mounted stop lamp LED bulb is integrated into the high-mounted stop lamp and is serviced as an assembly. Refer to EXL-132, "Removal and Installation".

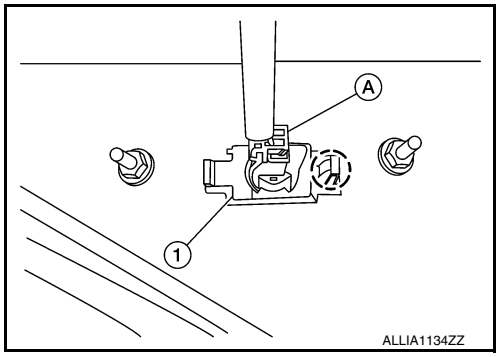
LICENSE PLATE LAMP

Removal and Installation

INFOID:0000000013402546

REMOVAL

1. Remove the license lamp finisher. Refer to EXT-44, "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:0000000013402547

WARNING:

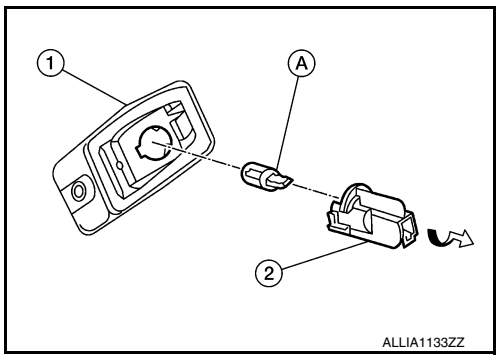
Do not touch bulb with your hand while it is on or right after being turned off. Burning may result.

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-45, "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

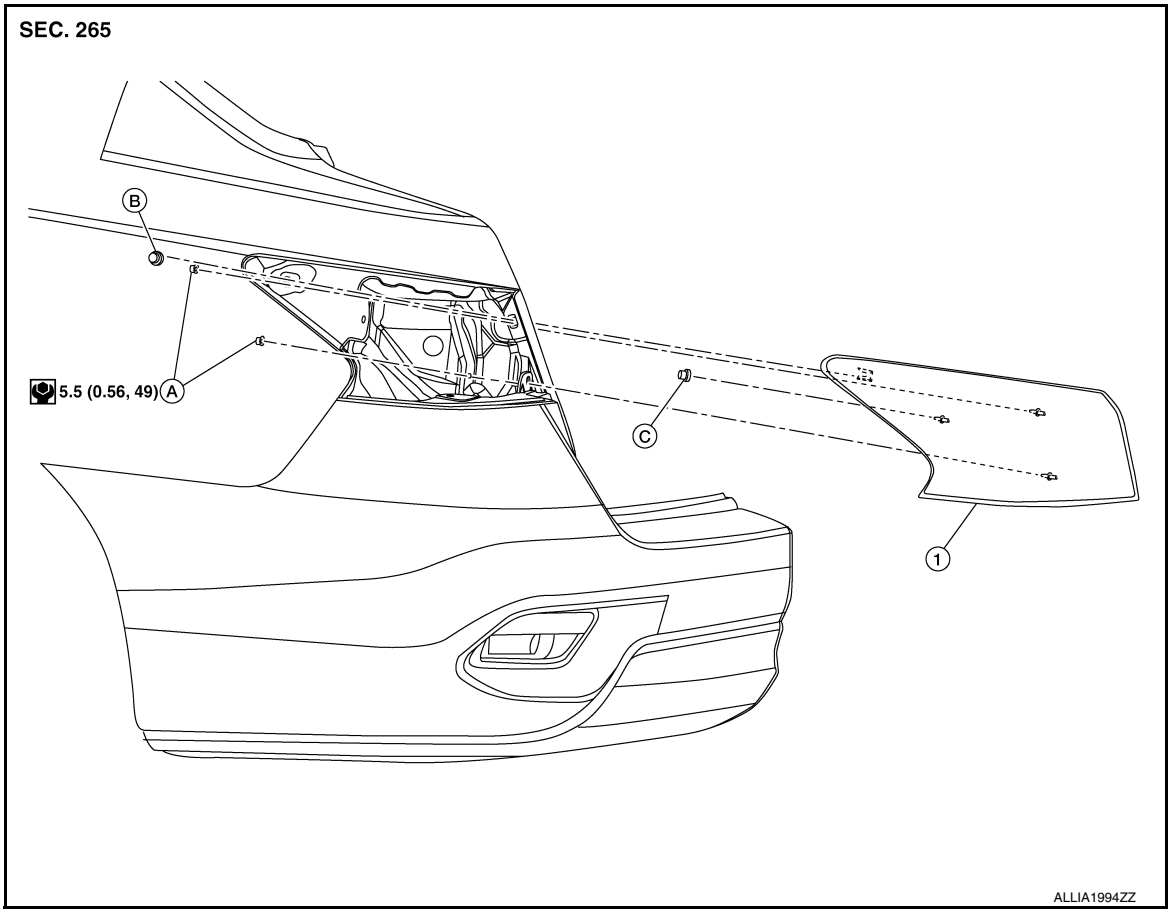
Installation is in the reverse order of removal.

REAR COMBINATION LAMP

Exploded View

INFOID:0000000013402548

REAR COMBINATION LAMP



1. Rear combination lamp
A. Bolt
B. Clip
C. Grommet

NOTE:
RH shown, LH similar.

Removal and Installation

INFOID:0000000013402549

Removal

1. Partially remove trunk side finisher. Refer to INT-43, "TRUNK SIDE FINISHER : Removal and Installation".
2. Remove the rear combination lamp nuts.
3. Disconnect the harness connector from the rear combination lamp.
4. Pull the rear combination lamp rearward and remove.

INSTALLATION

Installation is in the reverse order of removal.

Bulb Replacement

INFOID:0000000013402550

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-134, "Removal and Installation".
2. Rotate the rear turn signal lamp bulb socket counterclockwise and remove.
3. Remove the rear turn signal lamp bulb from 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

Removal

1. Remove the rear combination lamp. Refer to EXL-134, "Removal and Installation".
2. Rotate the stop/tail lamp bulb socket counterclockwise and remove.
3. Remove the stop/tail lamp bulb from bulb socket.

BACK-UP LAMP BULB

Removal

1. Remove the rear combination lamp. Refer to EXL-134, "Removal and Installation".
2. Rotate the back-up lamp bulb socket counterclockwise and remove.
3. Remove the back-up lamp bulb from bulb socket.

Installation

Installation is in the reverse order of removal.

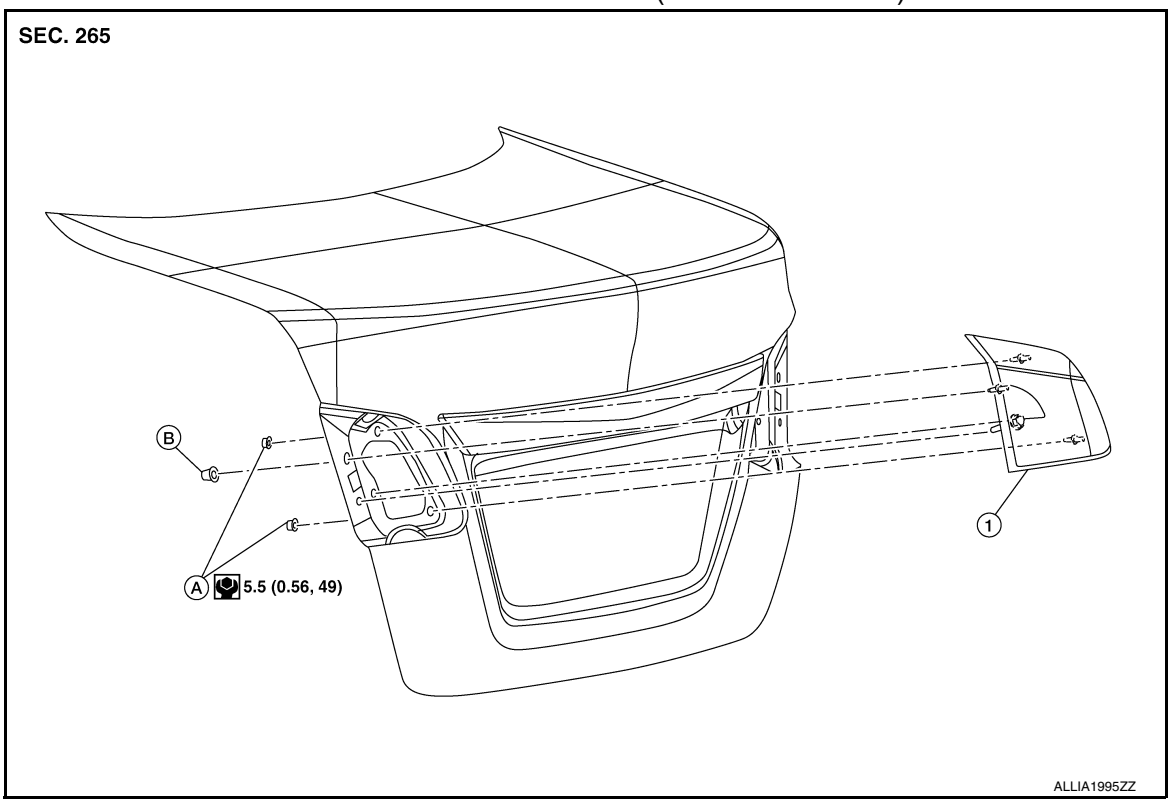
CAUTION:

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

Exploded View

INFOID:0000000013475449

REAR COMBINATION LAMP (TRUCK LID SIDE)



1. Back-up lamp assembly
A. Nut
B. Grommet

NOTE:
LH shown, RH similar.

Removal and Installation

INFOID:0000000013475450

REMOVAL

1. Partially remove trunk lid trim. Refer to INT-45, "Removal and Installation".
2. Remove rear combination lamp (truck lid side) nuts then remove rear combination lamp (truck lid side).

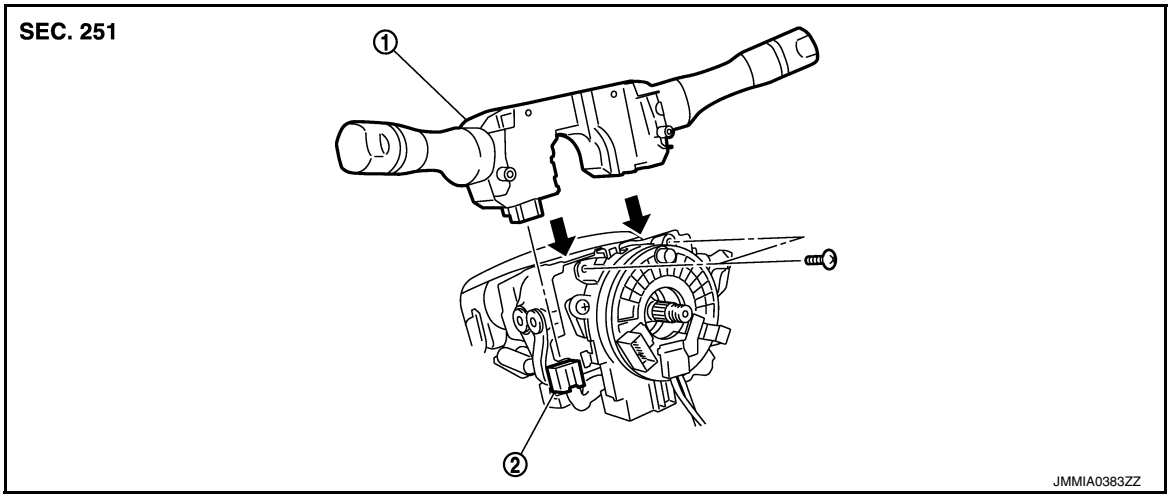
INSTALLATION

Installation is in the reverse order of removal.

COMBINATION SWITCH

Exploded View

INFOID:0000000013402554



1. Combination switch 2. Combination switch harness connector

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

Removal and Installation

INFOID:0000000013402555

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-74, "Removal and Installation (Battery)".
2. Remove the steering column covers. Refer to IP-16, "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-41, "ADDITIONAL SERVICE WHEN REPLACING CONTROL UNIT : Description".**

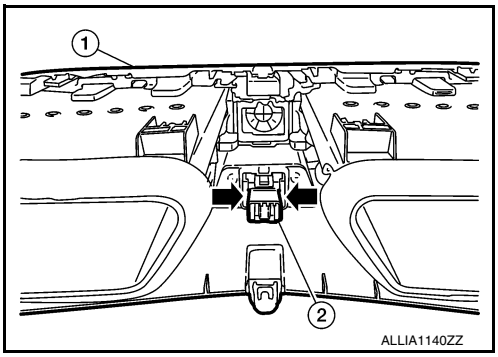
HAZARD SWITCH

Removal and Installation

INFOID:0000000013402556

REMOVAL

1. Remove cluster lid C (1). Refer to IP-20, "Removal and Installation - 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:0000000013402557

REMOVAL

1. Remove the defroster grille (LH) using a suitable tool.
2. Disconnect the harness connector from the optical sensor.
3. Release the pawls and remove the optical sensor.

INSTALLATION

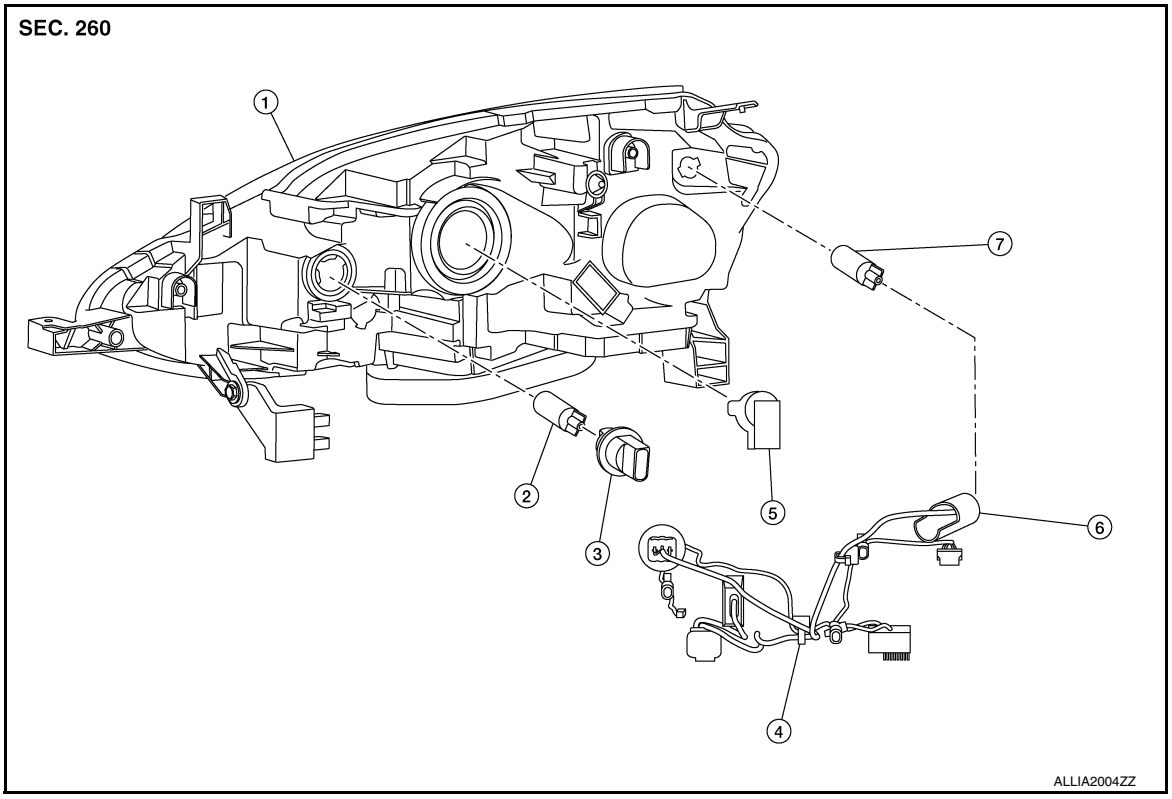
Installation is in the reverse order of removal.

UNIT DISASSEMBLY AND ASSEMBLY

FRONT COMBINATION LAMP

Exploded View

INFOID:0000000013402558



1. Front combination lamp (RH)
2. Turn signal lamp bulb
3. Turn signal lamp bulb socket
4. Harness connector
5. High beam lamp bulb
6. Side marker lamp bulb
7. Side marker lamp bulb socket

NOTE:
RH shown, LH similar.

Disassembly and Assembly

INFOID:0000000013402559

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-257, "Removal and Installation".

DISASSEMBLY

1. Remove front combination lamp. Refer to EXL-257, "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.

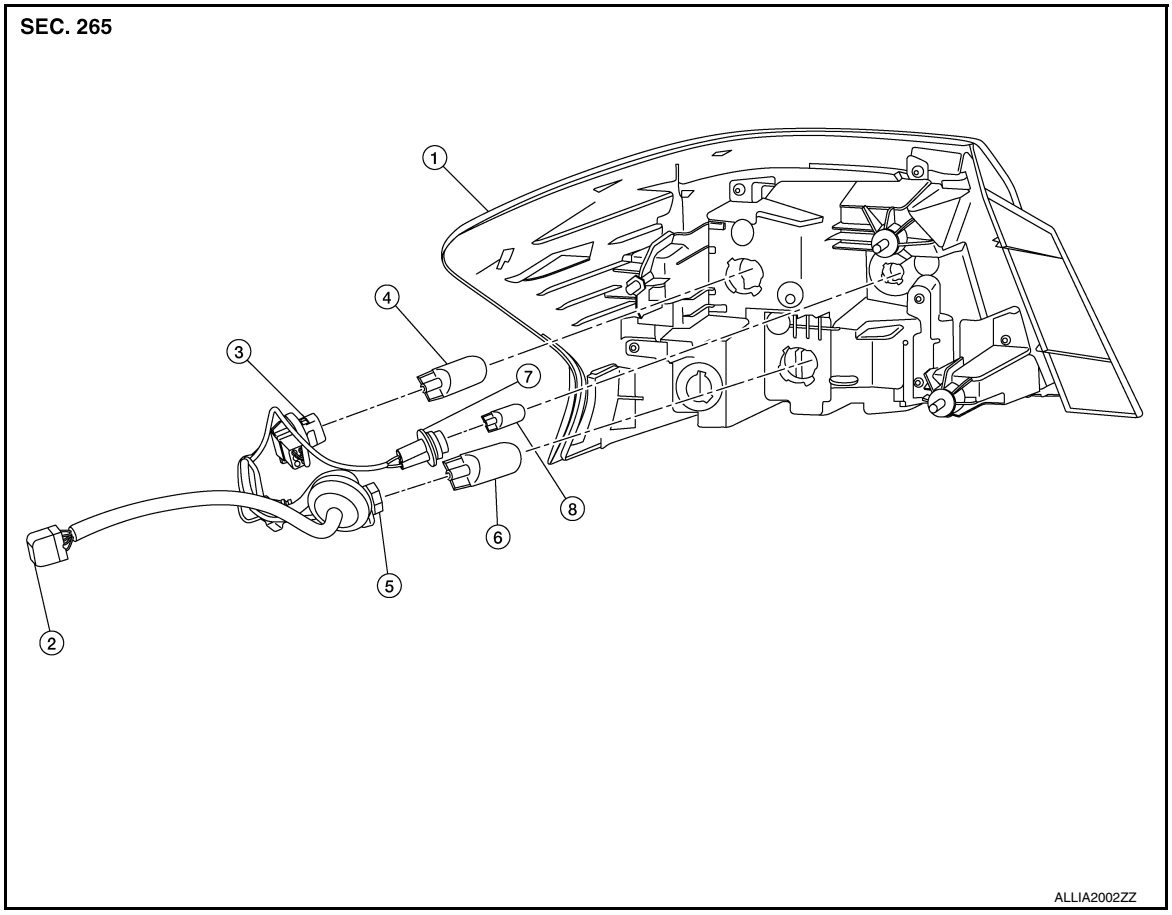
ASSEMBLY

Assembly is in the reverse order of disassembly.

REAR COMBINATION LAMP

Exploded View

INFOID:0000000013402560



1. Rear combination lamp
2. Rear combination lamp harness connector
3. Rear turn signal lamp
4. Rear turn signal lamp bulb
5. Stop/tail lamp bulb
6. Stop/tail lamp bulb socket
7. Back-up lamp bulb socket
8. Back-up lamp bulb

Disassembly and Assembly

INFOID:0000000013402561

DISASSEMBLY

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.**

1. Remove rear combination lamp. Refer to EXL-134, "Removal and Installation".
2. Rotate rear turn signal lamp bulb socket counterclockwise to remove from rear combination lamp.
3. Remove the rear turn signal lamp bulb from bulb socket.
4. Rotate back-up lamp bulb socket counterclockwise to remove from rear combination lamp.
5. Remove the back-up lamp bulb from bulb socket.
6. Rotate stop/tail lamp bulb socket counterclockwise to remove from rear combination lamp.
7. Remove the stop/tail lamp bulb from bulb socket.

ASSEMBLY

Assembly is in the reverse order of disassembly.

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Bulb Specifications

INFOID:0000000013402562

Item		Wattage (W)
Front combination lamp	High beam	65
	Low beam	LED
	Turn signal/parking lamp	27/7
	Side marker lamp	5
Fog lamp (if equipped)		55
Door mirror turn signal lamp (if equipped)		LED
Rear combination lamp	Stop/Tail lamp	21/5
	Turn signal lamp (amber)	21
	Back-up lamp	16
License plate lamp		5
High-mounted stop lamp	Without rear spoiler	LED
	With rear spoiler	LED

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