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CONTENTS

HALOGEN HEADLAMP	TURN SIGNAL AND HAZARD WARNING
PRECAUTION6	LAMPS : System Diagram12 TURN SIGNAL AND HAZARD WARNING
TILOAOTTON	LAMBO O L D III
PRECAUTIONS 6	LAMPS: System Description12 G
Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TEN-	PARKING, LICENSE PLATE AND TAIL LAMPS13 PARKING, LICENSE PLATE AND TAIL LAMPS:
SIONER"6	System Diagram13
Precaution for Work6	PARKING, LICENSE PLATE AND TAIL LAMPS:
DDED A D A TION	System Description13
PREPARATION7	COMBINATION SWITCH READING SYSTEM13
PREPARATION7	COMBINATION SWITCH READING SYSTEM:13
Special Service Tool7	System Diagram (With Intelligent Key System)13
·	COMBINATION SWITCH READING SYSTEM:
SYSTEM DESCRIPTION8	System Description (With Intelligent Key System)13
COMPONENT PARTS8	COMBINATION SWITCH READING SYSTEM:
Component Parts Location8	System Diagram (Without Intelligent Key System)16 K COMBINATION SWITCH READING SYSTEM:
Component Description9	System Description (Without Intelligent Key Sys-
SYSTEM10	4
3131EW10	, LA
HEADLAMP SYSTEM10	DIAGNOSIS SYSTEM (BCM) (WITH INTELLI-
HEADLAMP SYSTEM : System Diagram10	GENT KEY SYSTEM)20
HEADLAMP SYSTEM : System Description10	COMMON ITEM20
AUTO LIGHT SYSTEM10	COMMON ITEM : CONSULT Function (BCM -
AUTO LIGHT SYSTEM : System Diagram11	COMMON ITEM) 20
AUTO LIGHT SYSTEM : System Description11	, IN
	HEADLAMP21
DAYTIME RUNNING LIGHT SYSTEM11	HEADLAMP : CONSULT Function (BCM - HEAD
DAYTIME RUNNING LIGHT SYSTEM : System	LAMP)21 O
Diagram11	FLASHER22
DAYTIME RUNNING LIGHT SYSTEM : System	FLASHER : CONSULT Function (BCM - FLASH-
Description11	ER)22
FRONT FOG LAMP SYSTEM12	,
FRONT FOG LAMP SYSTEM : System Diagram12	DIAGNOSIS SYSTEM (BCM) (WITHOUT IN-
FRONT FOG LAMP SYSTEM : System Descrip-	TELLIGENT KEY SYSTEM)23
tion12	COMMON ITEM23
TURN GLOVAL AND HATARR WARNING !	COMMON ITEM : CONSULT Function (BCM -
TURN SIGNAL AND HAZARD WARNING LAMPS12	COMMON ITEM)

HEADLAMP ::::::::::::::::::::::::::::::::::::	. 24	BCM (BODY CONTROL SYSTEM) (WITH INTEL- LIGENT KEY SYSTEM): Diagnosis Procedure.	
LAMP)		BCM (BODY CONTROL SYSTEM) (WITHOUT IN	
FLASHER ::::::::::::::::::::::::::::::::::::	. 25	TELLIGENT KEY SYSTEM) BCM (BODY CONTROL SYSTEM) (WITHOUT	91
ER)	25	INTELLIGENT KEY SYSTEM) : Diagnosis Proce	·_
DIAGNOSIS SYSTEM (IPDM E/R) (WITH IN-	. 20	dure	
TELLIGENT KEY SYSTEM)	. 26	IPDM E/R (WITH INTELLIGENT KEY SYSTEM)	
Diagnosis Description		IPDM E/R (WITH INTELLIGENT KEY SYSTEM):	
CONSULT Function (IPDM E/R)	. 27	Diagnosis Procedure	92
DIAGNOSIS SYSTEM (IPDM E/R) (WITHOUT INTELLIGENT KEY SYSTEM)	30	IPDM E/R (WITHOUT INTELLIGENT KEY SYSTEM)	93
Diagnosis Description		IPDM E/R (WITHOUT INTELLIGENT KEY SYS-	
CONSULT Function (IPDM E/R)		TEM) : Diagnosis Procedure	93
ECU DIAGNOSIS INFORMATION	. 34	HEADLAMP (HI) CIRCUIT	
BCM, IPDM E/R	. 34	Component Function Check	
List of ECU Reference		Diagnosis Procedure	
WIRING DIAGRAM	. 35	HEADLAMP (LO) CIRCUIT	
HEADLAMP	35	Description Component Function Check	
Wiring Diagram		Diagnosis Procedure	
Wiring Diagram			99
AUTO LIGHT SYSTEM	49	Description	
Wiring Diagram		Diagnosis Procedure Component Inspection	
		Component inspection	. 101
FRONT FOG LAMP		FRONT FOG LAMP CIRCUIT	
Willing Diagram	. 50	Description	
TURN SIGNAL AND HAZARD WARNING		Component Function Check Diagnosis Procedure	
LAMPS		Diagnosis Frocedure	. 102
Wiring Diagram	. 62	PARKING LAMP CIRCUIT	
PARKING, LICENSE PLATE AND TAIL		Description	
LAMPS	. 71	Component Function Check Diagnosis Procedure	
Wiring Diagram	. 71	•	
STOP LAMP	79	TURN SIGNAL LAMP CIRCUIT	
Wiring Diagram		Description	
		Component Function Check Diagnosis Procedure	
BACK-UP LAMP		· ·	
Wiring Diagram	. 83	OPTICAL SENSOR	
BASIC INSPECTION	. 88	Description	
DIACNOSIS AND BEDAID WORK ELOW	00	Component Function Check Diagnosis Procedure	
DIAGNOSIS AND REPAIR WORK FLOW Work Flow		-	
WOIN Flow	. 00	HAZARD SWITCH	
DTC/CIRCUIT DIAGNOSIS	91	Component Function Check	
POWER SUPPLY AND GROUND CIRCUIT	04	Diagnosis Procedure	. 113
FOWER SUFFET AND GROUND CIRCUIT	. 51	SYMPTOM DIAGNOSIS	. 115
BCM (BODY CONTROL SYSTEM) (WITH INTEL-			
LIGENT KEY SYSTEM)	. 91	EXTERIOR LIGHTING SYSTEM SYMPTOMS	
		Symptom Table	. 110

NORMAL OPERATING CONDITION	117 Removal and Installation
Description	
BOTH SIDE HEADLAMPS DO NOT SWITCH	
	•
TO HIGH BEAM	
Description	
Diagnosis Procedure	Removal and Installation
DAYTIME LIGHT SYSTEM INOPERATIVE	119 ODTICAL SENSOD
Description	119 OPTICAL SENSOR
Diagnosis Procedure	119 Removal and Installation
BOTH SIDE HEADLAMPS (LO) ARE NOT	UNIT DISASSEMBLY AND ASSEMBLY . 140
TURNED ON	
Description	
Diagnosis Procedure	120 Disassembly and Assembly140
PARKING, LICENSE PLATE AND TAIL	DEAD COMPINATION LAMP
LAMPS ARE NOT TURNED ON	REAR COMBINATION LAMP142
Description	Laploded view142
Diagnosis Procedure	
-	SERVICE DATA AND SPECIFICATIONS
BOTH SIDE FRONT FOG LAMPS ARE NOT	(SDS)
TURNED ON	122 ` ′
Description	
Diagnosis Procedure	122 (SDS)
PERIODIC MAINTENANCE	Pulb Specifications 144
FERIODIC IVIAIN I ENANCE	LED HEADLAMP
HEADLAMP	123 PDECALITION
Aiming Adjustment	PRECAUTION
FRONT FOOLAMB	125 PRECAUTIONS145
FRONT FOG LAMP	120
Aiming Adjustment	125 (SRS) "AIR BAG" and "SEAT BELT PRE-TEN-
REMOVAL AND INSTALLATION	
LENGTHE MOINELANDIN MINIMI	Precaution for Work
FRONT COMBINATION LAMP	127
Exploded View	127 PREPARATION
Removal and Installation	127
Bulb Replacement	PREPARATION
EDONT FOC LAMP	Special Service Tool
FRONT FOG LAMP	CVCTEM DECCDIDION 445
Exploded View	123
Removal and Installation	
DOOR MIRROR TURN SIGNAL LAMP	131 Component Parts Location147
Removal and Installation	131 Optical Sensor148
	Hazard Switch149
HIGH-MOUNTED STOP LAMP	, , ,
Removal and Installation	•
Bulb Replacement	132 SYSTEM150
LICENSE PLATE LAMP	
Removal and Installation	
Bulb Replacement	100 LEADLAND SYSTEM: System Description 450
Duily Nephacement	HEADLAMP SYSTEM : Fail-safe151
REAR COMBINATION LAMP	134
Exploded View	AUTO LIGHT SYSTEM151
Removal and Installation	
Bulb Replacement	
Exploded View	

DAYTIME RUNNING LIGHT SYSTEM : System	Wiring Diagram	180
Description152	FRONT FOG LAMP	187
TURN SIGNAL AND HAZARD WARNING LAMP	Wiring Diagram	
SYSTEM153 TURN SIGNAL AND HAZARD WARNING LAMP	TURN SIGNAL AND HAZARD WARNING	
SYSTEM: System Description153	LAMPS	193
3131LW . System Description133	Wiring Diagram	
PARKING, LICENSE PLATE AND TAIL LAMP		
SYSTEM154 PARKING, LICENSE PLATE AND TAIL LAMP	PARKING, LICENSE PLATE AND TAIL	000
SYSTEM: System Description154	LAMPS Wiring Diagram	
PARKING, LICENSE PLATE AND TAIL LAMP	Willing Diagram	202
SYSTEM : Fail-Safe154	STOP LAMP	
FRONT FOG LAMP SYSTEM154	Wiring Diagram	209
FRONT FOG LAMP SYSTEM : System Descrip-	BACK-UP LAMP	213
tion155	Wiring Diagram	213
FRONT FOG LAMP SYSTEM : Fail-Safe155	BASIC INSPECTION	240
EXTERIOR LAMP BATTERY SAVER SYSTEM155	BASIC INSPECTION	210
EXTERIOR LAMP BATTERY SAVER SYSTEM :	DIAGNOSIS AND REPAIR WORK FLOW	218
System Description156	Work Flow	218
DIAGNOSIS SYSTEM (BCM) 157	LED HEADLAMP OPERATION INSPECTIO	N.221
	Work Procedure	
COMMON ITEM157	DTC/CIDCUIT DIA CNOCIC	
COMMON ITEM: CONSULT Function (BCM - COMMON ITEM)157	DTC/CIRCUIT DIAGNOSIS	222
COMMON TIEM)137	HEADLAMP (HI) CIRCUIT	222
HEAD LAMP158	Component Function Check	
HEAD LAMP: CONSULT Function (BCM - HEAD	Diagnosis Procedure	222
LAMP)158	HEADLAMP (LO) CIRCUIT	224
FLASHER159	Component Function Check	
FLASHER: CONSULT Function (BCM - FLASH-	Diagnosis Procedure	224
ER)159	DAYTIME RUNNING LIGHT RELAY CIRCU	IT
INT LAMP160	DAT TIME NOTWING EIGHT NEEAT GINGS	226
INT LAMP : CONSULT Function (BCM - INT	Component Function Check	
LAMP)160	Diagnosis Procedure	
DOOR LOCK160	Component Inspection	227
DOOR LOCK : CONSULT Function (BCM -	LED HEADLAMP	228
DOOR LOCK)160	Diagnosis Procedure	
DIAGNOSIS SYSTEM (IPDM E/R) 162	PARKING LAMP CIRCUIT	220
Diagnosis Description162	Component Function Check	
CONSULT Function (IPDM E/R)163	Diagnosis Procedure	
ECU DIAGNOSIS INFORMATION166	•	
	TAIL LAMP CIRCUIT Component Function Check	
BCM, IPDM E/R 166	Diagnosis Procedure	
List of ECU Reference166	•	
WIRING DIAGRAM167	LICENSE PLATE LAMP CIRCUIT	
	Component Function Check	
HEADLAMP	Diagnosis Procedure	
Wiring Diagram167	FRONT FOG LAMP CIRCUIT	
DAYTIME RUNNING LIGHT SYSTEM 173	Component Function Check	
Wiring Diagram173	Diagnosis Procedure	235
AUTO LIGHT SYSTEM180	TURN SIGNAL LAMP CIRCUIT	237

Component Function Check237	Removal and Installation	257
Diagnosis Procedure237	Bulb Replacement	257
OPTICAL SENSOR240	FRONT FOG LAMP	259
Component Function Check240	Exploded View	
Diagnosis Procedure240	Removal and Installation	
HAZARD SWITCH243	DOOR MIRROR TURN SIGNAL LAMP	261
Component Function Check243	Removal and Installation	
Diagnosis Procedure243		`
OVERDTON DIA ONOGIO	HIGH-MOUNTED STOP LAMP	
SYMPTOM DIAGNOSIS245	Removal and Installation	
EXTERIOR LIGHTING SYSTEM SYMPTOMS. 245	Bulb Replacement	262
Symptom Table	LICENSE PLATE LAMP	263
Cymptom rabic243	Removal and Installation	
NORMAL OPERATING CONDITION248	Bulb Replacement	L
Description248	·	
DOTH OLDE HEAD! AMDO (HI) ADE NOT	REAR COMBINATION LAMP	
BOTH SIDE HEADLAMPS (HI) ARE NOT	Exploded View	
TURNED ON249	Removal and Installation	
Description	Bulb Replacement	
Diagnosis Procedure249	Exploded View	
BOTH SIDE HEADLAMPS (LO) ARE NOT	Removal and Installation	266
TURNED ON250	COMBINATION SWITCH	267
Description	Exploded View	1
Diagnosis Procedure	Removal and Installation	
PARKING, LICENSE PLATE AND TAIL	HAZARD SWITCH	268
LAMPS ARE NOT TURNED ON251	Removal and Installation	
Description		
Diagnosis Procedure251	OPTICAL SENSOR	269
	Removal and Installation	269
BOTH SIDE FRONT FOG LAMPS ARE NOT	UNIT DISASSEMBLY AND ASSEMBL	V 070
TURNED ON252	UNIT DISASSEMBLT AND ASSEMBL	1 . 2/0
Description252	FRONT COMBINATION LAMP	270
Diagnosis Procedure252	Exploded View	
PERIODIC MAINTENANCE253	Disassembly and Assembly	
F LINIODIC MAINT LINANGL253		E)
HEADLAMP AIMING ADJUSTMENT253	REAR COMBINATION LAMP	
Aiming Adjustment253	Exploded View	
	Disassembly and Assembly	272
FRONT FOG LAMP255	SERVICE DATA AND SPECIFICATION	NS
Aiming Adjustment255	(SDS)	_
REMOVAL AND INSTALLATION 257	(000)	2/4
NEWOVAL AND INGLACED TON	SERVICE DATA AND SPECIFICATIONS	
FRONT COMBINATION LAMP257	(SDS)	274
Exploded View257	Bulb Specifications	
	·	

PRECAUTION

PRECAUTIONS

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

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

- 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 >

[HALOGEN HEADLAMP]

PREPARATION

PREPARATION

Special Service Tool

INFOID:0000000012782793

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

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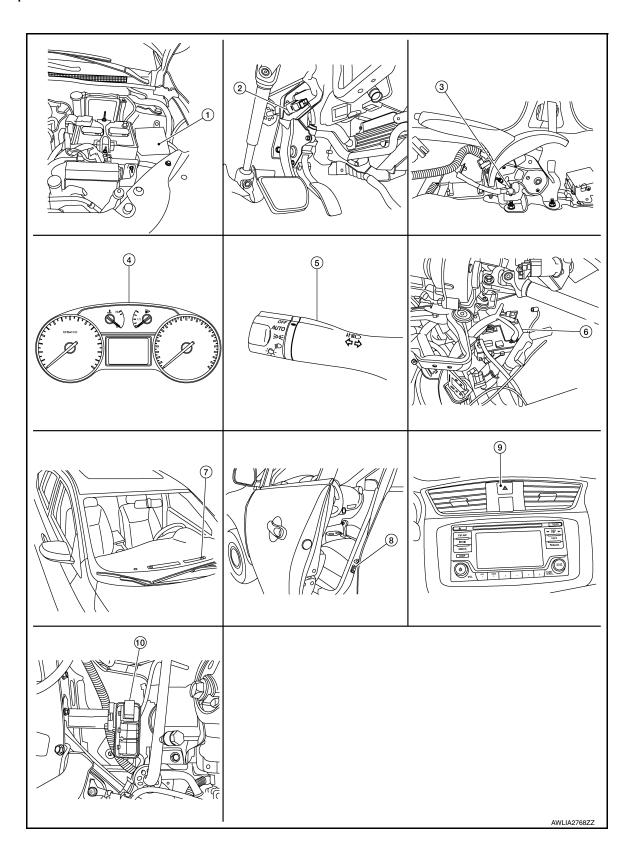
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SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

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COMPONENT PARTS

(lighting and turn signal switch)

Front door switch LH (Other doors

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

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- IPDM E/R, (Headlamp high relay, Headlamp low relay, Taillamp relay
- and Front fog lamp relay (if equipped)) Combination meter
- 7. Optical sensor

Stop lamp switch

similar)

Combination switch

2.

5.

- 3. Parking brake switch
- BCM (view with combination meter re-
- Hazard switch 9.

moved)

- 10. Daytime running light relay (if equipped)

Component Description

Part	Description
BCM	Controls the exterior lighting system.
Combination switch (Lighting & turn signal switch)	Refer to <u>BCS-9</u> , " <u>COMBINATION SWITCH READING SYSTEM</u> : <u>System Description</u> " (with Intelligent Key system) or <u>BCS-85</u> , " <u>COMBINATION SWITCH READING SYSTEM</u> : <u>System Description</u> " (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 deer open signal to the DCM
Rear door switch LH/RH	Transmits the door open signal to the BCM.
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.

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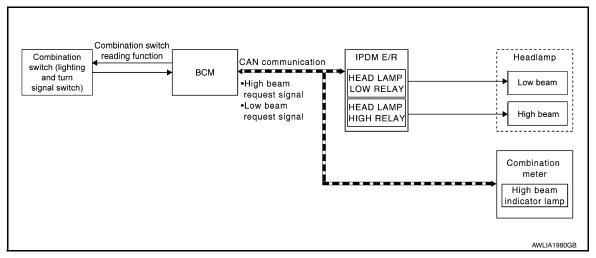
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SYSTEM HEADLAMP SYSTEM

HEADLAMP SYSTEM: System Diagram

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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.

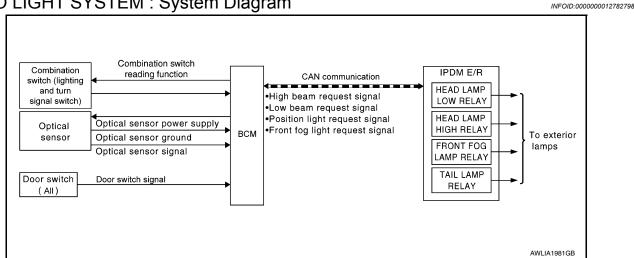
EXTERIOR LAMP BATTERY SAVER CONTROL

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



AUTO LIGHT SYSTEM: System Description

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- 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

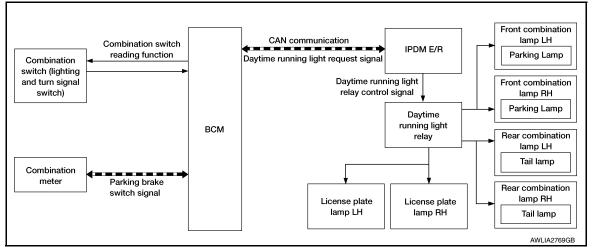
The auto light control system has an optical sensor that detects outside brightness.

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





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.

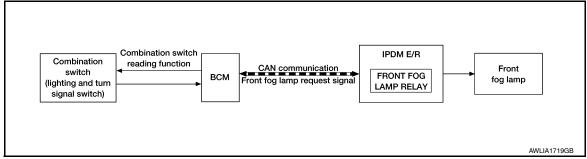
OPERATION

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

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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.

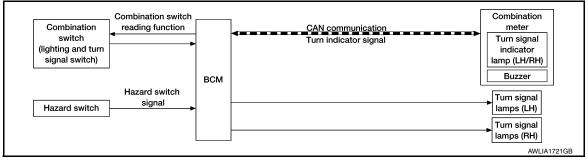
FRONT FOG LAMP OPERATION

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

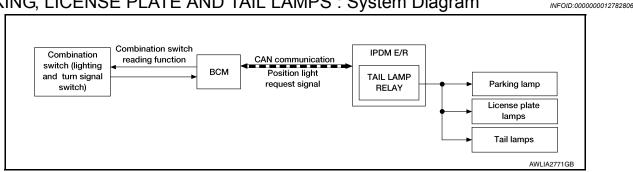
When the combination switch (lighting and turn signal switch) is in LH or RH turn position with the ignition switch in the ON position, the BCM receives input requesting the turn RH or turn LH lamps to illuminate. The BCM controls the turn signal power to the respective turn signal lamp. The BCM also 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



PARKING, LICENSE PLATE AND TAIL LAMPS: System Description

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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.

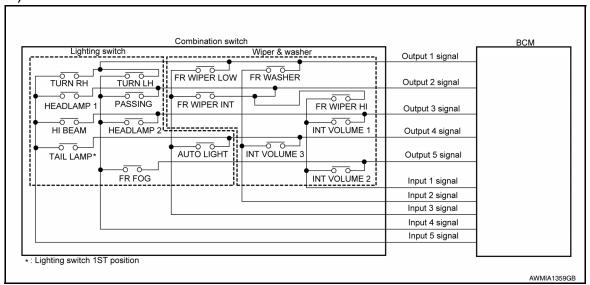
EXTERIOR LAMP BATTERY SAVER CONTROL

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



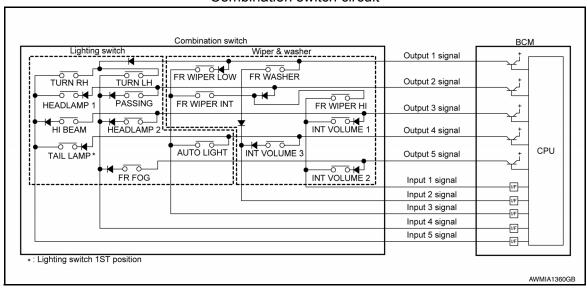
COMBINATION SWITCH READING SYSTEM: System Description (With Intelligent Key System) INFOID:0000000012782809

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



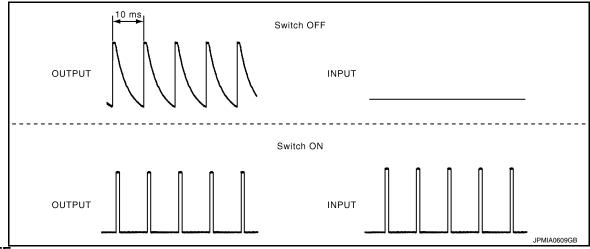
Combination switch INPUT-OUTPUT system list

Combination Children CT COTT CT Cyclem lice					
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.

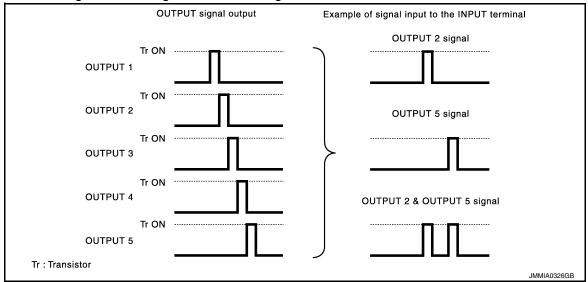


NOTE:

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 \rightarrow 2 \rightarrow 3 \rightarrow 4 \rightarrow 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.

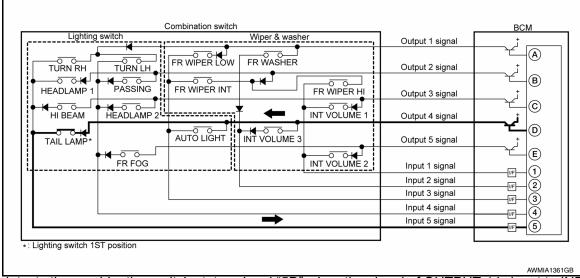


Operation Example

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

Revision: December 2015 EXL-15 2016 Sentra NAM

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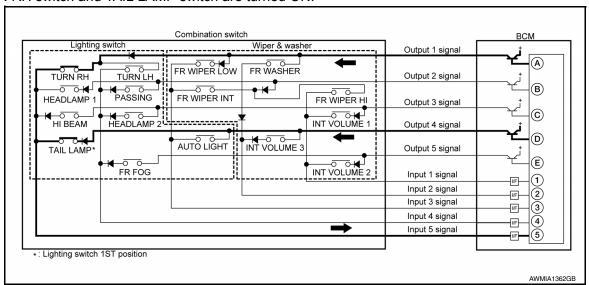
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• The circuits between OUTPUT 1 and INPUT 5 and between OUTPUT 4 and INPUT 5 are formed when the TURN RH switch and TAIL LAMP switch are turned ON.



- 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	Switch status			
dial position	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

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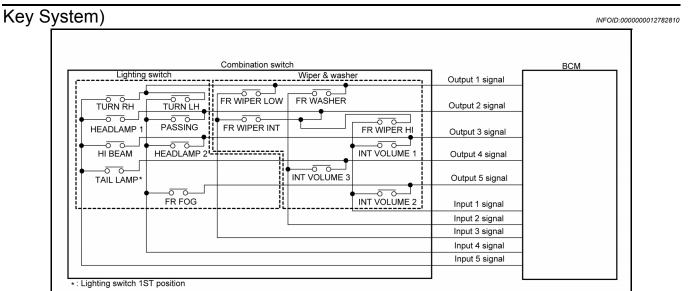
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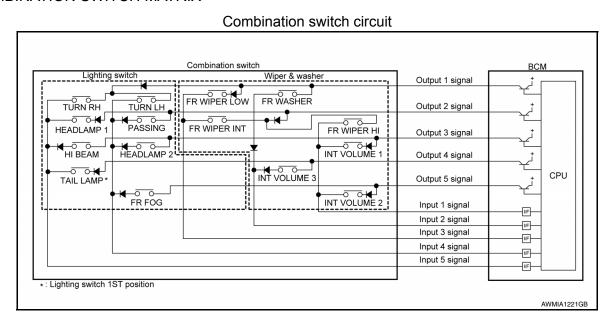


COMBINATION SWITCH READING SYSTEM: System Description (Without Intelligent Key System) INFOID:0000000012782811

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



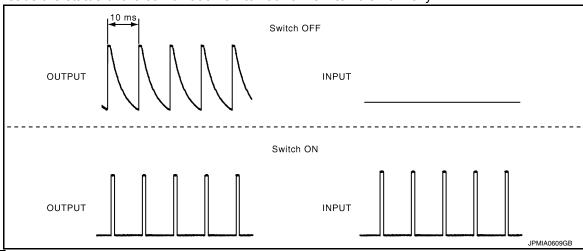
Combination switch INPUT-OUTPUT system		
System	INPUT 1	

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

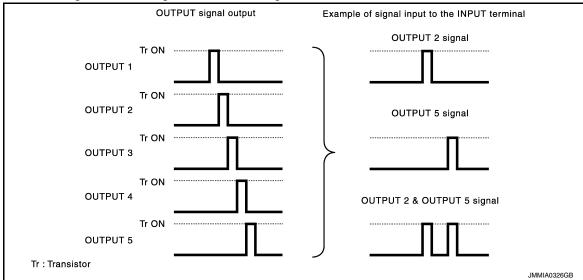
• BCM reads the status of the combination switch at 10 ms intervals normally.



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.

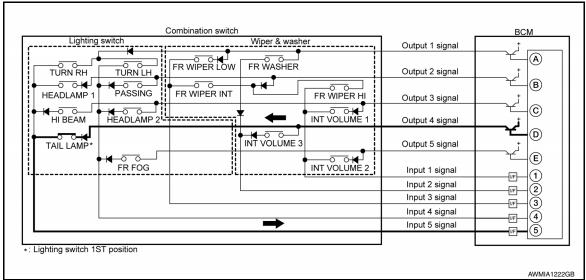


Operation Example

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

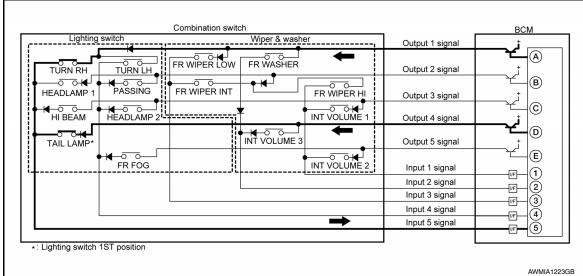
• The circuit between OUTPUT 4 and INPUT 5 is formed when the TAIL LAMP switch is turned ON.



- 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.

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< SYSTEM DESCRIPTION >

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.

				Direct [Diagnosti	c Mode		
System	Sub System	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		×	×	×	×		

< SYSTEM DESCRIPTION >

HEADLAMP

HEADLAMP: CONSULT Function (BCM - HEAD LAMP)

INFOID:0000000013407939

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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]	
TURN SIGNAL L [On/Off]	
TAIL LAMP SW [On/Off]	
HI BEAM SW [On/Off]	
HEAD LAMP SW 1 [On/Off]	Indicates condition of combination switch.
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
	MODE 1*	With twilight ON custom & with wiper INT, LO and HI
	MODE 2	Witt twilight ON custom & with wiper LO and HI
AUTO LIGHT LOGIC SET	MODE 3	With twilight ON custom & without
AUTO LIGHT LOGIC SET	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.
BATTERY SAVER SET	Off	Exterior lamp battery saver function OFF.

EXL-21 Revision: December 2015 2016 Sentra NAM **EXL**

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< SYSTEM DESCRIPTION >

Support Item	Setting		Description					
	MODE 1*		Normal					
CUSTOM A/LIGHT SETTING	MODE 2		More sensitive setting than normal setting (Turns ON earlier than no mal operation)					
COSTOM A/LIGHT SETTING	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)					
	MODE 8	180 sec.						
	MODE 7	150 sec.						
	MODE 6	120 sec.						
ILL DELAY SET	MODE 4	60 sec.	Sets delay timer function operation time					
ILL DELAT SET	MODE 5	90 sec.	(All doors closed).					
	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]	- indicates condition of turn signal function of combination switch.
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

< SYSTEM DESCRIPTION >

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.

				Direct E	Diagnosti	c Mode		
System	Sub System	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	ВСМ	×	×			×	×	×
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				×			

EXL-23 Revision: December 2015 2016 Sentra NAM

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< SYSTEM DESCRIPTION >

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]				
HEAD LAMP SW 1 [On/Off]				
HEAD LAMP SW 2 [On/Off]	Indicates condition of combination switch.			
TAIL LAMP SW [On/Off]	indicates condition of combination switch.			
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]	indicates condition of combination switch.			
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.
BATTERT SAVER SET	Off	Exterior lamp battery saver function OFF.

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

^{* :} Initial setting

FLASHER

FLASHER: CONSULT Function (BCM - FLASHER)

INFOID:0000000013407946

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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]	- indicates condition of turn signal function of combination switch.	

ACTIVE TEST

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

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EXL-25 Revision: December 2015 2016 Sentra NAM

< SYSTEM DESCRIPTION >

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.
- Turn the ignition switch ON, and within 20 seconds, press the driver door switch 10 times. Then turn the ignition switch OFF.
- Turn the ignition switch ON within 10 seconds. After that the horn sounds once and the auto active test 4.
- 5. After a series of the following operations is repeated 3 times, auto active test is completed.

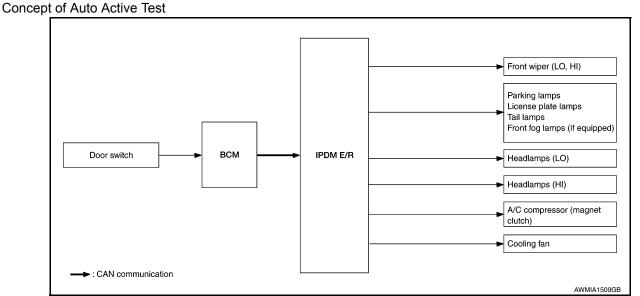
- When auto active test has to be cancelled halfway through test, turn the ignition switch OFF.
- When auto active test is not activated, door switch may be the cause. Check door switch. Refer to DLK-109, "Component Inspection".

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 \rightarrow MID for 3 seconds \rightarrow HI for 2 seconds

< SYSTEM DESCRIPTION >



- 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		YES	BCM signal input circuit	
 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?	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	
	Perform auto active test	YES	ECM signal input circuit CAN communication signal between ECM and IPDM E/R	
Cooling fan does not operate	Does the cooling fan operate?	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

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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.

EXL-27 Revision: December 2015 2016 Sentra NAM

< SYSTEM DESCRIPTION >

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].

< SYSTEM DESCRIPTION >

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".

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< SYSTEM DESCRIPTION >

DIAGNOSIS SYSTEM (IPDM E/R) (WITHOUT INTELLIGENT KEY SYS-TEM)

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.

- Turn the ignition switch OFF.
- Turn the ignition switch ON, and within 20 seconds, press the driver door switch 10 times. Then turn the ignition switch OFF.
- Turn the ignition switch ON within 10 seconds. After that the horn sounds once and the auto active test
- 5. After a series of the following operations is repeated 3 times, auto active test is completed.

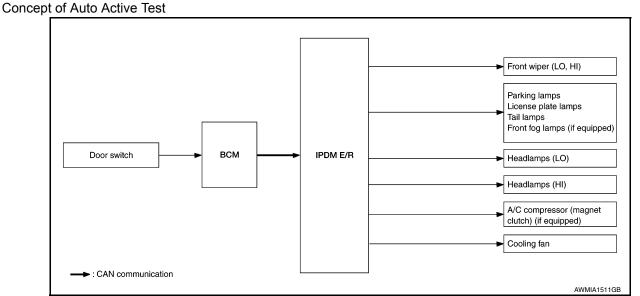
- When auto active test has to be cancelled halfway through test, turn the ignition switch OFF.
- When auto active test is not activated, door switch may be the cause. Check door switch. Refer to DLK-248, "Component Inspection".

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 lampLicense plate lampTail lampFront 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

< SYSTEM DESCRIPTION >



- 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		YES	BCM signal input circuit	
 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?		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 oper-	YES	BCM signal input circuit CAN communication signal between BCM and ECM CAN communication signal between ECM and IPDM E/R	
A/C compressor does not operate	ate?	NO	Magnet clutch Harness or connector between IPDM E/R and magnet clutch IPDM E/R	
	Perform auto active test	YES	ECM signal input circuit CAN communication signal between ECM and IPDM E/R	
Cooling fan does not operate	Does the cooling fan operate?	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

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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.

EXL-31 Revision: December 2015 2016 Sentra NAM

< SYSTEM DESCRIPTION >

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].

DIAGNOSIS SYSTEM (IPDM E/R) (WITHOUT INTELLIGENT KEY SYSTEM) YSTEM DESCRIPTION > [HALOGEN HEADLAMP]

< SYSTEM DESCRIPTION >
CAN DIAG SUPPORT MNTR

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

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ECU DIAGNOSIS INFORMATION

BCM, IPDM E/R

List of ECU Reference

INFOID:0000000012782822

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

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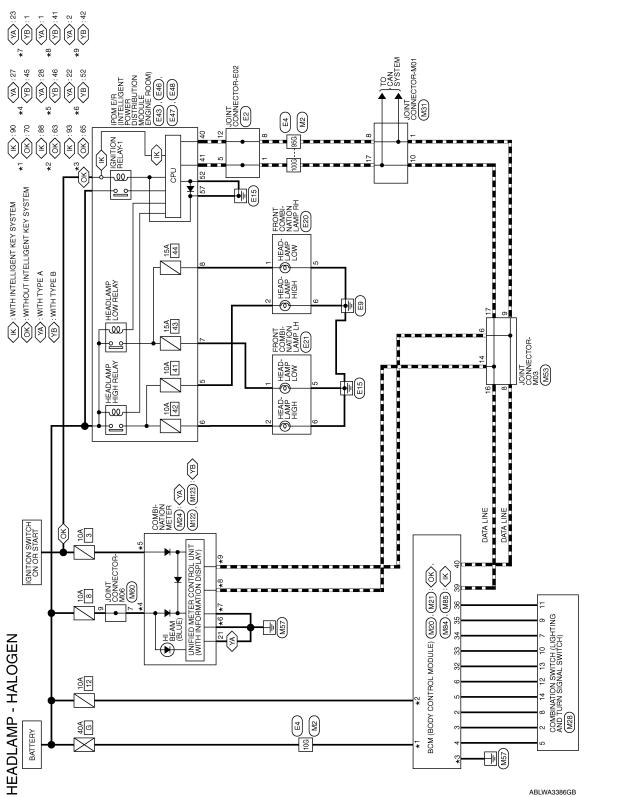
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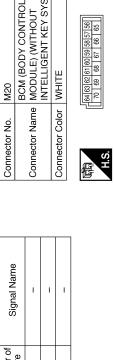
WIRING DIAGRAM

HEADLAMP

Wiring Diagram

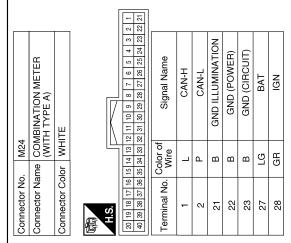


HEADLAMP CONNECTORS - HALOGEN



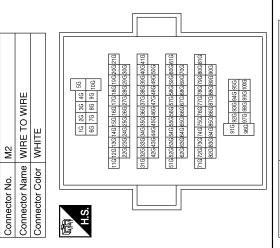
connector Na	ame INT	connector Name MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)	
Connector Color	_	WHITE	_
H.S.	100 July 100	64 68 62 61 60 59 58 57 56 7 7 68 6 7 7 68 6 7 7 68 7 7 7 7 7 7 7	1
erminal No.	Color of Wire	Signal Name	
63	BG	BATTERY (FUSE)	
65	В	GND	
70	>	BATTEBY (E/I)	

Signal Name	BATTERY (FUSE)	GND	BATTERY (F/L)	
Color of Wire	BG	В	Υ	
Terminal No. Wire	69	65	0/	



Signal Name	ı	_	I	
Color of Wire	>	Ь	٦	
Terminal No.	10G	95G	100G	

Signal Name	COMBINATION SW INPUT 2	COMBINATION SW INPUT 1	COMBINATION SW OUTPUT 5	COMBINATION SW OUTPUT 4	COMBINATION SW OUTPUT 3	COMBINATION SW OUTPUT 2	COMBINATION SW OUTPUT 1	CAN-H	T-NYO
Color of Wire	BG	>	LG	>	>	В	SB	٦	Ь
Terminal No. Wire	S.	9	32	33	34	35	36	39	40



				19 20 39 40				
	BCM (BODY CONTROL MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)	WHITE		2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 17 18 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Signal Name	COMBINATION SW INPUT 5	COMBINATION SW INPUT 4	COMBINATION SW INPUT 3
M21	e			6 7 8	Color of Wire		GR	BR
Connector No.	Connector Name	Connector Color	原动 H.S.	1 2 3 4 5 21 22 23 24 25	Terminal No.	2	е	4

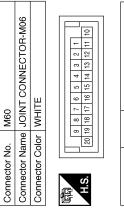
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H.S. 9 8 7 6 5 4 3 2 1 1.2 1.3 1.2 1.1 1.0	Connector No. M31 Connector Name JOINT CONNECTOR-M01 Connector Color BLUE	No. Name Color		M31 JOIN BLU	ㅜ 도 띡 [1 191 1 111	6 i		입 [2 1	¤ [OW	
S. 20 19 18 17 16 15 14 13 12 11 10	Į.		6	8	7	9	ß	4	က	8	-	J	
	E.S.	20	19	18	17	16	15	14	13	12	Ξ	2	

Signal Name	_	I	-	I
Color of Wire	Ь	Ь	٦	٦
Terminal No. Wire	1	8	10	17

Signal Name	1	I	1	1	ı	1
Color of Wire	ш	Υ	SB	M	ГG	BG
Terminal No. Wire	6	10	11	12	13	14

Connector No.	M28	
Connector Na	ume COM	Connector Name COMBINATION SWITCH
Connector Color WHITE	olor WHI	TE
H.S.	7 8 9	10 11 12 13 14
Terminal No.	Color of Wire	Signal Name
2	GR	ı
5	BR	ı
7	^	ı
80	٦	ı



Connector No. Mb0 Connector Name JOINT CONNECTOR-N Connector Color WHITE		20 19 18 77 6 5 4 3 2 1 1 1 1 1 1	Signal Name	_	ı
me JOIN		9 8 20 19 18 1	Color of Wire	W	Ν
Connector Name JOINT Connector Color WHITE	8	H.S.	Terminal No.	7	6

Connector No.	M53 M53	Connector No. M53 Connector Name JOINT CONNECTOR-M03
Connector Color BLUE	olor BLU	Ш
H.S.	20 19 18 17	20 19 8 7 6 5 4 3 2 1
Terminal No. Wire	Color of Wire	Signal Name

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

Signal Name

Color of Wire

Terminal No.

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COMBINATION SW OUTPUT 5 COMBINATION SW INPUT 1 COMBINATION SW INPUT 2 COMBINATION SW INPUT 3

> Б ≥

> > 32 33 34 35 36



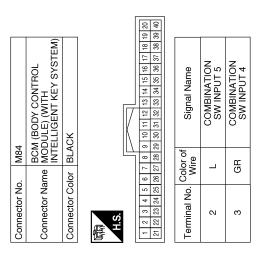


Signal Name	BATTERY (FUSE)	BATTERY (F/L)	GND	
Color of Wire	BG	Υ	В	
Color of Wire	88	06	93	

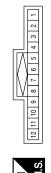
	S	erminal No.	88		90	93		
	1	lerr						
COMBINATION	SW OUTPUT 3	COMBINATION	SW OUTPUT 2	COMBINATION	SW OUTPUT 1	H-MAC	CAN-L	

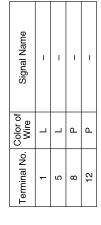
			H							
	COMBINATION SW OUTPUT 4	COMBINATION	SW COLLOIS	COMBINATION	3W 001F01 Z	COMBINATION	SW OUTPUT 1	CAN-H	CAN-L	
I	>	>		Œ		ď	O.D.	_	<u>ا</u>	

39 40

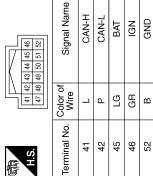


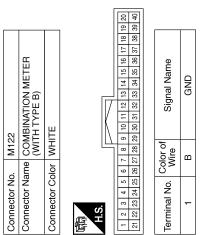
E2	Connector Name JOINT CONNECTOR-E02	ır BLUE	
Connector No.	Connector Nam	Connector Color BLUE	





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





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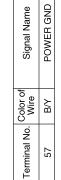
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	H.S	Connector No.		E43 POWER DISTRIBUTION MODULE ENGINE ROOM)	Connector Color Terminal No. WW Terminal No. WW S B/ B B/ Connector No. Connector Name	125141415151 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	FRONT COMBINATION LAMP RH BLACK or of Signal Name
	8 2 3 4 8 8 4 2 4 8 8 8 4 8 8 8 8 8 8 8 8 8 8	Connector Color	WH 8 8 8 17 18 17	7 6 5 4 3 16 15 14 18 12 11 10	Connector Color 南	WHII.	40 99 88 37 46 45 44 43
Color of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name
H	1	ည	Œ	H/LAMP HI RH	40	۵	CAN-L
	1	9	g	H/LAMP HI LH	41	_	CAN-H
B/R	ı	7	L	H/LAMP LO LH			
B/R	1	8	۵	H/LAMP LO RH			

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







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





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SIGNAL GN	Β/Y	52
Signal Nan	Color of Wire	Terminal No.

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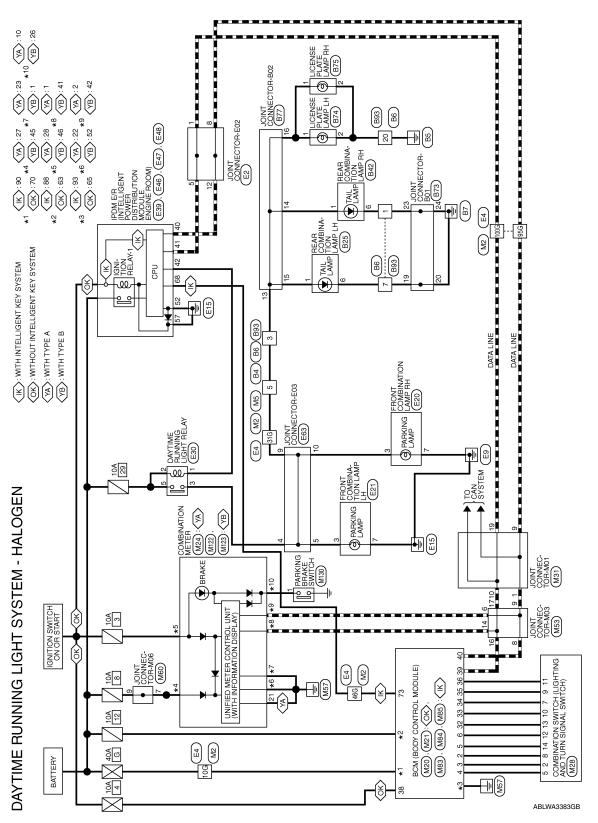
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DAYTIME RUNNING LIGHT SYSTEM

Wiring Diagram



COMBINATION SW INPUT 3

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DAYTIME RUNNING LIGHT SYSTEM CONNECTORS - HALOGEN

Connector Name | WIRE TO WIRE

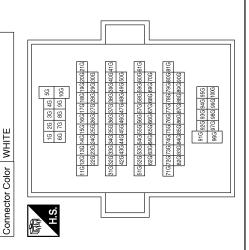
M2

Connector No.

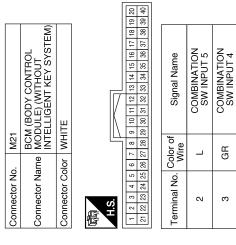
Connector No.	. M5	
Connector Name WIRE TO WIRE	me WIR	E TO WIRE
Connector Color WHITE	lor WHI	TE
麻勒 H.S.	7 6 5 4	1 13 12 11 10 9 8
Terminal No. Wire	Color of Wire	Signal Name
2	>	ı

	E TO WIRE	TE	7 6 5 4	Signal Name	_
Ç₩	me WIR	lor WHI	7 6 5 14 16 15 14	Color of Wire	^
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	南 H.S.	Terminal No. Wire	2

Signal Name	ı	ı	1	ı	-
Color of Wire	\	^	۸	Ь	Г
Terminal No. Wire	10G	31G	46G	95G	100G



Signal Name	COMBINATION SW INPUT 2	COMBINATION SW INPUT 1	COMBINATION SW OUTPUT 5	COMBINATION SW OUTPUT 4	COMBINATION SW OUTPUT 3	COMBINATION SW OUTPUT 2	COMBINATION SW OUTPUT 1	IGN SW	CAN-H	CAN-L
Color of Wire	BG	*	LG	>	>	ш	SB	н	Τ	Ь
Terminal No. Color of Wire	5	9	32	33	34	35	36	38	39	40



Connector No.	M20
Connector Name	Connector Name MODULE) (WITHOUT MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)
Connector Color WHITE	WHITE
原 H.S.	

Signal Name	BATTERY (FUSE)	GND	BATTERY (F/L)	
Color of Wire	BG	В	>	
Terminal No. Color of Wire	63	99	70	

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DAYTIME RUNNING LIGHT SYSTEM

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

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JOINT CONNECTOR-M01 BLUE	6 5 4 3 2 1 16 15 14 13 12 11 10		Signal Name	1	1	1	ı								DY CONTROL	MODULE) (WITH INTELLIGENT KEY SYSTEM)			53 52 51 50 49 48 47 46 45 44 43 42 42 17 170 69 68 67 66 65 64 63 62 61	Signal Name	IGN RELAY	OUTPUT1 (USM)					
Connector Color BLUE	H.S. 20 19 18 17 16 15		Terminal No. Color of Wire	Т	8	10 L	17 L							Connector No. M83		Connector Name MODULE INTELLIC	Connector Color WHITE		H.S. 60 59 58 57 56 55 54 80 79 78 77 76 75 74	Terminal No. Color of Wire		>					
COMBINATION SWITCH WHITE	3 3 10 11 1 4 9 11 1 1 1 1 1 1 1 1 1 1 1 1 1 1		Signal Name	1	ı	1	1	1	1	ı	ı	I	ı		JOINT CONNECTOR-M06	ПЕ	F	9 8 7 6 5 4 3 2 1 19 18 17 16 15 14 13 12 11 10		Signal Name	1	1					
Connector Color WHITE	H.S.		Terminal No. Wire	2 GR	5 BR	7	8 F	9 R	10 Y	11 SB	12 W	13 LG	14 BG	Connector No. M60	Connector Name JOI	Connector Color WHITE		λί S		Terminal No. Color of Wire	M 2	M 6	_				
COMBINATION METER (WITH TYPE A) WHITE		1 13 12 11 10 9 8 7 6 5 4 3 2 1 3 32 32 31 30 29 28 27 26 25 24 23 22 21	Signal Name	- CAN-H	CAN-L	B PKB SW	3 GND (ILLUMINATION)	3 GND (POWER)	3 GND (CIRCUIT)	G BAT	R IGN			M53	JOINT CONNECTOR-M03	BLUE		8 7 6 5 4 3 2 1 18 17 16 15 14 13 12 11 10		Signal Name		1	1	ı	ı		
Connector Name Connector Color	崎 H.S.	20 19 18 17 16 15 14 13 12 40 39 38 37 36 35 34 33 32	Terminal No. Wire	-	2 P	10 SB	21 B	22 B	23 B	27 LG	28 GR			Connector No.	Connector Name	Connector Color		H.S. 20 19		Terminal No. Color of Wire	9	8	6	14 L	16 L	17 L	

Revision: December 2015 **EXL-43** 2016 Sentra NAM

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

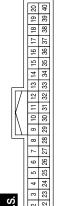






Signal Name	COMBINATION SW OUTPUT 5	COMBINATION SW OUTPUT 4	COMBINATION SW OUTPUT 3	COMBINATION SW OUTPUT 2	COMBINATION SW OUTPUT 1	CAN-H	CAN-L
Color of Wire	ГС	>	^	В	SB	٦	Ь
erminal No. Color of Wire	32	33	34	35	36	39	40





21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38	Signal Name	COMBINATION SW INPUT 5	COMBINATION SW INPUT 4	COMBINATION SW INPUT 3	COMBINATION SW INPUT 2	COMBINATION SW INPUT 1
26 27 28 2	Color of Wire	٦	GR	BR	BG	W
21 22 23 24 25	Terminal No. Wire	2	е	4	2	9

2	PARKING BRAKE SWITCH	CK		Signal Name	ı
. M130		lor BLA		Color of Wire	SB
Connector No.	Connector Name	Connector Color BLACK	H.S.	Terminal No.	1

Connector No.	M123
	(WITH TYPE B)
Connector Color WHITE	WHITE
	/
S	41 42 43 44 45 46
	47 48 49 50 51 52

TE	42 43 44 45 46	Signal Name	CAN-H	CAN-L	BAT	IGN	GND
lor WHI	14 4 7 7 7 4	Color of Wire	_	Д	ГG	GR	В
Connector Color WHITE	H.S.	Terminal No.	41	42	45	46	52

				19 20	39 40			
22	Connector Name COMBINATION METER (WITH TYPE B)	ІТЕ		9 10 11 12 13 14 15 16 17 18 19	29 30 31 32 33 34 35 36 37 38 3	Signal Name	GND	PKB SW
. M122	me CO	lor WHITE		6 7 8	26 27 28	Color of Wire	В	SB
Connector No.	Connector Na	Connector Color	原 H.S.	1 2 3 4 5	21 22 23 24 25	Terminal No. Wire	1	26

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DAYTIME RUNNING LIGHT SYSTEM

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

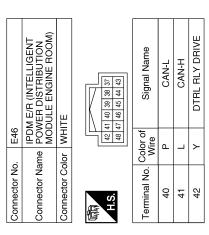
																											А
Signal Name	I	ı	ı	1	ı											DAYTIME RUNNING LIGHT				Signal Name	1	ı	ı	ı			В
Color of Wire	g	۳	0	۵	_										lo. E30				2 2 2	Color of Wire	>	P		re			D
Terminal No.	10G	31G	46G	95G	100G										Connector No.	Connector Name	Connector Color		是 H.S.	Terminal No.	-	2	က	Ŋ			Е
			F]													F
				[z	5 (5	46 136 126 116	4G23G22G	0.0000000000000000000000000000000000000	4G43G42G	4G63G62G	46736726716	4G83G82G		<u>o</u>		ATION				Name							G
L	Connector Color WHITE	<u>.</u>		56	106 96 86 76 66	216 206 196 186 176 166 156 146 136 26 116	30G29G28G27G26G25G24G23G22G	20202020202020	50G 49G 48G 47G 46G 45G 44G 43G 42G	70G 69G 68G 67G 66G 65G 64G 63G 62G	816 806 796 786 776 766 756 746 736 726 716	90G 89G 88G 87G 86G 85G 84G 83G 82G	95G 94G 93G 92G 91G	96 978 988 988 97		FRONT COMBINATION	S	[6 2 3 4 4 8 8 8 8	Signal Name							Н
No. E4	Connector Name WIRE I			32	6 2	216206196	30G29G	240 200 200	50G 49G	569 507 70G 69G	81G80G79G	900890	[6]		Vo. E21		+		_ w	o. Color of Wire	_	B/R					I
Connector No.	Connector				ġ										Connector No.	Connector Name	Connector Color		原的 H.S.	Terminal No.	က	7					J
		7								\neg																	K
	INNEC I OR-EUZ		[7	6 5 4 3 2 1		Signal Name	ı		1 1							OMBINATION		ſ	4 8	Signal Name	1	1					EXL
E2		1010				Color of	D _		_ 	 					E20	FRONT COMBINAT	BLACK		2 9 9 7 8	Color of Wire		B/W					M
Connector No.	Connector Name JOINT CONNECTOR			12 11 10	_	Terminal No.	-		ဂ ထ						Connector No.	Connector Name	Connector Color	ı	(6	Terminal No. Col	3	7 B					Ν
Conn						Term									Conn	Conn	Conn		是 H.S.	Term			ADI	.IA841;	O.P.		0
																							ADL		<i>,</i>		Р

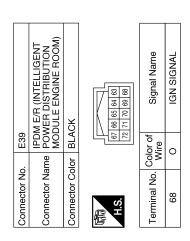
Revision: December 2015 **EXL-45** 2016 Sentra NAM

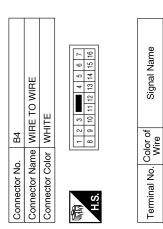
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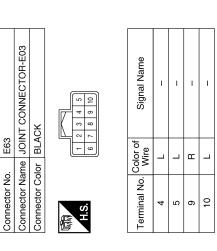
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Connector No	F47	
5		IPDM E/R (INTELLIGENT
Connector Name		POWER DISTRIBUTION MODULE ENGINE ROOM)
tor Col	Connector Color BROWN	NWO
	51	56 55 54 53 52
No.	Terminal No. Color of Wire	Signal Name
52	В/У	SIGNAL GND









Connector No.	E48	
Connector Name		IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color BLACK	or BLA	CK
「 H.S.		59 58 57 62 61 60
Terminal No. Color of Wire	Color of Wire	Signal Name
25	В/У	POWER GND

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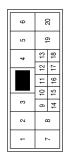
B42	Connector Name REAR COMBINATION I AMP RH	HITE	2 1	6 5 4 3		of Signal Name	1	1	-	
Connector No. B ²	Connector Name RI	Connector Color WHITE		H.S.		Terminal No. Color of Wire	1 BR	9		
]							
B25	Connector Name REAR COMBINATION I AMP I H	HITE	2	6 4 8 3		of Signal Name	ı	ı		
Connector No. B	nnector Name R	Connector Color WHITE		H.S.		Terminal No. Color of Wire	1 LG	6 BG		
Co			3 2 1	12 11 10 9 8 7 17 16 15 14 8 7		Signal Name Te	ı	ı		1
Be	Connector Name WIRE TO WIRE	Connector Color WHITE	6 5	20 19 13		Terminal No. Color of Wire	Г	LG	BG	В
Connector No.	r Nar	00			1	S				

Signal Name Terminal No. Wire - 1 GR - 2 B
1

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EXL-47 Revision: December 2015 2016 Sentra NAM





	Signal Name	ı	-	ı	ı
	Color of Wire	٦	В	В	В
J	Terminal No.	1	8		20







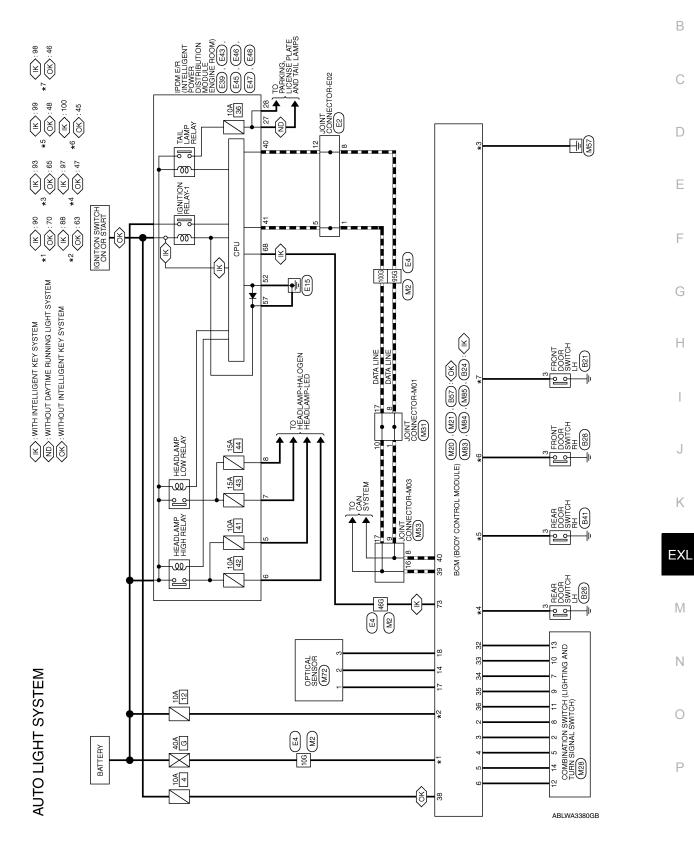


	_			
Signal Name	-	ı	I	-
Color of Wire	G	BR	LG	GR
Terminal No. Wire	13	14	15	16

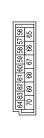
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AUTO LIGHT SYSTEM

Wiring Diagram



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



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

	5
SW OUTPUT 2	
SW OUTPUT 1	
IGN SW	
CAN-H	
CAN-L	

Signal Name	1	ı	ı	-
Color of Wire	Y	>	Ь	٦
Terminal No. Wire	10G	46G	95G	100G

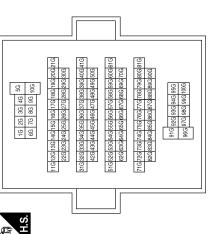
Signal Name	1	I	1	_	
Color of Wire	Υ	>	Ь	٦	
Terminal No. Color of Wire	10G	46G	95G	100G	

AUTO LIGHT SYSTEM CONNECTORS

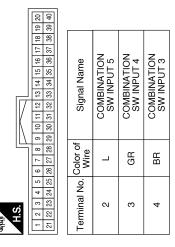
Connector Name | WIRE TO WIRE Connector Color WHITE

M2

Connector No.



Signal Name	COMBINATION SW INPUT 2	COMBINATION SW INPUT 1	AUTO LIGHT SENSOR INPUT 1 (& 2)	AUTO LIGHT SENSOR POWER SUPPLY OUTPUT	KEYLESS & AUTO LIGHT SENSOR GND	COMBINATION SW OUTPUT 5	COMBINATION SW OUTPUT 4	COMBINATION SW OUTPUT 3
Color of Wire	BG	*	SB	>	>	LG	>	>
Terminal No. Color of Wire	5	9	14	17	18	32	33	34



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Connector Name MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)

M21

Connector No.

WHITE

Connector Color

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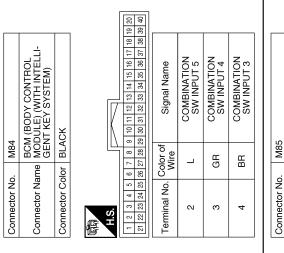
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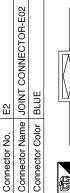
Connector No. M31	M31 JOINT CONNECTOR-M01 BLUE 8 7 6 5 4 3 2 1 10 18 17 16 15 14 13 12 11 10 2 - - - 3 2 1 3 2 1 10 4 4 4 4 4 4 4 4 WHITE WHITE Signal Name Signal Name Signal Name Signal Name Signal Name Signal Name	Connector No. Connector No. Terminal No. Tonnector No. Connector No. Connector No. Connector No. Connector No. Terminal No. Terminal No.
Connector Name JOINT CONNECTOR-MOI Connector Name JOINT CONNECTOR-MOI Connector Color BLUE Connector Color BLUE Connector Color BLUE Connector Color Signal Name Term Term Connector No. M83 Connector Name MODULE) WITH Connector Name MODULE) WITH Connector Color WHITE Connector Color WHITE Connector Color WHITE Connector Color WHITE Connector Name MODULE) With Connector Name MODULE) With Connector Color WHITE Connector Color WHITE Connector Color WHITE Connector Color WHITE Connector Color Color of Signal Name Connector Color Color of Signal Name Color of	Wire	
Connector Name JOINT CONNECTOR+MO1		
Connector Name JOINT CONNECTOR-MO1		
Connector Name JOINT CONNECTOR-M01		73
Connector Name JOINT CONNECTOR-M01 Connector Color BLUE Terminal No. Wire 1		73
Connector Name JOINT CONNECTOR-M01		73
Connector Name JOINT CONNECTOR-MO1 Connector Color BLUE		73
Connector Name JOINT CONNECTOR-MO1		_
Connector Name JOINT CONNECTOR-MO1	Wire	ו פוווווומו ואס.
Connector Name JOINT CONNECTOR-M01	Color of	Terminal No.
Connector Name JOINT CONNECTOR-M01	56 55 54 53 76 75 74 73	78 57
Connector Name JOINT CONNECTOR-M01		9
Connector Name JOINT CONNECTOR-M01		S
Connector Name JOINT CONNECTOR-M01		
Connector Name JOINT CONNECTOR-M01		Connector Co
Connector Name JOINT CONNECTOR-M01	INTELLIGENT RETSTRIM)	
Connector Name JOINT CONNECTOR-M01		Connector Na
Connector Name JOINT CONNECTOR-M01 Connector Color BLUE Logistic Particles 1 1 1 1 1 1 1 1 1		
Connector Name JOINT CONNECTOR-M01		Connector No
Connector Name JOINT CONNECTOR-M01 Connector Color BLUE LS. Terminal No. Color of Signal Name 1		
Connector Name JOINT CONNECTOR-M01 Connector Color BLUE LS. Terminal No. Color of Signal Name 1		
Connector Name JOINT CONNECTOR-M01 Connector Color BLUE LS. Terminal No. Color of Signal Name 1		
Connector Name JOINT CONNECTOR-M01 Connector Color BLUE Log 18 7 6 5 4 3 2 1 Log 19 18 17 16 15 14 13 12 11 10 Terminal No. Wire 8 P - 10 L - 17 L - 17 L -		
Connector Name JOINT CONNECTOR-M01		
Connector Name JOINT CONNECTOR-M01		
Connector Name JOINT CONNECTOR-M01		17
Connector Name JOINT CONNECTOR-M01	ı	10
Connector Name JOINT CONNECTOR-M01 Connector Color BLUE 2019181716151413121110 Terminal No. Color of Signal Name 1 P	1	∞
Connector Name JOINT CONNECTOR-M01 Connector Color BLUE 20 19 18 17 16 15 14 13 12 11 10 Terminal No. Color of Signal Name		- '
Connector Name JOINT CONNECTOR-M01		•
Connector Name JOINT CONNECTOR-M01 Connector Color BLUE Solid So	Color of Signal Name Wire	Terminal No.
Connector Name JOINT CONNECTOR-M01 Connector Color BLUE	9 8 7 6 5 4 3 2 1	原的 H.S.
Connector Name JOINT CONNECTOR-M01 Connector Color BLUE		
Connector Name JOINT CONNECTOR-M01	BLUE	Connector Co
		Connector Na
M31 Connector No.	M31	

Revision: December 2015 **EXL-51** 2016 Sentra NAM

Terminal No. Color of Wire	Color of Wire	Signal Name
35	ш	COMBINATION SW OUTPUT 2
36	SB	COMBINATION SW OUTPUT 1
39	٦	CAN-H
40	Ь	CAN-L

Signal Name	COMBINATION SW INPUT 2	COMBINATION SW INPUT 1	AUTO LIGHT SENSOR INPUT	AUTO LIGHT SENSOR POWER SUPPLY OUTPUT	KEYLESS TUNER, AUTO LIGHT SENSOR GND	COMBINATION SW OUTPUT 5	COMBINATION SW OUTPUT 4	COMBINATION SW OUTPUT 3
Color of Wire	BG	>	SB	>	>	ГG	>	>
Terminal No.	5	9	14	17	18	32	33	34

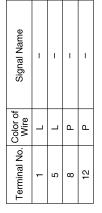




BCM (BODY CONTROL MODULE) (WITH INTELLI-GENT KEY SYSTEM)

Connector Name











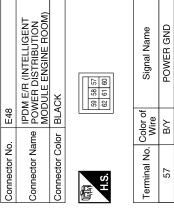
Signal Name	BATTERY (FUSE)	BATTERY (F/L)	GND
Color of Wire	BG	>	В
Terminal No.	88	06	93

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		А
(INTELLIGENT STRIBUTION ENGINE ROOM) Signal Name IGN SIGNAL	(INTELLIGENT STRIBUTION) ENGINE ROOM) (44 43) Signal Name CAN-L CAN-L	В
NAMER DONGER DON	WERD WERD WERD WERD WERD WERD WERD WERD	С
		D
Connector No. Connector Name Connector Color Terminal No. W 68	Connector No. Connector Name Connector Color H.S. H.S. A0 A1	Е
		F
Signal Name	POWER DISTRIBUTION POWER DISTRIBUTION BROWN BROWN State of State o	G
of a large and a l	PDM E/R (I	Н
Color of Wire O G Wire O C C C C C C C C C C C C C C C C C C		I
Terminal No. 10G 46G 95G 100G	Connector No. Connector Name Connector Color Terminal No. Color 27 27 28	J
		K
E4 WHIRE TO WIRE	POWER DISTRIBUTION MODULE ENGINE ROOM) WHITE To be compared to the period of the peri	EXL
E4 r WHRE T 10203 196186 3003296286 3003296286 10400396386 105006396886 10500696886 10500696886 10500696886 10500696886		
inector No.	nector No. nector No. on nector No. on nector No. on nector Cole	N
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	Connector No.	o. B21	
TELLIGENT	Connector Na	ame FRC	Connector Name FRONT DOOR SWITCH LH
RIBUTION SINE ROOM)	Connector Color WHITE	olor WH	ІТЕ
	H.S.		2 3 4
nal Name	Terminal No. Color of Wire	Color of Wire	Signal Name
WER GND	ဇ	\	ı

	Connector Name FRONT DOOR SWITCH RH	壨	T	Signal Name	-
B28	me FR	lor WH		Color of Wire	Œ
Connector No.	Connector Na	Connector Color WHITE	是 H.S.	Terminal No. Color of Wire	ε



Connector No.). B26	
Connector Na	ame RE/	Connector Name REAR DOOR SWITCH LH
Connector Color WHITE	olor WH	TE
H.S.		60 2
Terminal No. Color of Wire	Color of Wire	Signal Name
3	GR	ı

Connector No.	. E47		
Connector Name		IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)	
Connector Color	lor BROWN	NWO	
(内)	[6]	56 55 54 53 52	
Terminal No. Color of Wire	Color of Wire	Signal Name	
52	В/У	SIGNAL GND	

Connector No.	. B24	
Connector Name		BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	lor BLACK	CK
顾 H.S.	104103	04/03/102/10/109/99/98/97/96
Terminal No. Color of Wire	Color of Wire	Signal Name
26	GR	DOOR SW (RL)
86	>	DOOR SW (DR)
66	Ь	DOOR SW (RR)
100	В	DOOR SW (AS)

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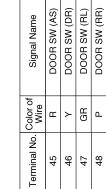
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Connector No.	B57
Connector Name	Connector Name MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)
Connector Color BLACK	BLACK

Connector No.



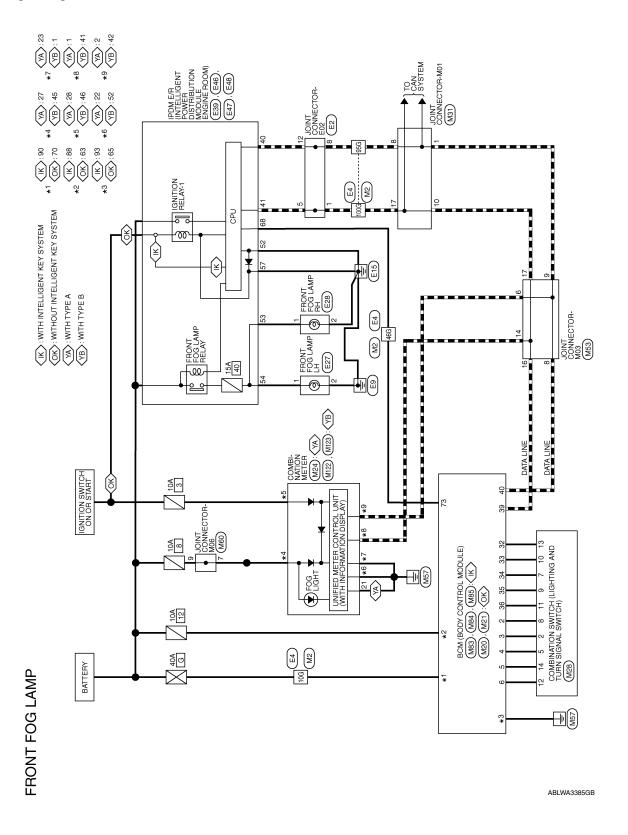




2 3 4	Signal Name	
	Color of Wire	
H.S.	Terminal No.	
	S. S.	Color of Wire

FRONT FOG LAMP

Wiring Diagram



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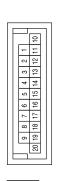
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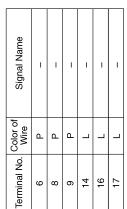
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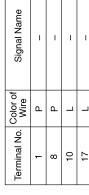


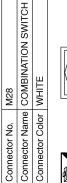


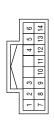


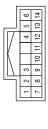














Signal Name	I	ı	ı	ı	-	ı	ı	I	1	I
Color of Wire	GR	BB	>	_	н	>	SB	Μ	LG	BG
Terminal No.	2	5	7	8	6	10	11	12	13	14

Connector No.	M83	
Connector Name	Connector Name MODULE) (WITH INTELLIGENT KEY SYSTEM)	
Connector Color WHITE	WHITE	
原 H.S.		
60 59 58 57 56 55 54	53 52 51 50 49 48 47 46 45 44 43 42	4
7 27 97 77 87 67 08	79 78 77 76 75 74 73 72 71 70 69 68 67 66 65 64 63 62 6	9
Terminal No. Wire	Solor of Signal Name Wire	

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Connector Name JOINT CONNECTOR-M06	Name	9	Z	_	0	ź	Ĕ	E	는 -	-MC	90
Connector Color WHITE	Color	₹	두	ш							
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The state of the s										F	
	ი 	8	7	6 5 4 3	5	4	က	2	-		
H.S.	20 19 18 17 16 15 14 13 12 11 10	8	17	16	15	14	13	12	=	10	
		Ш							Ш		
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Connector No.

Signal Name	ı	ı	
Color of Wire	>	M	
Terminal No.	7	6	

IGN RELAY OUTPUT1 (USM)

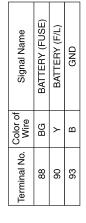
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Connector No.	M85
Connector Name	Connector Name MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color WHITE	WHITE

	82 81	06		
	35 84 83	92 91		
	8 87 86	94 93		
	8 8 L	92		
ſ	7		οį	



Signal Name	COMBINATION SW INPUT 2	COMBINATION SW INPUT 1	COMBINATION SW OUTPUT 5	COMBINATION SW OUTPUT 4	COMBINATION SW OUTPUT 3	COMBINATION SW OUTPUT 2	COMBINATION SW OUTPUT 1	CAN-H	CAN-L
Color of Wire	BG	8	ГG	\	^	В	SB	Т	Ь
Terminal No. Color of Wire	5	9	32	33	34	35	36	39	40

	STEM)			16 17 18 19 20 36 37 38 39 40		SW	SW	SW
	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)	OK.		10 11 12 13 14 15 30 31 32 33 34 35	Signal Name	COMBINATION SW INPUT 5	COMBINATION SW INPUT 4	COMBINATION SW INPUT 3
M84	me MOE	lor BLACK		6 7 8 9 26 27 28 29	Color of Wire	٦	GR	BR
Connector No.	BCM (BODY CON Connector Name MODULE) (WITH INTELLIGENT KE	Connector Color	H.S.	1 2 3 4 5 21 22 23 24 25	Terminal No.	2	ю	4

	Connector Name JOINT CONNECTOR-E02	JE	8 7 6 5 4 3 2 1	Signal Name	ı	ı	I	ı
. E2	me JOII	lor BLUE	12 11 10 9	Color of Wire	_	_	۵	۵
Connector No.	Connector Na	Connector Color	H.S.	Terminal No.	-	5	8	12

Connector No.). M123	53
Connector Na	ame (WI	Connector Name COMBINATION METER (WITH TYPE B)
Connector Color	olor WHITE	TE
H.S.	41 42	43 44 45 46 49 50 51 32
Terminal No.	Color of Wire	Signal Name
41	٦	CAN-H
42	۵	CAN-L
45	ГG	BAT
46	ВÐ	NÐI
52	В	GND

				19 20 39 40		
2	COMBINATION METER (WITH TYPE B)	믵		7 8 9 10 11 12 13 14 15 16 17 18 27 28 29 30 31 32 33 34 35 36 37 38	Signal Name	GND
, M122	me CO	lor WHITE		6 7 8 26 27 28	Color of Wire	В
Connector No.	Connector Name	Connector Color	原 H.S.	1 2 3 4 5 6 21 22 23 24 25 26	Terminal No.	1

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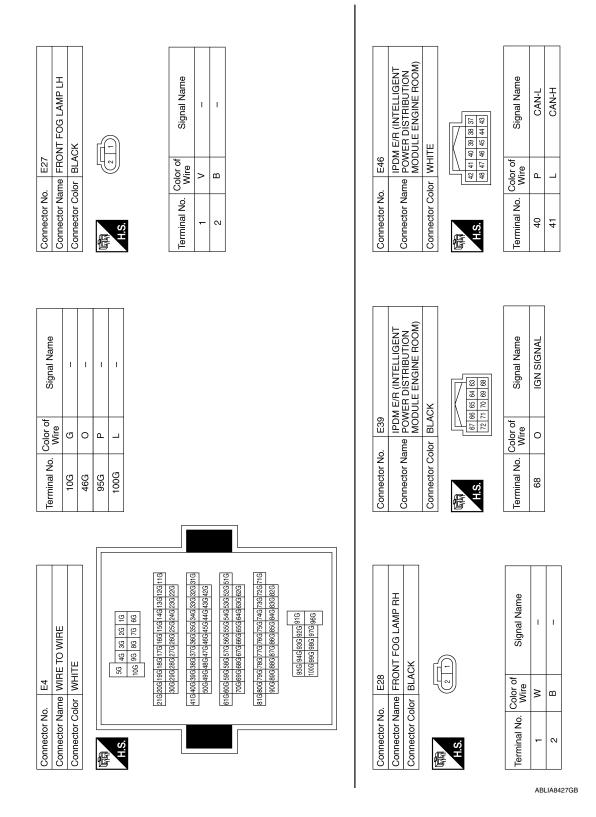
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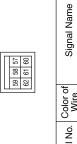
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E48	Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM)	BLACK	
Connector No.	Connector Name	Connector Color BLACK	



Color of
Terminal No.

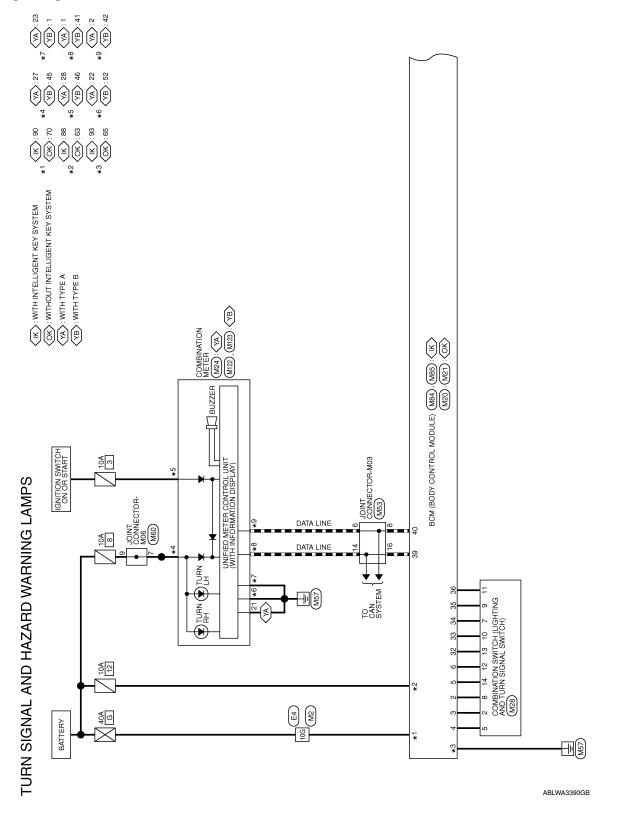
POWER GND

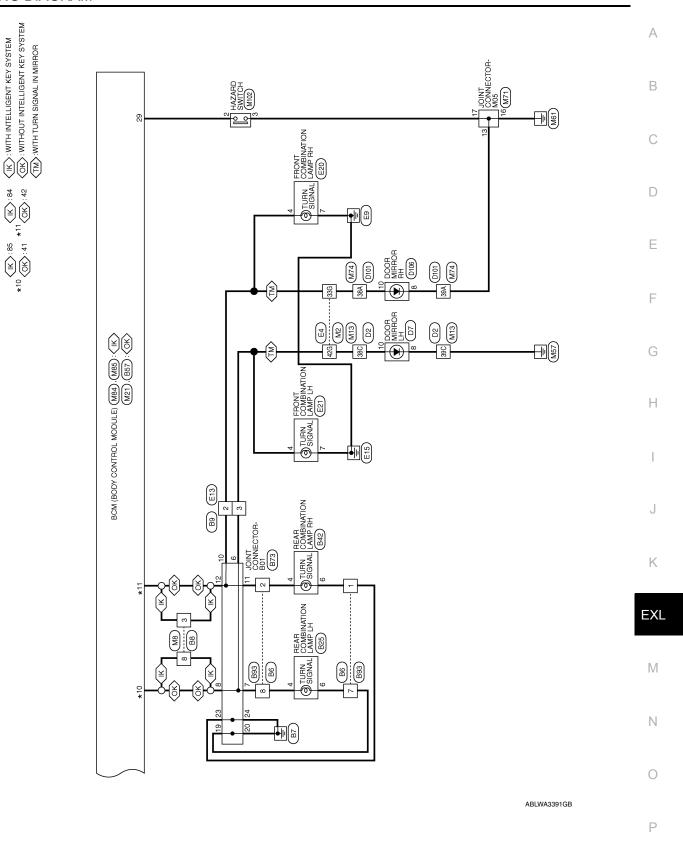
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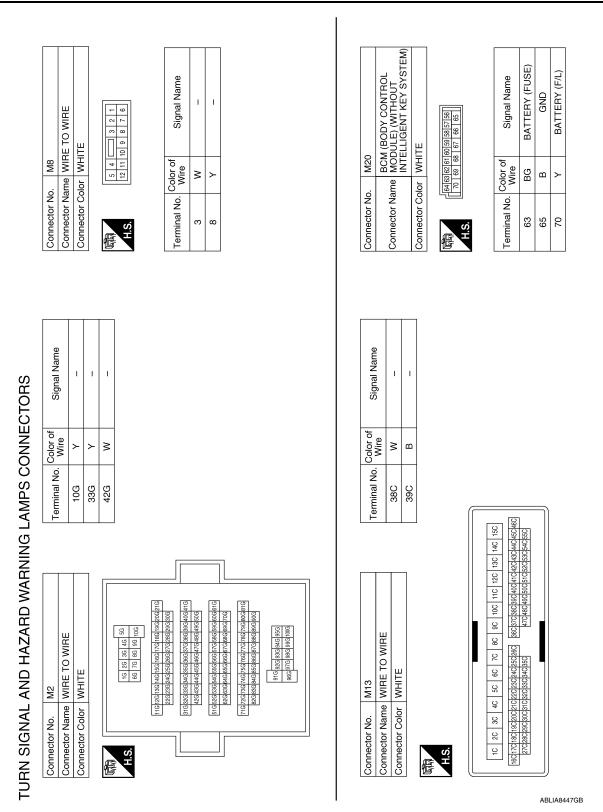
E47	Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM)	ROWN	
Connector No.	Connector Name F	Connector Color BROWN	

56 55 54 53 52	Signal Name	SIGNAL GND	FR FOG/L RH	HJ J/BOJ HJ
56 (Color of Wire	В/У	W	^
H.S.	Terminal No.	52	53	24

Wiring Diagram

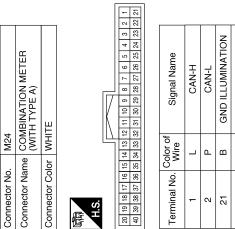






[HALOGEN HEADLAMP]

< WIRING DIAGRAM >



	$\overline{}$		_				
Signal Name	CAN-H	CAN-L	GND ILLUMINATION	GND (POWER)	GND (CIRCUIT)	BAT	IGN
Color of Wire	٦	Ь	В	В	В	ГG	GR
Terminal No. Wire	-	2	21	22	23	27	28

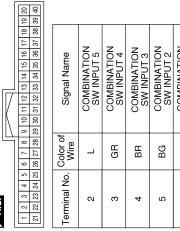
3	JOINT CONNECTOR-M03	JE	7 6 5 4 3 2 1	20 19 18 17 16 15 14 13 12 11 10	Signal Name	-	-	_	-
. M53	me JOI	lor BLL	8	20 19 18 1	Color of Wire	Ь	۵	٦	٦
Connector No.	Connector Name	Connector Color BLUE	F	S	Terminal No.	9	8	14	16

Signal Name	HAZARD SW	COMBINATION SW OUTPUT 5	COMBINATION SW OUTPUT 4	COMBINATION SW OUTPUT 3	COMBINATION SW OUTPUT 2	COMBINATION SW OUTPUT 1	CAN-H	CAN-L
Color of Wire	SB	re	\	>	В	SB	_	۵
Terminal No. Wire	29	32	33	34	35	36	39	40

Signal Name	ı	1	1	ı	1	ı
Color of Wire	Ж	Υ	SB	W	ГG	BG
Terminal No. Wire	6	10	=	12	13	14

Connector No. M28
Connector Name COMBINATION SWITCH

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



Signal Name	COMBINATION SW INPUT 5	COMBINATION SW INPUT 4	COMBINATION SW INPUT 3	COMBINATION SW INPUT 2	COMBINATION SW INPUT 1	
Color of Wire	٦	GR	BR	BG	W	
Terminal No. Wire	5	3	4	5	9	

TE	10 11 12 13 14	Signal Name	I	-	ı	I
lor WHI	7 8 2 3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Color of Wire	GR	BR	>	٦
Connector Color WHITE	所 H.S.	Terminal No. Wire	2	5	7	8

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EXL-65 Revision: December 2015 2016 Sentra NAM

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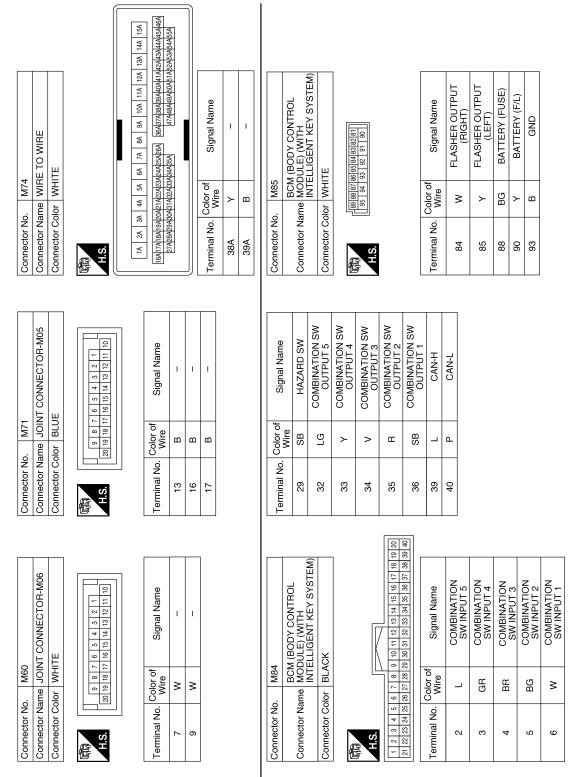
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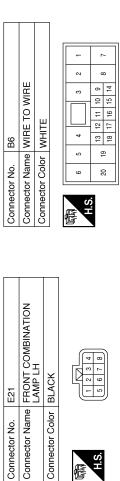
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< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

			А
M123 COMBINATION METER (WITH TYPE B) WHITE	Signal Name CAN-H CAN-L BAT IGN GND	WIRE Name N	В
M123 COMBINATION (WITH TYPE B WHITE	Color of Wire L L P P LG GR		С
e lo		Connector No. E13 Connector Name WIRE T Connector Color WHITE Terminal No. Color of 14 15 16 17 18 2	D
Connector No. Connector Col	A1 42 45 45 46 52 52	Connector Na. Connector Nan Connector Colt	Е
38 38 40			F
B) METER B) 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Signal Name GND	Signal Name	G
M122 COMBINATIO (WITH TYPE.) WHITE			Н
tor No. M122 for Name COM (WITH tor Color WHIT tor 5 6 7 8 9 24 55 6 7 8 9	o. Wire B	Color of Wire of A	I
Connector No. Connector Name Connector Color H.S. 1 2 3 4 5 6 2 3 24 25 38 2	Terminal No.	Terminal No. 10G 33G 42G	J
			K
LOH LOH LOH LOH LOH LOH LOH LOH LOH LOH	Signal Name	E4	EXL
22 ZARD SWIT ITE		E4	M
4ame HAZAR All MHITE	Color of Wire SB B	No. E4 No.	N
Connector No. M102 Connector Name HAZARD SWITCH Connector Color WHITE M.S.	Terminal No.	Connector No. E4	0
		ABLIA8450GB	_
			P



BLACK

Connector Color

E21

Connector No.

Signal Name	ı	1	ı	1
Color of Wire	_	н	BG	SB
Terminal No.	-	2	2	8

Signal Name	-	1	
Color of Wire	>	B/R	
Terminal No. Wire	4	7	

	FRONT COMBINATION LAMP RH	CK	6 7 3 4 4 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	Signal Name	1	1
E20	me FRC	lor BLACK	(- la)	Color of Wire	>	/V/ a
Connector No.	Connector Name	Connector Color	南 H.S.	Terminal No. Wire	4	7

Connector No.). B25	
Connector Na	ame RE/ LAN	Connector Name REAR COMBINATION LAMP LH
Connector Color WHITE	olor WH	ІТЕ
刷.S.	0 0	<u> </u>
Terminal No. Wire	Color of Wire	Signal Name
4	SB	ı
9	bВ	-

Connector No.). B9	
Connector Name WIRE TO WIRE	ame WIF	E TO WIRE
Connector Color WHITE	olor WH	TE
H.S.	24 23 22 21	24 28 22 21 20 19 18 17 16 15 14 13
Terminal No.	Color of Wire	Signal Name
2	\	-

SB

က

Connector Name WIRE TO WIRE Connector Color WHITE 2							
nector No. B8 nector Name WIF nector Color WH innal No. Color of Wire BG RECTOR OF THE STREET STR		IE TO WIRE	ΠE			ı	1
nector No nector No nector No nector No nector No ninal No.		me WIF	lor WH	7 2	Color of Wire	BG	P
Con Con Terra	Connector No.	Connector Na	Connector Co	廟 H.S.	Terminal No.	က	8

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< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

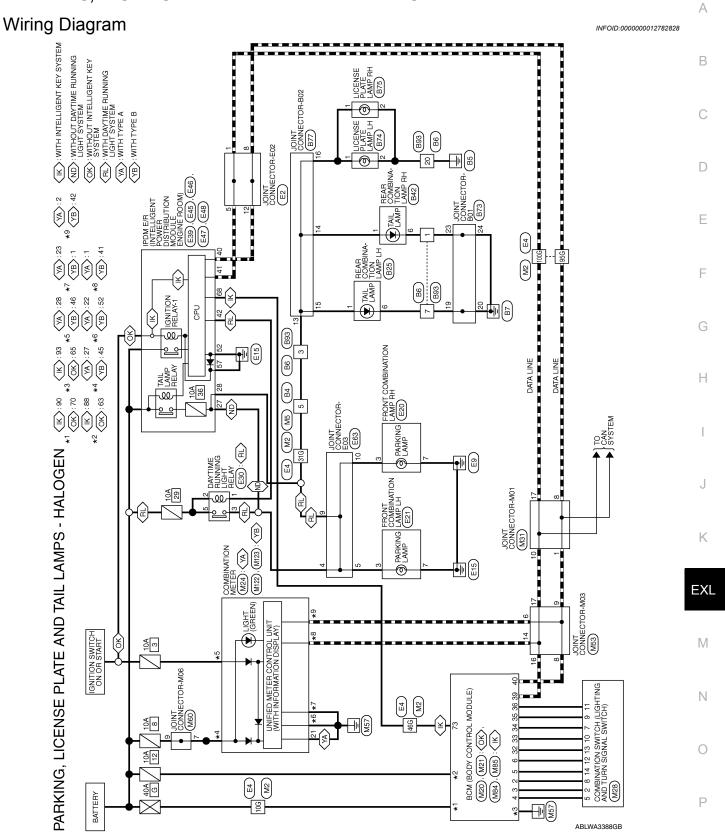
Connector No. B73 Connector Name JOINT CONNECTOR-B01 Connector Color BLACK REAL STATE OF S	Signal Name	Signal Name
Connector No. B73 Connector Name JOINT Connector Color BLACK TH.S. THE	Terminal No. Color of Wire 6 SB 2B 2 LG 10 Y 11 R 11 BG 19 B 20 B 20 B 23 L 24 B	Terminal No. Color of 38C G 39C B
SO S	Tem	
B57 BCM (BODY CONTROL MODULE) (WITHOUT INTELLIGENT KEY SYSTEM) BLACK BLACK BLACK BLACK BLACK BLACK BLACK BLACK B	Signal Name FLASHER OUTPUT (LEFT) FLASHER OUTPUT (RIGHT)	70 80 50 40 02s024033022221020 8503403302822021051
nector No.	Color of Wire 41 LG F BG F	Connector No. D2 Connector Name WIRE TO WIRE Connector Color WHITE H.S. 14C 13C 14C 14C
	Φ	
Connector No. B42 Connector Name REAR COMBINATION LAMP RH Connector Color WHITE 2	Signal Nam	B93 WHRE TO WIRE WHITE 3
Connector No. B42 Connector Name REA Connector Color WHI	Color of Wire 4 R R 6 L	Connector No. B93 Connector Name WIRE TO WIRE Connector Color WHITE T 2 3 10 11 12 13 T 8 9 10 11 12 13 T 8 9 10 11 12 13 T 8 14 15 16 17 18 T B Signs Z R B BR

Revision: December 2015 **EXL-69** 2016 Sentra NAM

Connector No.	o. D7		Connector No.	Jo. D101	11		Connector No.	D106		
Connector Name DOOR MIRROR L	ame DOOF	R MIRROR LH	Connector	Vame WIR	Connector Name WIRE TO WIRE		Connector Na	me DOO	Connector Name DOOR MIRROR RH	
Connector Color WHITE	olor WHIT	Щ	Connector Color WHITE	Color WHi	ITE		Connector Color WHITE	lor WHIT		
原 用.S.	6 5 11 2 1	10 9 8 7	原 H.S.				(南) H.S.	0 CZ	4 0 6 0 7 8 8 7 7 7 8	
						11 -				
Terminal No. Wire	Color of Wire	Signal Name	15A 14A 14A 46A 46A 46A 46A 46A 46A 46A 46A 46A 4	154 144 154 114 104 94 46A45A44A43A42A41A40A59A38A37A56A	104 34 84 74 64 34 34 14 14 14 14 14 1	2A 1A 9418417416A	Terminal No.	Color of Wire	Signal Name	
8	a	1	55A54A53	55A54A53A52A51A50A49A48A47A	NA48A47A 35A34A33A32A31A30A29A28A27A	9A28A27A	8	В	ı	
10	g	ı					10	D	1	
			Terminal No. Wire	Color of Wire	Signal Name					
			38A	ŋ	ı					
			39A	α.	ı					

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PARKING, LICENSE PLATE AND TAIL LAMPS



Connector No.	Connector No. M2 Color of Signal Name	Terima T	Color of	Niens News	Connector No.). M5	
Connector Name	WIRE TO WIRE	5			Connector Name	-	WIRE TO WIRE
Connector Color	WHITE	10G	>	ı	Connector Color	olor WHITE	
		31G	>	ı		-	
		46G	>	1		7 6 5 4	3 2 1
	1G 2G 3G 4G 5G	956	Д	ı	U	15 14 13	-
	66 76 86 96 106	100G	_	1			
	116126136146156166176186136206216						
	226236246256286276286296306	F			Terminal No.	Color of Wire	Signal Name
<u></u>	31 e) 32 e (33 e) 34 e (35 e) 36 e) 36 e) 37 e) 38 e) 60 e)				5	>	ı
Lis.	51 G 52 G 53 G 54 G 55 G 56 G 57 G 58 G 59 G 60 G 61 G 62 G 63 G 64 G 65 G 66 G 67 G 68 G 69 G 70 G						
12	716 726 736 746 756 766 776 786 796 806 816 826 836 846 856 876 896 896 896						
	010 020						
Connector No.	M20	Connector No.	No. M21		Terminal No	Color of	Niena Niena
_	BCM (BODY CONTROL	20,000	_	(BODY CONTROL	3		
Connector Name	MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)	Connector Name		MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)	32	P	COMBINATION SW OUTPUT 5
Connector Color	WHITE	Connector Color	Color WHITE	TE	33	>	COMBINATION SW OUTPUT 4
	64 63 62 61 60 59 58 57 56 70 70 69 68 67 66 65 70 70 70 70 70 70 70 7		1 2 3 4	5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	34	>	COMBINATION SW OUTPUT 3
H.S.		H.S.	23 24	26 27 28 29 30 31 32 33 34 35	35	Œ	COMBINATION SW OUTPUT 2
S	Signal Nam	Terminal No.	lo. Color of Wire	Signal Name	36	SB	COMBINATION SW OUTPUT 1
_	G BALLERY (FUSE)	8		COMBINATION	39	_	CAN-H
90 20	TT V O			SW INPOLS	40	۵	CAN-L
0/		ဧ	GR	SW INPUT 4			
		4	BB	COMBINATION SW INPUT 3			
		S.	BG	COMBINATION SW INPUT 2			
		9	>	COMBINATION SW INPLIT 1			

PARKING, LICENSE PLATE AND TAIL LAMPS

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

	18 17 16 15 14 13	e Terminal No. Color of Signal Name	H		10 -							Connector No. M83		Connector Name MODULE) (WITH INTELLIGENT KEY SYSTEM)	Connector Color WHITE			80 79 78 77 76 75 74		Terminal No. Color of Signal Name	WIFE	73 V IGN RELAY			
WHITE	7 8 9 10 11 12 13 14 7 8 9 10 11 12 13 14	Color of Signal Name	GR	BB) > -	- a	 	SB	M	- FG	BG -	4o. M60	Connector Name JOINT CONNECTOR-M06	Solor WHITE		20 19 18 17 16 15 14 13 12 11 10	Color of		M	- M					
Connector Name Connector Color	H.S.	22 21 Terminal No.	2	2	<u></u> 0	ာ တ	10	=	12	13	14	Connector No.	Connector N	Connector Color	4	(时) H.S.		l erminal No.	7	6					
COMBINATION METER (WITH TYPE A) WHITE		11 10 9 8 7 6 5 4 3 31 30 29 28 27 26 25 24 23	Signal Name	1.000	CAN-L	GND (ILLUMINATION)	GND (POWER)	GND (CIRCUIT)	BAT	IGN			Connector Name JOINT CONNECTOR-M03	ш		6 5 4 3 2 1 16 15 14 13 12 11 10	:	Signal Name	ı	ı	ı	_	-	ı	
Vame COMBIR (WITH I		17 16 15 14 13 12 37 36 35 34 33 32	color of Wire	D _	ı <u>a</u>	В	В	В	LG	GR		No. M53	Name JOIN	Color BLUE		20 19 18 17 1	Color of	>	۵	۵	۵	7	7		
Connector Name		20 19 18 17 1 40 39 38 37 3	Terminal No.	-	. ~	21	52	23	27	28		Connector No.	nnector	Connector Color		H.S.	:	ı erminai No.	9	8	6	14	16	17	

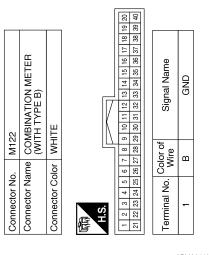
Revision: December 2015 **EXL-73** 2016 Sentra NAM

Connector No.). M85	
Connector Na	ame MO GEI	Connector Name MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color	olor WHITE	<u> </u>
H.S.	88	(89) (88) (87) (86) (85) (84) (83) (82) (81)
Terminal No. Wire	Color of Wire	Signal Name
88	BG	BATTERY (FUSE)
06	Υ	BATTERY (F/L)
66	В	GND

Signal Name	COMBINATION SW OUTPUT 5	COMBINATION SW OUTPUT 4	COMBINATION SW OUTPUT 3	COMBINATION SW OUTPUT 2	COMBINATION SW OUTPUT 1	CAN-H	CAN-L
Color of Wire	ГС	٨	^	В	SB	Т	Р
Terminal No. Wire	32	33	34	35	36	39	40

				39 40						
4	BCM (BODY CONTROL MODULE) (WITH INTELLI- GENT KEY SYSTEM)	BLACK		29 30 31 32 33 34 35 36 37 38	Signal Name	COMBINATION SW INPUT 5	COMBINATION SW INPUT 4	COMBINATION SW INPUT 3	COMBINATION SW INPUT 2	COMBINATION SW INPUT 1
. M84				26 27 28	Color of Wire	Γ	GR	BR	BG	×
Connector No.	Connector Name	Connector Color	H.S.	21 22 23 24 25	Terminal No.	2	8	4	5	9

	02											
	Connector Name JOINT CONNECTOR-E02	UE			8 7 6 5 4 3 2 1		Signal Name	1	I	ı	ı	
. E2	me JO	lor BL		٦	12 11 10 9		Color o	_	_	۵	۵	
Connector No.	Connector Na	Connector Color BLUE		管	H.S. 121		Terminal No. Wire	-	5	80	12	
		T										
23	Connector Name COMBINATION METER	III I I I E D)	IITE		/	43 44 45 46 49 50 51 52	Signal Name	CAN-H	CAN-L	BAT	IGN	GND
. M123	me CO	<u> </u>	lor Wh			41 42 43 47 48 49	Color of Wire		Д	LG	GR	В
Connector No.	Connector Na		Connector Color WHITE	4	E	H.S.	Terminal No. Wire	41	42	45	46	52



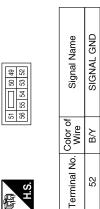
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< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

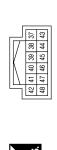
20 3ONT COMBINATION	LAMP RH	BLACK		2 3 4	6 7		Signal Name	ı	ı					39	IPDM E/R (INTELLIGENT POWER DISTRIBUTION	ODULE ENGINE ROOM)	BLACK	67 66 66 64 63			IGN SIGNAL					(
Connector No. E20	$\overline{}$	Connector Color BL			H.S.	- (Terminal No. Wire	3 L	7 B/W					Connector No. E39	l e	_		H.S.	_ [3	l erminal No. Wire	0 89					1
Signal Name	1	ı	ı	_	1										DAYTIME RUNNING LIGHT RELAY		F	-		Signal Name	-	1	1	ı		(
Color of Wire	g	۳	0	Д	_									E30	_	-	-	2 2	Jolor of	Wire	>	LG		re		
Terminal No.	10G	31G	46G	95G	100G									Connector No.	Connector Name	Connector Color		H.S.		l erminal No.	1	2	က	2		
			ſF																							
TO WIBE	i i			26	106 96 86 76 66		306296286276266256246236226	41 G 40 G 38 G 37 G 38 G 35 G 34 G 33 G 31 G	50G49G48G47G46G45G44G42G	61 G 60 G 59 G 59 G 57 G 56 G 55 G 54 G 53 G 52 G 51 G 70 G 69 G 68 G 67 G 66 G 65 G 64 G 63 G 62 G	81 G 80 G 78 G 77 G 76 G 75 G 74 G 73 G 72 G 71 G		95G 94G 93G 92G 91G 100G 99G 98G 97G 96G		FRONT COMBINATION	ž		6 7 8		Signal Name	-	ı				E
me WIRE	TIMM IC						30629	419,409,39	50649	61G 60G 58	81G80G78	0000		E21		-	4	2 9 2	Solor of	Wire	_	B/R				
Connector Name WIRE TO WIRE	Connector Color				6.1									Connector No.	Connector Name	Connector Color		H.S.		l erminal No.	8	7				
<i>3</i> C	, C	2]		,	3									0	10							ABLIA	8441	GR		

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



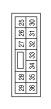


Connector No.

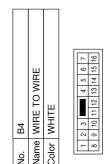




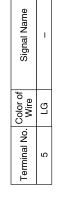


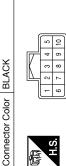












Connector Name | JOINT CONNECTOR-E03

E93

Connector No.



Signal Name	ı	-	_	1
Color of Wire	_	Т	В	Т
Terminal No. Wire	4	5	6	10

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



POWER GN	B/Y	25
Signal Nam	Color of Wire	Terminal No.

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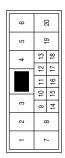
Ν

20		Connector No.). B25		Connector No.	. B42	
Connector Name WIRE TO WIRE		Connector Na	me REAR CO	Connector Name REAR COMBINATION LAMP LH	Connector Na	Connector Name REAR COMBINATION LAMP RH	SINATION
		Connector Color WHITE	olor WHITE		Connector Color WHITE	lor WHITE	
4 13 12 11 10 8 1 17 16 14 17 16 17 16 17 17 18 17 17 18 17 17 18 17 17 18 17 17 18 17 17 18 17 17 18 17 17 18 17 17 18 17 17 18 17 17 18 17 17 18 17 17 18 17 17 18 17 17 18 17 17 18 17 17 18 17 17 17 18 17 17 18 18 18 18 18 18 18 18 18 18 18 18 18	2 8 7 1	E.S.	6 2 6	-0	Si S	S O O O O O O O O O	
Signal	Name	Terminal No. Color of Wire	Color of Wire	Signal Name	Terminal No. Wire		Signal Name
		-	FG	1	-	BR	1
ı		9	BG	ı	9	7	1
1							
ı							

Connector No. B73		Connector No.	o. B74		Conne	Connector No.	B75
Connector Name JOINT CONNECTOR-B01	-801	Connector N	ame LICEN	Connector Name LICENSE PLATE LAMP LH	Conne	ector Name	Connector Name LICENSE PLATE LAMP RH
Connector Color BLACK		Connector C	Connector Color BROWN	z	Conne	Connector Color BROWN	BROWN
01 00 00 00 00 00 00 00 00 00 00 00 00 0		SH SH			S H		2 1
		İ					
Terminal No. Color of Signal Name	<u> </u>	Terminal No. Wire	Color of Wire	Signal Name	Termi	Terminal No. Color of Wire	or of Signal Name
19 B –		-	GR	1		-	GR -
20 B –		2	В	ı		2	ı B
23 L –							
24 B –							

Revision: December 2015 EXL-77 2016 Sentra NAM







Signal Name	1	ı	-	ı
Color of Wire	٦	В	В	В
Terminal No.	-	8	2	20







Signal Name	_	ı	ı	_
Color of Wire	g	BR	LG	GR
Terminal No. Wire	13	14	15	16

ABLIA8444GB

[HALOGEN HEADLAMP] < WIRING DIAGRAM > STOP LAMP Α Wiring Diagram INFOID:0000000012782829 В ⟨OS⟩: WITHOUT REAR SPOILER ⟨SP⟩: WITH REAR SPOILER С D Е F JOINT CONNECTOR-B02 B77 G JOINT CONNECTOR-B01 B73 Н J (B93 (B) Κ EXL \mathbb{N} Ν BATTERY

STOP LAMP

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Connector Name STOP LAMP SWITCH

E60

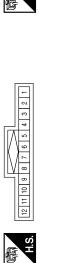
Connector No.

Connector Color WHITE

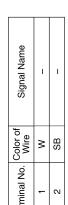
3 4

STOP LAMP CONNECTORS

Connector No. E13	Connector Name WIRE TO WIRE	Connector Color WHITE	
. E3	onnector Name JOINT CONNECTOR-E01	onnector Color BLUE	



Signal Name	-	_
Color of Wire	SB	SB
Terminal No. Wire	11	12



Signal Name	ı	1	
Color of Wire	8	SB	
Terminal No.	-	2	

Signal Name	-	
Color of Wire	SB	
S		

Signal Name	1	
Color of Wire	SB	
Terminal No.	-	

Signal Name	1	
Color of Wire	SB	
Terminal No.	1	

Connector No.	B9
Connector Name WIRE TO WIRE	WIRE TO WIRE
Connector Color WHITE	WHITE
所 (12 11 10 H.S. (24 23 22	24 28 22 21 20 19 18 17 16 15 14 13

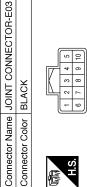
Connector No.	ė.	Be	တ							
Connector Name WIRE TO WIRE	Name	>	IR.	Ξ	0	¥	Æ			
Connector Color WHITE	Color	>	₹	끧						
										ı
· ·	9	2	4	ш		\vdash	· m	2	-	
6	8	5	55	12	=	- 2	0		r	
	02	19	18	18 17 16 15	16	15	14	8	,	

Signal Name	1	1	-	1
Color of Wire	7	Y	BG	В
Terminal No. Color of Wire	1	4	7	20

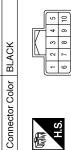
Signal Name

Color of Wire

Terminal No.



Connector No. E63





Signal Name	ı	1
Color of Wire	8	W
Terminal No.	7	8

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		T					
	Connector Name LAMP (WITHOUT REAR	IILEH)	CK	[5]	Signal Name	1	1
B46	me LAN	2 2 3	or BLA		Color of Wire	\	В
Connector No.	Connector Nar		Connector Color BLACK	H.S.	Terminal No. Wire	-	2
	۵		1				
	Connector Name REAR COMBINATION LAMP RH	믵		1 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	Signal Name	-	_
. B42	me REA RH	or WHI		2 9	Color of Wire	>	L
Connector No.	Connector Na	Connector Color WHITE		「阿斯 H.S.	Terminal No. Wire	2	9
	AR COMBINATION LAMP	TE		1 S	Signal Name	I	ı
B25	me REA LH	or WHI		2/ 9	Color of Wire	Œ	BG
Connector No.	Connector Name REAR COMBIN, LH	Connector Color WHITE		南 H.S.	Terminal No. Wire	2	9

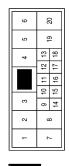
		_						
	Connector Name JOINT CONNECTOR-B02 Connector Color GREEN		6 5 4 3 2 1 16 15 14 13 12 11 10	Signal Name	I	1	1	
. B77	me JOIN		20 19 18 17	Color of Wire	>	>	_	
Connector No.	Connector Name JOINT C	9	H.S.	Terminal No. Color of Wire	-	2	4	
	Connector Name JOINT CONNECTOR-B01 Connector Color BLACK		20 19 18 17 16 15 14 13	Signal Name	1	1	ı	ı
B73	ne JOINT	L	24 23 22 21 20 19 18	Color of Wire	В	В	_	В
Connector No.	Connector Name JOINT C	Ð	H.S.	Terminal No. Color of Wire	19	20	23	24
]	
	Connector Name LAMP (WITH REAR SPOILER)	TE		Signal Name	ı	ı		
. B71	HIGH me LAM SPO	lor WHI	8	Color of Wire	В	_		
Connector No.	Connector Na	Connector Color WHITE	原 H.S.	Terminal No. Wire	2	က		

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Revision: December 2015 **EXL-81** 2016 Sentra NAM

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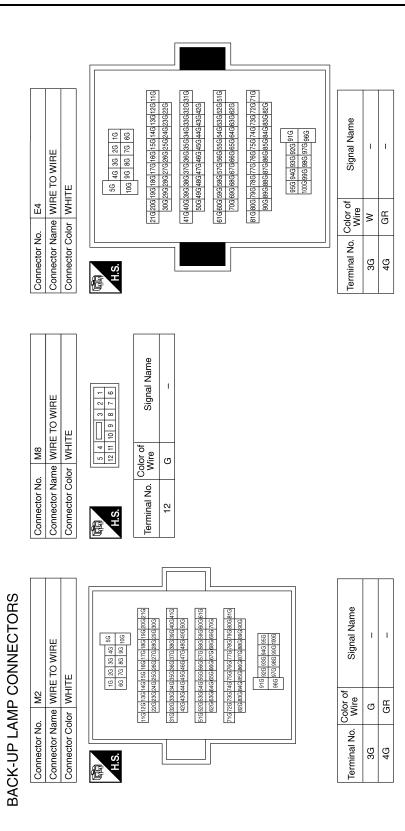




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9	20		Je					
co	4	20		Signal Name			١,	
4	13	18		ına	'		l '	ı.
_	12 2			150				
	10 11 12	15 16 17		0,				
_	10	15						
က	6	14		<u></u>				
7	-			olor o Wire	_	\	В	В
-	-			0				
VI.				Terminal No. Wire	-	4	7	20

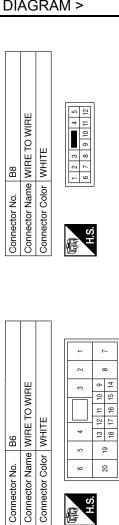
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BACK-UP LAMP Α Wiring Diagram INFOID:0000000012782830 ⟨M⟩: WITH M/T ⟨VT⟩: WITH CVT В С D Е F G JOINT CONNECTOR-B02 (B77) Н REAR COMBINATION LAMP LH (B25) [55] J (8) Κ EXL M Ν **BACK-UP LAMP** IGNITION SWITCH ON OR START 0 Р



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No. F23 Name TCM (TRANSMISSION CONTROL MODULE) Solor BLACK 31 22 33 44 55 6 7 8 9 10 41 42 1 2 3 4 5 6 7 8 9 10 41 42 Color of Signal Name G R RANGE SW	Color of Signal Name Wire Signal Name Color of Signal Name G	A B C
Connector No. Connector Name Connector Color Terminal No. 6 Golo Golo Golo Golo Golo Golo Golo G	Terminal No. 5A 17A 17A 18A	Е
		F
VIRE 1104 14 114 24 114 24 115 64 115 64 115 84 115 84 115 84 115 84 115 84 115 84 115 84 115 84 115 84 115 84 115 84	1RE 33A 42A	G
E64 WIRE TO V WIRE TO V WIRE TO V WIRE TO V V WIRE TO V V V V V V V V V V V V V V V V V V	Connector No. F50 Connector Name WIRE TO WIRE Connector Color BLACK A 134 20A 26A 38 3 4 14 13 2 1 4 22	Н
Connector No. Connector Name Connector Color H.S. 401 At 17A G G G G G 17A G G G G G G G G G G G G G G G G G G G	Connector No.	I
O O O O O O O O O O O O O O O O O O O		J
1		K
E43 IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) WHITE T 6 5 4 3 12 11 10 T 16 15 14 13 12 11 10 AT ECU IGN	F26 SWITCH BLACK 6 5 4 3 2 1 10 9 8 7 10 9 8 7 10 9 8 7 10 8 7 10 9 8 7 10 9 8 7 10 9 8 7 10 9 8 7 10 9 9 7 10 9 9 7 10 9 9 7 10 9 9 7 10 9 9 7 10 9 9 7 10 9 9 7 10 9 9 7 10 9 9 7 10 9 9 7 10 9 9 7 10 9 9 7 10 9 9 7 10 9 9 7 10 9 9 9 7 10 9 9 9 7 10 9 9 9 9 10 9 9 9 9 10 9 9 9 9 10 9 9 9 9 10 9 9 9 10 9 9 9 10 9 9 9 10 9 9 9 10 9 9 9 10 9 9 9 10 9 9 9 10 9 9 9 10 9 9 9 10 9 9 9 10 9 9 9 10 9 9 9 10 9 9 9 10 9 9 9 10 9 9 9 10 9 9 9 10 9 9 9 10 9 9 9 10 9 10 9 9 10 9 9 10 9 9 10 9 9 10 9 9 10 9 9 10 9 9 10 9 9 10 9 9 10 9 9 10 9 9 10 9 9 10 9 9 10 9 10 9 9 10 9 9 10 9 9 10 9 9 10 9 9 10 9 9 10 9 9 10 9 9 10 9 9 10 9 10 9 9 10 9 9 10 9 9 10 9 9 10 9 9 10 9 9 10 9 9 10 9 1	EXL
	1 1 2 5 1 9 1 9 1	M
mector No. Innector No. Innector No. Innector No. Innector Col	mector No minal No.	N
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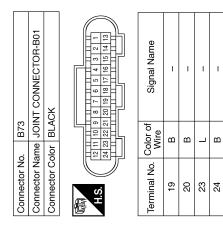


Signal Name	1	
Color of Wire	Μ	
Terminal No.	12	

Signal Name	ı	1	1	
Color of Wire	7	Μ	BG	
erminal No.	1	5	7	

Signal Name		'	
Color of Wire	M	BG	
Terminal No.	5	7	

	PARK/NEUTRAL POSITION (PNP) SWITCH	EN	C C C C C C C C C C	Signal Name	-	=
F52		lor GREEN		Color of Wire	G	SB
Connector No.	Connector Name	Connector Color	原则 H.S.	Terminal No.	-	2



	Connector Name REAR COMBINATION LAMP RH	11	1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Signal Name	1
. B42	me REA	lor WHI	[C] (Q)	Color of Wire	SB
Connector No.	Connector Na	Connector Color WHITE	H.S.	Terminal No.	က

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Connector No.	o. B25	
Connector Name		REAR COMBINATION LAMP LH
Connector Color	olor WHITE	ПЕ
H.S.	0 9	1 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Terminal No.	Color of Wire	Signal Name
3	Ф	1
9	BG	ı

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	9	15	
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Signal Nam	-	ı	-
Color of Wire	٦	>	В
Terminal No.	1	5	

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

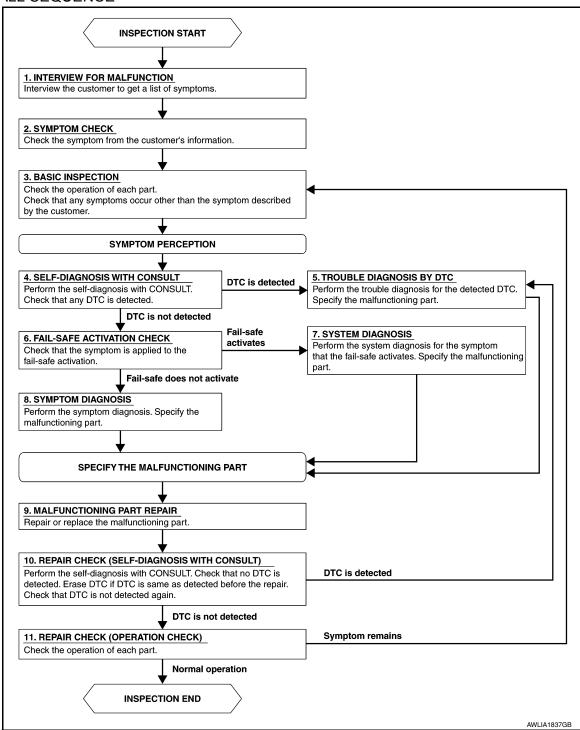
Signal Name	-	ı	ı
Color of Wire	Μ	SB	Д
Terminal No.	10	Ξ	12

BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

OVERALL SEQUENCE



DETAILED FLOW

1.INTERVIEW FOR MALFUNCTION

Find out what the customer's concerns are.

DIAGNOSIS AND REPAIR WORK FLOW

DIAGNOSIS AND REPAIR WO	
< BASIC INSPECTION >	[HALOGEN HEADLAMP]
>> 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 of interview.	ner than those mentioned in the customer
>> GO TO 4	
4.SELF-DIAGNOSIS WITH CONSULT	
Perform the self diagnosis with CONSULT. Check that any DTC is de	etected.
Is any DTC detected?	
YES >> GO TO 5 NO >> GO TO 6	
NO >> GO TO 6 5.TROUBLE DIAGNOSIS BY DTC	
	· · · · · · · · · · · · · · · · · · ·
Perform the trouble diagnosis for the detected DTC. Specify the malf	runctioning 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 ac	ctivates. 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)	
	latastad Erasa all DTCs datastad prior to
Perform the self diagnosis with CONSULT. Verify that no DTCs are d the repair. Verify that DTC is not detected again.	ietected. Erase all DTOs detected prior to
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?	

Revision: December 2015 **EXL-89** 2016 Sentra NAM

DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

[HALOGEN HEADLAMP]

>> Inspection End. >> GO TO 3 YES

NO

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

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

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	Rattery power supply	12 (10A)
90	Battery power supply	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

- Disconnect BCM connector M85.
- Check voltage between BCM connector M85 and ground.

BCM		Ground	Voltage	
Connector	Terminal	Giodila	vollage	
M85	88		Pottony voltage	
	90	_	Battery voltage	

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.

ВСМ		Ground	Continuity	
Connector	Terminal	Ground	Continuity	
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

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

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< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

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	Pattory power supply	12 (10A)
70	Battery power supply	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.

ВСМ		Ground	Ignition switch position		on
Connector	Terminal	Ground	OFF	ACC	ON
M20	63		Pottoni voltogo		
IVIZU	70		Battery voltage	Battery voltage	Detterminaltess
MOA	11	_	0 V		Battery voltage
M21	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	Ground	Continuity
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.

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

Terminal No.	Signal name	Fusible link Nos.
1		B (100A)
2	Battery	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

- Disconnect IPDM E/R connector E42 and E44.
- Check voltage between IPDM E/R connector E42 and E44 and ground.

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

Is the inspection result normal?

>> GO TO 3 YES

NO >> Repair harness or connectors.

3. CHECK GROUND CIRCUIT

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

IPDM E/R		Ground	Continuity	
Connector	Terminal	Giodila	Continuity	
E47	52	_	Yes	
E48	57	_	165	

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

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		B (100A)
2	Battery	A (140A), E (100A)
24		A (140A), D (100A), J (40A)

Is the fusible link blown?

>> Replace the blown fusible link after repairing the affected circuit.

EXL-93 Revision: December 2015 2016 Sentra NAM

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< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

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		Ground		
E42	1			
L 4 Z	2	_	Battery voltage	
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	Giodila	Continuity	
E47	52		Yes	
E48	57	_	165	

Is the inspection result normal?

YES >> Inspection End.

NO >> Repair harness or connectors.

HEADLAMP (HI) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

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

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1.CHECK HEADLAMP (HI) OPERATION

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).

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

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

НΙ : Headlamp switches to the high beam.

OFF : Headlamp OFF

Is the inspection result normal?

YES >> Headlamp (HI) circuit is normal.

>> Refer to EXL-95, "Diagnosis Procedure". NO

Diagnosis Procedure

INFOID:0000000012782834

Regarding Wiring Diagram information, refer to EXL-35, "Wiring Diagram".

1.CHECK HEADLAMP (HI) FUSES

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

(P)CONSULT ACTIVE TEST

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

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HEADLAMP (HI) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

(+)			()	Voltage
Connector Ter		Terminal	(-)	voltage
RH	E20	2	Ground	Battery voltage
LH	E21	2	Giodila	Dattery Voltage

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

	IPDM E/F	₹	Front combination lamp		Continuity
Coni	nector	Terminal	Connector	Terminal	Continuity
RH	E43	5	E20	2	Yes
LH	E43	6	E21	2	165

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to <u>PCS-31</u>, "<u>Removal and Installation</u>" (with Intelligent Key system) or <u>PCS-60</u>, "<u>Removal and Installation</u>" (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	0	Ground	165

Is the inspection result normal?

YES >> Inspect the headlamp bulb.

NO >> Repair or replace the harness or connector.

HEADLAMP (LO) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

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

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1.CHECK HEADLAMP (LO) OPERATION

- 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).
- 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

- Select EXTERNAL LAMP of IPDM E/R active test item.
- 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.

>> Refer to EXL-97, "Diagnosis Procedure". NO

Diagnosis Procedure

INFOID:0000000012782837

Regarding Wiring Diagram information, refer to EXL-35, "Wiring Diagram".

1. CHECK HEADLAMP (LO) FUSES

- Turn the ignition switch OFF.
- 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

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

(+)		(_)	Voltage
Connector	Terminal	(-)	voltage

EXL-97 Revision: December 2015 2016 Sentra NAM EXL

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HEADLAMP (LO) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

RH	E20	1	Ground	Rattery voltage
LH	E21	ı	Oround	Battery voltage

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 combina	Continuity		
Conr	nector	Terminal	Connector	Terminal	Continuity
RH	E43	8	E20	1	Yes
LH	L43	7	E21	'	165

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to <u>PCS-31</u>, "<u>Removal and Installation</u>" (with Intelligent Key system) or <u>PCS-60</u>, "<u>Removal and Installation</u>" (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.

Conr	nector	Terminal	_	Continuity
RH	E20	5	Ground	Yes
LH	E21	3	Sibulid	103

Is the inspection result normal?

YES >> Inspect the headlamp bulb.

NO >> Repair or replace the harness or connector.

DAYTIME RUNNING LIGHT RELAY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

INFOID:0000000012782839

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

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

1. CHECK DAYTIME RUNNING LIGHT RELAY VOLTAGE SUPPLY

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

Daytime run	ning light relay	()	Voltago	
Connector	Terminal	(-)	Voltage	
E30	2	Ground	Patton, voltago	
£30	5	Giouna	Battery voltage	

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

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

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

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.

f 4.CHECK DAYTIME RUNNING LIGHT RELAY

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EXL-99 Revision: December 2015 2016 Sentra NAM

DAYTIME RUNNING LIGHT RELAY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

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 runni	ng light relay	Front combination lamp			Continuity
Connector	Terminal		Connector	Terminals	Continuity
E30	3	LH	E21	3	Yes
£30	E30 3	RH	E20	3	Yes

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

Daytime runnii	ng light relay	Rear combination lamp			Continuity
Connector	Terminal		Connector	Terminals	Continuity
E30	2	LH	B25	1	Yes
€30	3	RH	B42	, , , , , , , , , , , , , , , , , , ,	168

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

Daytime runn	ing light relay	License plate lamp			Continuity
Connector	Terminal		Connector	Terminals	Continuity
E30	3	LH	B74	1	Yes
L30	E30 3	RH	B75	'	res

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

Daytime running light relay		()	Continuity	
Connector	Terminal	(-)	Continuity	
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	,	Giodila	165

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

Connector	Terminal	_	Continuity	
LH B25	6	Ground	Yes	
RH B42		Ground	163	

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

DAYTIME RUNNING LIGHT RELAY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

Connector	Terminal	_	Continuity
LH B74	2	Ground	Yes
RH B75		Orbana	165

Is the inspection result normal?

YES >> Inspect daytime running light bulb.

NO >> Repair or replace the harness or connector.

Component Inspection

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1. CHECK DAYTIME RUNNING LIGHT RELAY

- Turn ignition switch OFF.
- Remove daytime running light relay. 2.
- 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
3 and 3	No current supply	No

Is the inspection result normal?

YES >> Inspection End.

NO >> Replace daytime running light relay.

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EXL-101 Revision: December 2015 2016 Sentra NAM

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FRONT FOG LAMP CIRCUIT

Description INFOID:000000012782841

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

NWITHOUT 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.
- 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

(P)CONSULT

- 1. Disconnect the front fog lamp harness connector in question.
- Turn the ignition switch ON.
- Turn the front fog lamps ON.
- Check the voltage between the front fog lamp harness connector and ground.

(+)		(_)	Voltage		
C	onnector	Terminal	al (–)		
LH	E27	1	Ground	Rattery voltage	
RH	E28	, i	Ground	Battery voltage	

Is the inspection result normal?

YES >> GO TO 4.

FRONT FOG LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

NO >> GO TO 3.

$3.\mathsf{CHECK}$ 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
Coni	nector	Terminal	Connector Terminal		Continuity
RH	E47	53	E28	1	Yes
LH	E47	54	E27	1	165

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to <u>PCS-31, "Removal and Installation"</u> (with Intelligent Key system) or <u>PCS-60, "Removal and Installation"</u> (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.

Coni	Connector Terminal		_	Continuity	
RH	E28	2	Ground	Yes	
LH	E27	2	Ground	163	

Is the inspection result normal?

YES >> Inspect the fog lamp bulb.

NO >> Repair or replace the harness or connector.

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Revision: December 2015 EXL-103 2016 Sentra NAM

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PARKING LAMP CIRCUIT

Description INFOID:000000012782844

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

NWITHOUT CONSULT

- 1. Activate IPDM E/R auto active test. Refer to EXL-26, "Diagnosis Description" (with Intelligent Key system).
- Check that the parking lamp is turned ON.

(A) 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.
- 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)

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

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

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

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	(+)		(-)	Voltage
	Connector	Terminal	(-)	(Approx.)
LH	B25	1	1 Ground Battery volta	Battery voltage
RH	B42	, , , , , , , , , , , , , , , , , , ,	Giodila	Dattery Voltage

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

	(+)	(+)		Voltage (Approx.)	
	Connector	Terminal	(-)	(Approx.)	
LH	B74	1 Ground		Pattery veltage	
RH	B75	, , , , , , , , , , , , , , , , , , ,	Ground	Battery voltage	

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.
- 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
Conne	ector	Terminal	Connector	Terminal	Continuity
LH	E45	27	E21	2	Yes
RH	E45	21	E20	3	res

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

IPDM E/R			Rear combina	Continuity		
Connector Terminal		Connector	Terminal	Continuity		
LH	E45	28	B25	1	Yes	
RH	L43	20	B42	'	165	

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

Continuity	plate lamp	License	IPDM E/R		
Continuity	Terminal	Connector	Terminal	Connector	
Yes	1	B74	28	E45	LH
165	1	B75	26	RH E45 26	

Are the inspection results normal?

YES >> Replace IPDM E/R. Refer to <u>PCS-31, "Removal and Installation"</u> (with Intelligent Key system) or <u>PCS-60, "Removal and Installation"</u> (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	(-)	Continuity

Revision: December 2015 EXL-105 2016 Sentra NAM

PARKING LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

LH	E21	7	Ground	Yes
RH	E20	ľ	Gloulia	163

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

	(+)	()	Continuity		
Connector		Terminal	(-)	Continuity	
LH	B25	6	Ground	Yes	
RH	B42	0	Giodila	res	

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

	(+)	()	Continuity		
Connector		Terminal	(-)	Continuity	
LH	B74	2	Ground	Yes	
RH	B75	2	Gloulia	res	

Are the inspection results normal?

YES >> Inspect the parking lamp bulb.

NO >> Repair or replace the harness or connector.

TURN SIGNAL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

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INFOID:0000000012782848

INFOID:0000000012782849

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

NOTE:

Turn signal lamp blinks at normal speed when using the hazard warning lamp.

Component Function Check

1.CHECK TURN SIGNAL LAMP

(P)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.

>> Refer to EXL-107, "Diagnosis Procedure". NO

Diagnosis Procedure

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

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.
- Operate the turn signal switch.
- While the turn signal is operating, check the voltage between the front combination lamp harness connector and ground.

(+)		(-)	Voltage	D
Connector	Terminal	(-)	(Approx.)	Г

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TURN SIGNAL LAMP CIRCUIT

[HALOGEN HEADLAMP]

RH	E20			
LH	E21	4	Ground	(V) 15 10 5 0 PKIC6370E

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

	(+)		(_)	Voltage (Approx.)	
Connector Terminal		(-)	(Approx.)		
RH	B42				
LH	B25	4	Ground	(V) 15 10 5 0 1s	

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

	(+)			Voltage	
	Connector Terminal		(-)	Voltage (Approx.)	
RH	D106				
LH	D7	10	Ground	(V) 15 10 5 0 1s 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 combinati	Continuity		
Coni	Connector Terminal		Connector	Terminal	Continuity	
LH	M85	85	E21	4	Yes	
RH	IVIOO	84	E20	4	ies	

Without Intelligent Key

BCM			Front combinati	Continuity		
Conr	Connector Terminal		Connector	Terminal	Continuity	
LH	B57	41	E21	4	Yes	
RH	B37	42	E20	4	res	

TURN SIGNAL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

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

With Intelligent Key

ВСМ		Rear combination lamp		Continuity	
Con	nector	Terminal	Connector	Terminal	Continuity
LH	M85	85	B25	4	Yes
RH	IVIOO	84	B42	4	res

Without Intelligent Key

ВСМ		Rear combination lamp		Continuity	
Cor	nnector	Terminal	Connector	Terminal	Continuity
LH	B57	41	B25	4	Yes
RH	637	42	B42	4	165

Check continuity between the BCM harness connector and the door mirror harness connector in question.
 With Intelligent Key

ВСМ		Door mirror		Continuity	
Con	nector	Terminal	Connector	Terminal	Continuity
LH	M85	85	D7	10	Yes
RH	IVIOS	84	D106	10	165

Without Intelligent Key

BCM		Door mirror		Continuity	
Con	nector	Terminal	Connector	Terminal	Continuity
LH	B57	41	D7	10	Yes
RH	637	42	D106	10	165

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		Continuity
Connector	Terminal		Continuity
M85 (with Intelligent	84	Ground	
Key)	85	Ground	No
B57 (without Intelli-	41		NO
gent Key)	42		

Are the inspection results normal?

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

NO >> Repair or replace the harness or connectors.

5. CHECK TURN SIGNAL LAMP GROUND CIRCUIT

- 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	(-)	Continuity

TURN SIGNAL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

LH	E21	7	Ground	Yes
RH	E20	,	Ground	163

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

Rear combination lamp			()	Continuity
Connec	ctor	Terminal	(-)	Continuity
LH	B25	6	Ground	Yes
RH	B42	0	Ground	

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

Door mirror			()	Continuity	
Connector		Terminal	(-)	Continuity	
LH	D7	0	Ground	Yes	
RH	D106	0	Giouna	168	

Are the inspection results normal?

YES >> Replace the malfunctioning lamp.

NO >> Repair or replace the harness or connectors.

OPTICAL SENSOR

Description

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

Component Function Check

INFOID:0000000012782851

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1. CHECK OPTICAL SENSOR SIGNAL BY CONSULT

CONSULT

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

Monitor item	Monitor item Condition	
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 <u>EXL-111</u>, "<u>Diagnosis Procedure</u>".

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.
- 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		
La Charles Carrier Carrier and Decar	. H				

Is the inspection result normal?

YES >> GO TO 2.

NO >> GO TO 3.

2.CHECK OPTICAL SENSOR GROUND CIRCUIT

- 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

< DTC/CIRCUIT DIAGNOSIS >

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

Optical	sensor	ВСМ		Continuity
Connector	Terminal	Connector	Terminal	Continuity
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	(-)	Continuity	
M72	1	Ground	No	

Is the inspection result normal?

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

NO >> Repair or replace the harness or connectors.

f 4 . CHECK OPTICAL SENSOR SIGNAL OPEN CIRCUIT

- Disconnect BCM connector.
- Check continuity between optical sensor harness connector and BCM harness connector.

Optica	sensor	BCM		Continuity
Connector	Terminal	Connector	Terminal	Continuity
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.

CHECK OPTICAL SENSOR GROUND FOR OPEN CIRCUIT

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

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

Is the inspection result normal?

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

NO >> Repair or replace harness or connector.

HAZARD SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

HAZARD SWITCH

Component Function Check

INFOID:0000000012782853

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1. CHECK HAZARD SWITCH SIGNAL BY CONSULT

(E)CONSULT DATA MONITOR

- Turn ignition switch ON.
- Select HAZARD SW of BCM (FLASHER) Data Monitor item.
- While operating the hazard switch, check the monitor status.

Monitor item	Condition		Monitor status
HAZARD SW	Hazard switch	ON	On
	TIAZAIA SWILGII	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

- Turn ignition switch OFF.
- Disconnect hazard switch connector.
- Turn ignition switch ON.
- Check voltage between hazard switch harness connector and ground.

(+) Hazard switch			
		(–)	Voltage (Approx.)
Connector	Terminal		(
M102	2	Ground	Battery voltage

Is the inspection result normal?

>> GO TO 4. YES

NO >> GO TO 2.

2.CHECK HAZARD SWITCH SIGNAL OPEN CIRCUIT

- Turn ignition switch OFF.
- 2. Disconnect BCM connector.
- Check continuity between hazard harness connector and BCM harness connector.

Hazaro	d switch	ВСМ		Continuity
Connector	Terminal	Connector	Terminal	Continuity
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.

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HAZARD SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

Hazard switch			Continuity
Connector	Terminal	Ground	Continuity
M102	2		No

Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-78</u>, "Removal and Installation" (with Intelligent Key system) or <u>BCS-135</u>, "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			Continuity
Connector	Terminal	Ground	Continuity
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.

EXTERIOR LIGHTING SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[HALOGEN HEADLAMP]

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SYMPTOM DIAGNOSIS

EXTERIOR LIGHTING SYSTEM SYMPTOMS

Symptom Table

CAUTION:

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

Symp	otom	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 <u>EXL-95</u> .
Switch to the high beam.	Both sides	_	Symptom diagnosis "BOTH SIDE HEADLAMPS DO NOT SWITCH TO HIGH BEAM" Refer to EXL-118.
High beam indicator lamp (Headlamp switches to the		Combination meter BCM	Combination meter. Data monitor "HI-BEAM IND" BCM (HEAD LAMP) Active test "HEADLAMP"
	One side	Bulb Fuse Harness between IPDM E/R and the front combination lamp IPDM E/R	Headlamp (LO) circuit Refer to <u>EXL-97</u> .
Headlamp does not switch to the low beam.	Both sides	Combination switch (lighting and turn signal switch) Harness between the combination switch (lighting and turn signal switch) and BCM BCM	Combination switch (lighting and turn signal switch) Refer to 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 <u>EXL-97</u>
	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	

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Symp	otom	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 <u>EXL-111</u> .
Daytime running light syste	em does not activate.	_	Symptom diagnosis "DAYTIME LIGHT SYSTEM INOP- ERATIVE" Refer to <u>EXL-119</u> .
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 <u>EXL-107</u> .
Turn signal indicator lamp does not blink.	One side Both sides (Always)	Combination meter 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 <u>EXL-113</u> .

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[HALOGEN HEADLAMP]

NORMAL OPERATING CONDITION

Description

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.

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BOTH SIDE HEADLAMPS DO NOT SWITCH TO HIGH BEAM

< SYMPTOM DIAGNOSIS >

[HALOGEN HEADLAMP]

BOTH SIDE HEADLAMPS DO NOT SWITCH TO HIGH BEAM

Description INFOID.000000012782857

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 <u>BCS-76, "Symptom Table"</u> (with Intelligent Key system) or <u>BCS-133, "Symptom Table"</u> (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

(P)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	HI or PASS	ON
	(2nd)	Except for HI or PASS	OFF

Is the inspection results normal?

YES >> GO TO 3

NO >> Replace BCM. Refer to <u>BCS-78</u>, "Removal and Installation" (with Intelligent Key system) or <u>BCS-135</u>, "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 <u>PCS-31</u>, "<u>Removal and Installation</u>" (with Intelligent Key system) or <u>PCS-60</u>, "<u>Removal and Installation</u>" (without Intelligent Key system).

NO >> Repair or replace the malfunctioning part.

DAYTIME LIGHT SYSTEM INOPERATIVE

< SYMPTOM DIAGNOSIS >

[HALOGEN HEADLAMP]

INFOID:0000000012782860

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

1.CHECK DAYTIME RUNNING LIGHT OPERATION

- 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: CON-SULT Function (BCM - HEAD LAMP)" (without Intelligent Key system).
- Check that the daytime running lights turn on.

Is the inspection results normal?

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

NO >> GO TO 2.

2.CHECK DAYTIME RUNNING LIGHT RELAY FUSE

- Turn ignition switch OFF.
- 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.

>> Replace the bulbs. NO

$oldsymbol{4}$.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.

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BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

[HALOGEN HEADLAMP]

BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

Description INFOID:000000012782861

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 <u>BCS-76, "Symptom Table"</u> (with Intelligent Key system) or <u>BCS-133, "Symptom Table"</u> (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

- 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 <u>BCS-78</u>, "Removal and Installation" (with Intelligent Key system) or <u>BCS-135</u>, "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 <u>PCS-31</u>, "<u>Removal and Installation</u>" (with Intelligent Key system) or <u>PCS-60</u>, "<u>Removal and Installation</u>" (without Intelligent Key system).

NO >> Repair or replace the malfunctioning part.

PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

[HALOGEN HEADLAMP]

INFOID:0000000012782864

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PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON

Description INFOID:000000012782863

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

Diagnosis Procedure

1.combination switch (Lighting and turn signal switch) inspection

Check the combination switch (lighting and turn signal switch). Refer to <u>BCS-76, "Symptom Table"</u> (with Intelligent Key system) or <u>BCS-133, "Symptom Table"</u> (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

(P)CONSULT DATA MONITOR

- 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 <u>BCS-78</u>, "Removal and Installation" (with Intelligent Key system) or <u>BCS-135</u>, "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 <u>PCS-31, "Removal and Installation"</u> (with Intelligent Key system) or <u>PCS-60, "Removal and Installation"</u> (without Intelligent Key system).

NO >> Repair or replace the malfunctioning part.

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Revision: December 2015 EXL-121 2016 Sentra NAM

BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

[HALOGEN HEADLAMP]

BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

Description INFOID:000000012782865

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 <u>BCS-76, "Symptom Table"</u> (with Intelligent Key system) or <u>BCS-133, "Symptom Table"</u> (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

(P)CONSULT DATA MONITOR

- 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	ON	ON
	(Lighting switch 3rd)	OFF	OFF

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace BCM. Refer to <u>BCS-78</u>, "Removal and Installation" (with Intelligent Key system) or <u>BCS-135</u>, "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 <u>PCS-31</u>, "<u>Removal and Installation</u>" (with Intelligent Key system) or <u>PCS-60</u>, "<u>Removal and Installation</u>" (without Intelligent Key system).

NO >> Repair or replace the malfunctioning part.

INFOID:0000000012782867

PERIODIC MAINTENANCE

HEADLAMP

Aiming Adjustment

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.

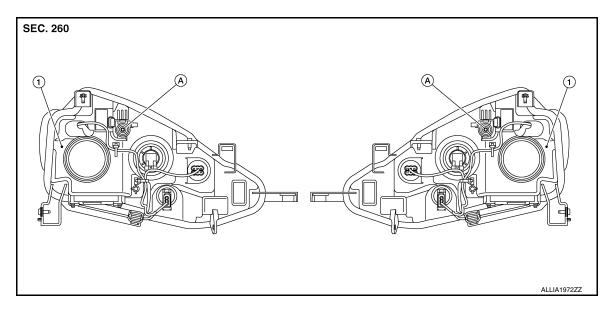
CAUTION:

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.
- Start the engine. Turn the headlamp (LO) ON.

Revision: December 2015 EXL-123 2016 Sentra NAM

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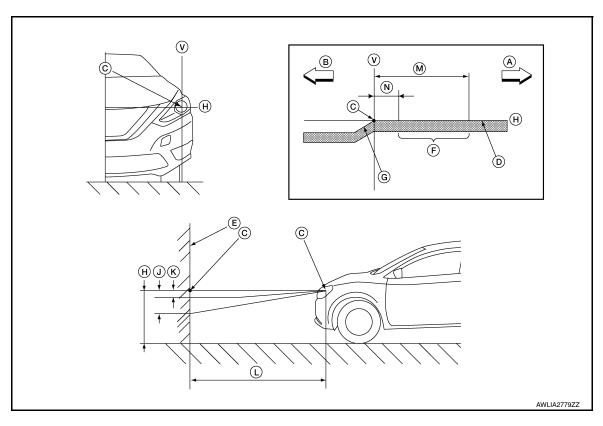
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CAUTION:

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

D. Cutoff line

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

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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.

- 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 adiustable.
- · 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.
- Start the engine. Turn the front fog lamp ON.

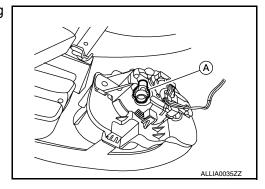
NOTE:

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).



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FRONT FOG LAMP

< PERIODIC MAINTENANCE >

[HALOGEN HEADLAMP]

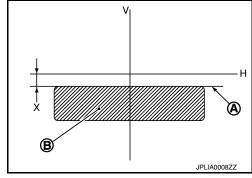
5. Adjust the cutoff line height (A) with the aiming adjustment screw so that the distance (X) between the horizontal center line of front fog lamp (H) and (A) becomes 100 mm (4 in).

A : Cutoff line

B : High illuminance area

H : Horizontal center line of front fog lampV : Vertical center line of front fog lamp

X : Cutoff line height



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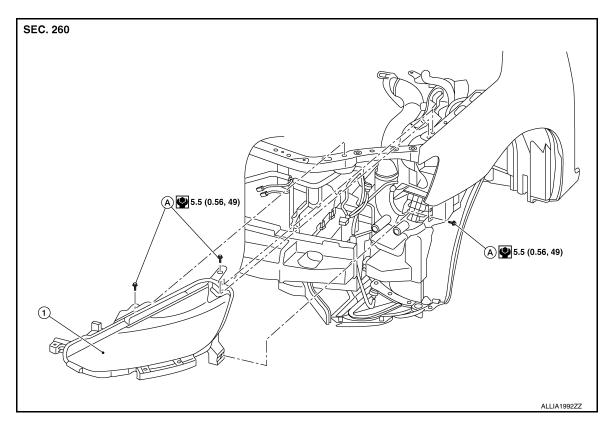
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REMOVAL AND INSTALLATION

FRONT COMBINATION LAMP

Exploded View



1. Front combination lamp

A. Bolt

Removal and Installation

REMOVAL

- Remove the front bumper fascia. Refer to <u>EXT-17</u>, "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

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

Revision: December 2015 EXL-127 2016 Sentra NAM

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FRONT COMBINATION LAMP

< REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]

- Remove the core support cover. Refer to <u>EXT-23</u>, "<u>Exploded View</u>".
- 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".
- 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:

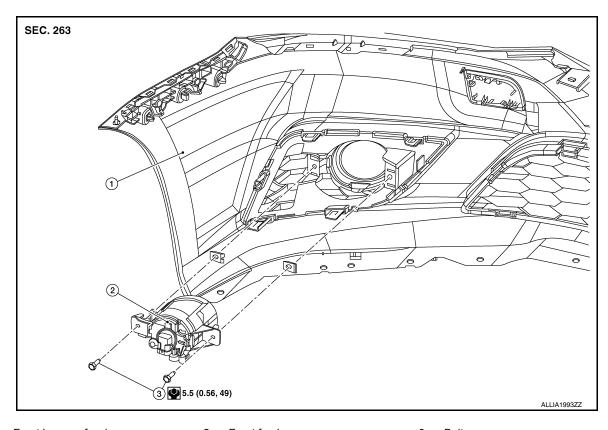
After installing, be sure to install the bulb socket securely to ensure watertightness.

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

Front fog lamp 2

Bolt 3.

Removal and Installation

INFOID:0000000012782872

FOG LAMP

Removal

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.

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

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FRONT FOG LAMP

< REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]

- 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 >

[HALOGEN HEADLAMP]

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".

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HIGH-MOUNTED STOP LAMP

Removal and Installation

INFOID:0000000012782874

HIGH-MOUNTED STOP LAMP - WITH REAR SPOILER

Removal

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

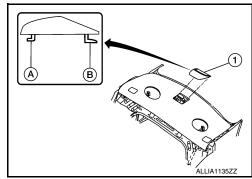
Installation

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

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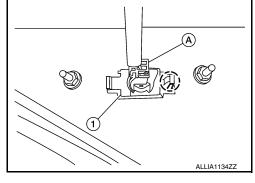
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REMOVAL

- 1. Remove the license lamp finisher. Refer to <a>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:

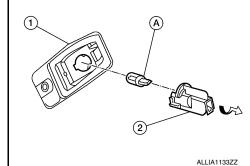
Do not touch bulb while it is lit or right after being turned off. Burning may result.

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.

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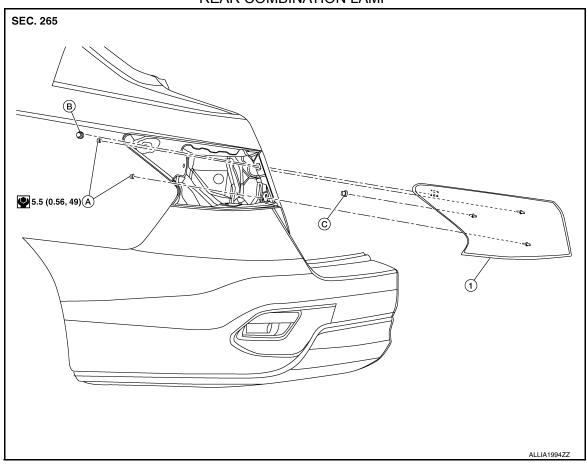
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REAR COMBINATION LAMP

Exploded View

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.

REAR COMBINATION LAMP

< REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]

• 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

- 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

- Remove the rear combination lamp. Refer to <u>EXL-134, "Removal and Installation"</u>.
- 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.

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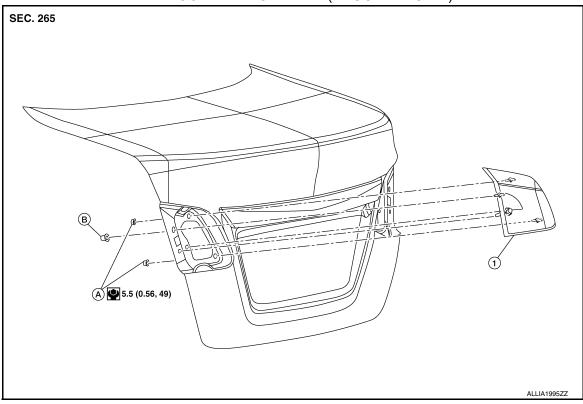
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Revision: December 2015 EXL-135 2016 Sentra NAM

Exploded View

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

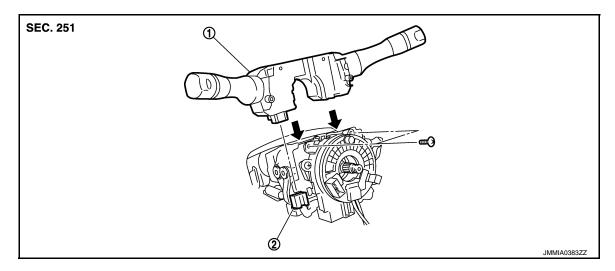
- Partially remove trunk lid trim. Refer to <u>INT-45, "Removal and Installation"</u>.
- 2. Remove rear combination lamp (truck lid side) nuts then remove rear combination lamp (truck lid side).

INSTALLATION

Installation is in the reverse order of removal.

COMBINATION SWITCH

Exploded View



Combination switch

Combination switch harness connector

NOTE

Shown with the steering wheel removed for clarity only.

Removal and Installation

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)".
- Remove the steering column covers. Refer to <u>IP-16</u>, "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".

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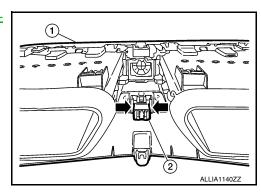
HAZARD SWITCH

Removal and Installation

INFOID:0000000012782883

REMOVAL

- 1. Remove cluster lid C (1). Refer to <u>IP-20, "Removal and Installation Cluster Lid C"</u>.
- 2. Release pawls at () and remove hazard switch (2).



INSTALLATION

Installation is in the reverse order of removal.

OPTICAL SENSOR

< REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]

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.

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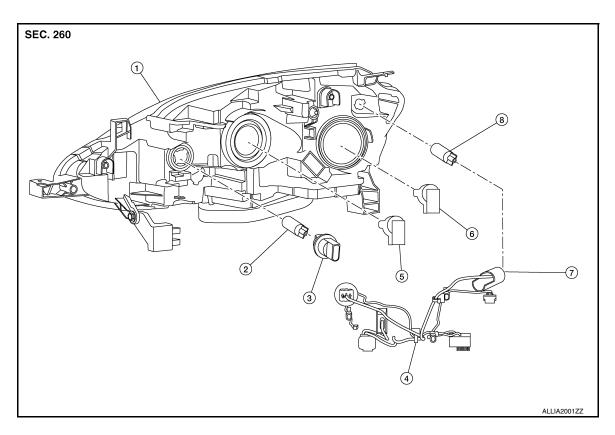
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UNIT DISASSEMBLY AND ASSEMBLY

FRONT COMBINATION LAMP

Exploded View



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

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.
- 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.

FRONT COMBINATION LAMP

< UNIT DISASSEMBLY AND ASSEMBLY >

[HALOGEN HEADLAMP]

ASSEMBLY

Assembly is in the reverse order of disassembly.

CAUTION:

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

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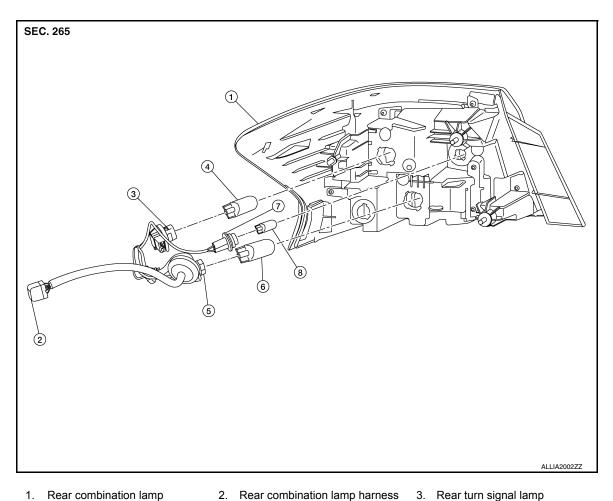
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REAR COMBINATION LAMP

Exploded View INFOID:0000000012782887



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

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

REAR COMBINATION LAMP

< UNIT DISASSEMBLY AND ASSEMBLY >

[HALOGEN HEADLAMP]

ASSEMBLY

Assembly is in the reverse order of disassembly.

CAUTION:

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

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SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

[HALOGEN HEADLAMP]

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Bulb Specifications

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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.

PRECAUTIONS

< PRECAUTION > [LED HEADLAMP]

PRECAUTION

PRECAUTIONS

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

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

- 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.

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Revision: December 2015 EXL-145 2016 Sentra NAM

PREPARATION

< PREPARATION > [LED HEADLAMP]

PREPARATION

PREPARATION

Special Service Tool

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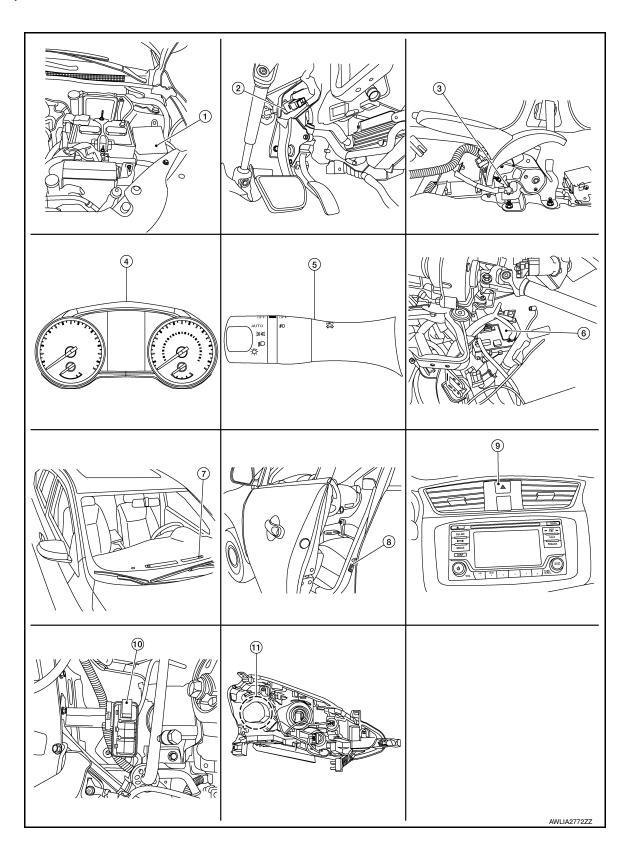
Tool number (TechMate No.) Tool name		Description
— (J-46534) Trim Tool Set	AWJIA0483ZZ	Removing trim components

INFOID:0000000013402463

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location



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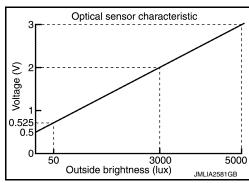
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No.	Part	Function		
1.	IPDM E/R (Headlamp high relay, Headlamp low relay, Tail lamp relay and Front fog lamp relay)	 Supplies voltage to the load according to the request from BCM (via CAN communication). Refer to PCS-5, "Component Parts Location" 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 re- moved)	 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

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



COMPONENT PARTS

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

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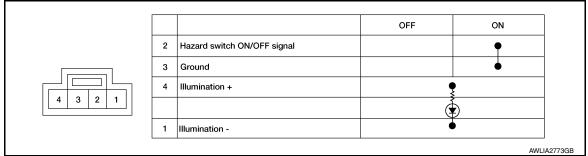
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Hazard Switch

Inputs the hazard switch ON/OFF signal to BCM.



Daytime Running Light Relay

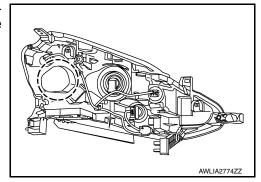
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Power is provided to the daytime running light relay according to request from IPDM E/R.

LED Headlamp Control Module

 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.



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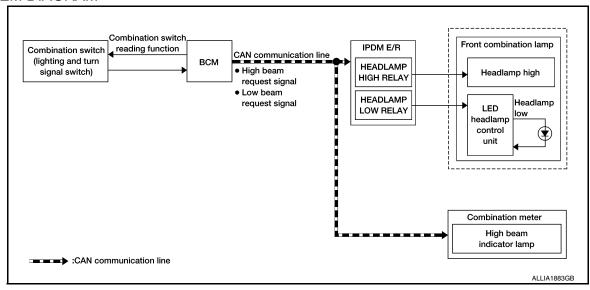
SYSTEM

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 <u>EXL-151</u>, "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 <u>MWI-88</u>, "INFORMATION DISPLAY: System Description".

HEADLAMP SYSTEM: Fail-safe

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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

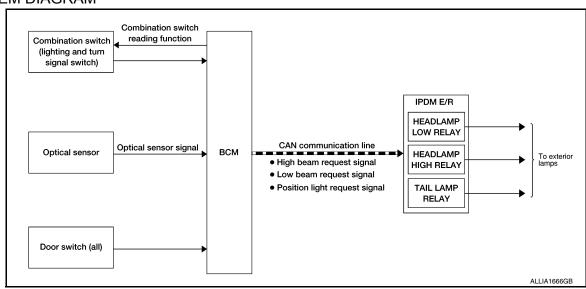
Control part	Fail-safe operation
Headlamp	 Turns ON the headlamp low relay when the ignition switch is turned ON Turns OFF the headlamp low relay when the ignition switch is turned OFF Headlamp high relay OFF

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.

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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.

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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 <u>BCS-19</u>, "<u>HEAD-LAMP</u>: CONSULT Function (BCM HEAD LAMP)".

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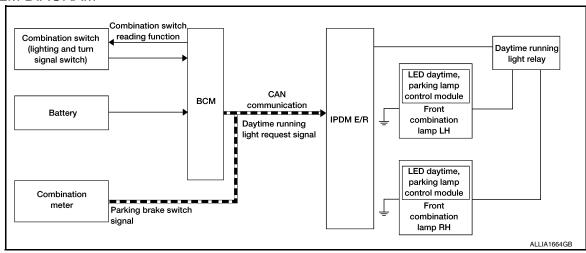
When any position other than the light switch AUTO is set, the auto light system function switches to the exterior lamp battery saver function.

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.

[LED HEADLAMP]

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- 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:

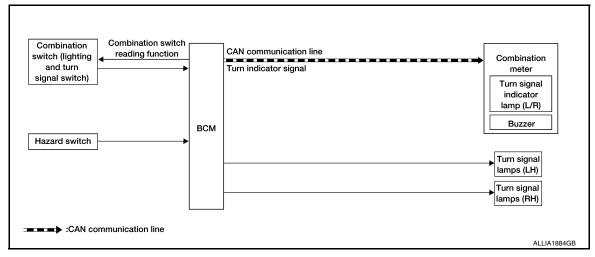
- Vehicle condition READY
- Lighting switch OFF or 1ST
- Lighting switch AUTO and the auto light function OFF judgment
- Parking brake switch OFF
- IPDM E/R controls the daytime running light relay (ground-side) to turn ON according to the daytime running light request signal.
- · Power is supplied from 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

EXL-153 Revision: December 2015 2016 Sentra NAM EXL

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- 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:

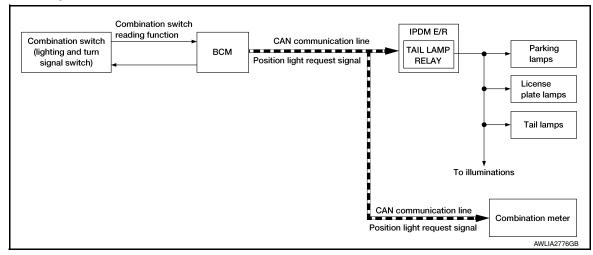
The blinking speed is normal while operating the hazard warning lamp.

PARKING, LICENSE PLATE AND TAIL LAMP SYSTEM

PARKING, LICENSE PLATE AND TAIL LAMP SYSTEM: System Description

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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

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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 lampsLicense plate lampsIlluminationTail 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

[LED HEADLAMP]

FRONT FOG LAMP SYSTEM: System Description

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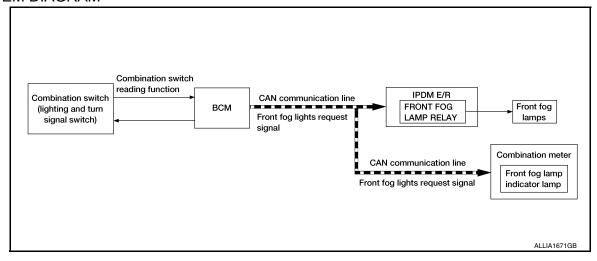
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SYSTEM DIAGRAM



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

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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

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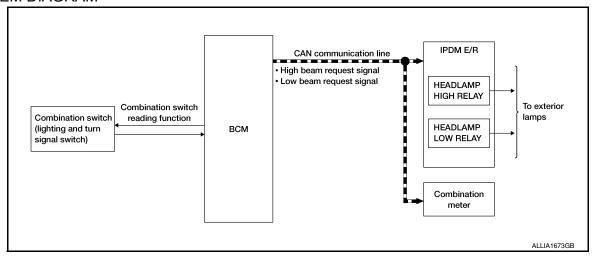
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EXTERIOR LAMP BATTERY SAVER SYSTEM: System Description

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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.

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

COMMON ITEM: CONSULT Function (BCM - COMMON ITEM)

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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.

		Direct Diagnostic Mode						
System	Sub System	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			×	×			<u> </u>
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	ВСМ	×	×			×	×	×
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		×	×	×	×		

Revision: December 2015 EXL-157 2016 Sentra NAM

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

HEAD LAMP

HEAD LAMP : CONSULT Function (BCM - HEAD LAMP)

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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]	
TURN SIGNAL L [On/Off]	
TAIL LAMP SW [On/Off]	
HI BEAM SW [On/Off]	
HEAD LAMP SW 1 [On/Off]	Indicates condition of combination switch.
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
	MODE 1*	With twilight ON custom & with wiper INT, LO and HI
	MODE 2	Witt twilight ON custom & with wiper LO and HI
AUTO LIGHT LOGIC SET	MODE 3	With twilight ON custom & without
AUTO LIGHT LOGIC SET	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.
DATTERT SAVER SET	Off	Exterior lamp battery saver function OFF.

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

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)		
COSTONI A/LIGITI SETTING	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)		
	MODE 8	180 sec.			
	MODE 7	150 sec.			
	MODE 6	120 sec.			
III DELAV CET	MODE 4	60 sec.	Sets delay timer function operation time		
ILL DELAY SET	MODE 5	90 sec.	(All doors closed).		
	MODE 3	30 sec.			
	MODE 2	OFF			
	MODE 1*	45 sec.			

^{*:} Initial setting

FLASHER

FLASHER: CONSULT Function (BCM - FLASHER)

INFOID:0000000013421347

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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 quitab	
TURN SIGNAL L [On/Off]	Indicates condition of turn signal function of combination switch.	
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
	Lock/Unlock*	Hazard warning lamp activation when doors are locked or unlocked with Intelligent Key.
HAZARD ANSWER BACK	Unlock Only	Hazard warning lamp activation when doors are unlocked with Intelligent Key.
HAZARD ANSWER BACK	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.
IX LAWIF TIMEN LOGIC SET	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.
SET I/L D-UNLOK INTOON	Off		Interior room lamp timer function OFF.
	MODE 4	30 sec.	
ROOM LAMP TIMER SET	MODE 3*	15 sec.	Sets the interior room lamp ON time. (Timer operating time).
	MODE 2 7		
FOG LAMP OVERRIDE	On*		With fog override function.
1 OG LAWIF OVLINIDE	Off		Without fog override function.

^{*:} Initial setting

DOOR LOCK

DOOR LOCK: CONSULT Function (BCM - DOOR LOCK)

INFOID:0000000013421513

DATA MONITOR

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

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

^{*:} Initial setting

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DIAGNOSIS SYSTEM (IPDM E/R)

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

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 <u>DLK-109</u>, <u>"Component Inspection"</u>.

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 lampLicense plate lampTail lampFront 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

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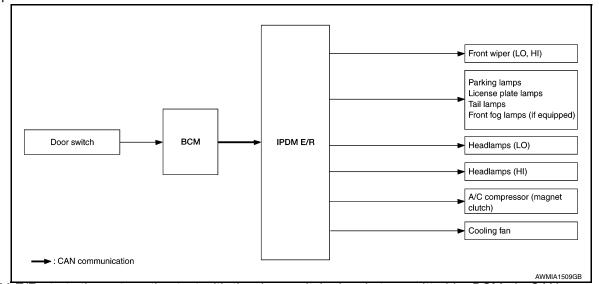
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Concept of Auto Active Test



- 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		YES	BCM signal input circuit
 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?	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
	Perform auto active test.	YES	ECM signal input circuit CAN communication signal between ECM and IPDM E/R
Cooling fan does not operate	Does the cooling fan operate?	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.

DIAGNOSIS SYSTEM (IPDM E/R)

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

Direct Diagnostic Mode	Description	
Active Test	The IPDM E/R activates outputs to test components.	
CAN Diag Support Mntr	Intr 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].

DIAGNOSIS SYSTEM (IPDM E/R)

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

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".

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ECU DIAGNOSIS INFORMATION

BCM, IPDM E/R

List of ECU Reference

INFOID:0000000013402486

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

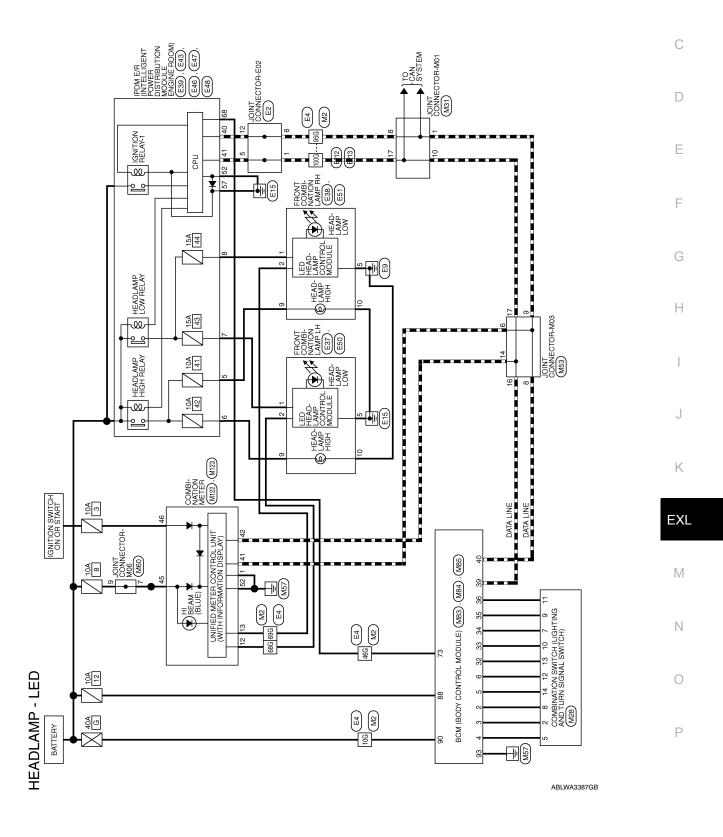
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WIRING DIAGRAM

HEADLAMP

Wiring Diagram



Signal Name	I	ı	ı	I	ı	I
Color of Wire	Υ	>	Υ	GR	Д	Г
Terminal No. Color of Wire	10G	46G	989	569	95G	100G

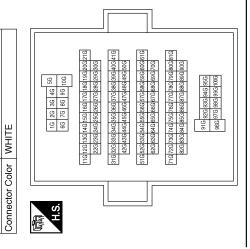
HEADLAMP CONNECTORS - LED

Connector Name WIRE TO WIRE

M2

Connector No.

Signal Name	_	-	ı	_	-	_
Color of Wire	В	Y	SB	M	ГG	BG
Terminal No. Wire	6	10	11	12	13	14



			1 1					
8	COMBINATION SWITCH	ITE	10 11 12 13 14	Signal Name	I	ı	ı	ı
M28	me CO	lor WH	7 8 9	Color of Wire	GR	BB	>	_
Connector No.	Connector Name	Connector Color WHITE	赋 H.S.	Terminal No. Wire	2	5	7	8

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BATTERY (FUSE) BATTERY (F/L)

BG

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GND

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Signal Name

Color of Wire

Terminal No.

Connector Name JOINT CONNECTOR-M03
Connector Color BLUE

Connector No. M53

Connector Name JOINT CONNECTOR-Mo6 Connector Name MODULE) (WITH MODULE) (WITH CONNECTOR-MOE MODULE) (WITH CONNector Color WHITE MODULE) (WITH CONNector Color WHITE MODULE) (WITH CONNector Name MODULE) (WITH CONNector Name MODULE) (WITH CONNECTOR-MODULE) (WITH CONNECTOR-MO		Connector No. M60		Connector No.	M83
Signal Name	Connector N.	ame JOIN	NT CONNECTOR-M06		BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
9 8 7 6 5 4 3 2 1 1 10 1 1 10 1 1 1				-	WHITE
Color of Signal Name W - Color of Wire Signal Name BR SW INPUT 3 COMBINATION C	H.S.	6 2	6 5 4 3 2 1 7 16 15 14 13 12 11 10	SH.	
Color of Wire Wire Wire Signal Name Terminal No. Color of Wire Swinbut 3 Color of Swinbut 3 Connector No. BR COMBINATION Swinbut 3 Connector Name BG COMBINATION Connector Name				60 59 58 57 56 55 54 54 54 54 54 54	53 52 51 50 49 48 47 46 45 44 43 42 41 73 72 73 72 71 70 69 68 67 66 65 64 63 62 61 61 61
W - 73 V W - 73 V Color of Wire Signal Name Connector No. Wire COMBINATION Connector Name BR COMBINATION Connector Name BG COMBINATION Connector Name	Terminal No.	Color of Wire		Terminal No. Wii	
W	7	*	1		
Color of Signal Name Connector No. Wire COMBINATION SW INPUT 3 COMBINATION Connector Color BG COMBINATION Connector Color	6	*	1		
Color of Signal Name Connector No. Wire COMBINATION Connector Name SW INPUT3 COMBINATION COMBINATION Connector Color					
Wire Ognativation BR COMBINATION BG COMBINATION COMPETOR Connector Name	Terminal No	Color of			M85
BR COMBINATION Connector Name SW INPUT 3 CONNECTOR Name CONNECTOR CONN		Wire			BCM (BODY CONTROL
COMBINATION Connector Color	4	BR	COMBINATION SW INPUT 3	Connector Name	MODÜLE) (WITH INTELLIGENT KEY SYSTEM)
	ι	C	COMBINATION	Connector Color	WHITE

Signal Name	COMBINATION SW INPUT 3	COMBINATION SW INPUT 2	COMBINATION SW INPUT 1	COMBINATION SW OUTPUT 5	COMBINATION SW OUTPUT 4	COMBINATION SW OUTPUT 3	COMBINATION SW OUTPUT 2	COMBINATION SW OUTPUT 1	CAN-H	I-NAC
Color of Wire	BR	BG	8	LG	\	>	В	SB	T	Д
Terminal No. Wire	4	5	9	32	33	34	32	36	39	UV

Signal Name	ı	ı	ı	ı	ı	ı	
Color of Wire	Д	Ь	۵	Γ	٦	Γ	
Terminal No. Wire	9	8	6	14	16	17	

Connector No. M84	Connector Name MODULE) (WITH INTELLIGENT KEY SYSTEM)	Connector Color BLACK	ſ
Conne	Conne	Conne	á

	9 20	9			
	10 11 12 13 14 15 16 17 18 19	38 39			
	16 17	36 37	o o	0. 2	O.4
	14 15 34 35		Signal Name	COMBINATION SW INPUT 5	COMBINATION SW INPUT 4
	4	34	<u>=</u>	ਙਵ	🚡 뫁
H	2 1	છ	<u>i</u>	NS SNS	NS NS NS NS NS NS NS NS NS NS NS NS NS N
\parallel	=	30 31 32 33	\ \o	0"	0"
\mathbb{I}	9	೫			
	6	53	<u> </u>		
П	8	78	5 e		l œ
	^	27	응≶		GR
	9	8	0		
	2	22	<u> </u>		
	4	72	=		
1	60	ន	l e l	N	က
	2	21 22 23 24 25 26 27	Terminal No. Wire		
	L	21	e		

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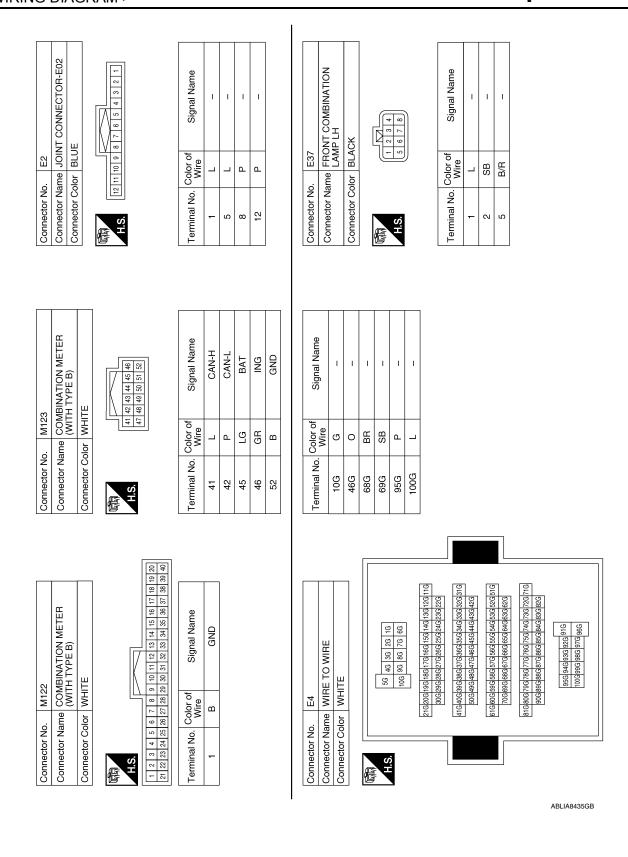
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POWER GND Signal Name

Β/Y

SIGNAL GND Signal Name

Β/Y

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Terminal No.

Color of Wire

Terminal No. 22

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BLACK

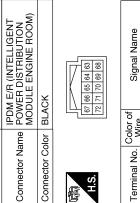
Connector Color

BROWN

Connector Color

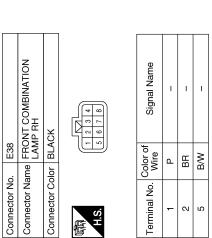
Connector No.	E43
Connector Name	Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color WHITE	WHITE

9 8 7 6 6 5 4 3 18 17 16 15 14 13 12 11 10	Signal Name	H/LAMP HI RH	H/LAMP HI LH	H/LAMP LO LH	H/LAMP LO RH
9 8 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Color of Wire	Œ	Q	_	۵
H.S.	Terminal No. Wire	5	9	7	8



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Connector No.



Signal Name	P HI RH	H/LAMP HI LH	Р СО СН	H/LAMP LO RH
Signa	H/LAM	H/LAN	H/LAM	H/LAM
Color of Wire	ш	Э	7	۵
Terminal No. Wire	5	9	7	8
Signal Name	IGN SIGNAL			
No. Color of Wire	0			
o.				

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	E48	Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM)
	Connector No. E48	Connector Name
	E47	Sonnector Name POWER DISTRIBUTION MODULE ENGINE ROOM)
	Connector No. E47	Connector Name
		E/R (INTELLIGENT ER DISTRIBUTION JLE ENGINE ROOM)

Connector No.	E46
Connector Name	Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color WHITE	WHITE

,	ІТЕ	41 40 39 38 37 47 46 45 44 43	Signal Name	CAN-L	CAN-H
	lor WH	24 84	Color of Wire	Ъ	٦
	Connector Color WHITE	原 H.S.	Terminal No. Wire	40	41

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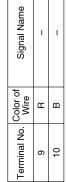
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or No. E51	Connector Name FRONT COMBINATION LAMP RH	Connector Color BLACK	
Connector No.	Connector Na	Connector Co	







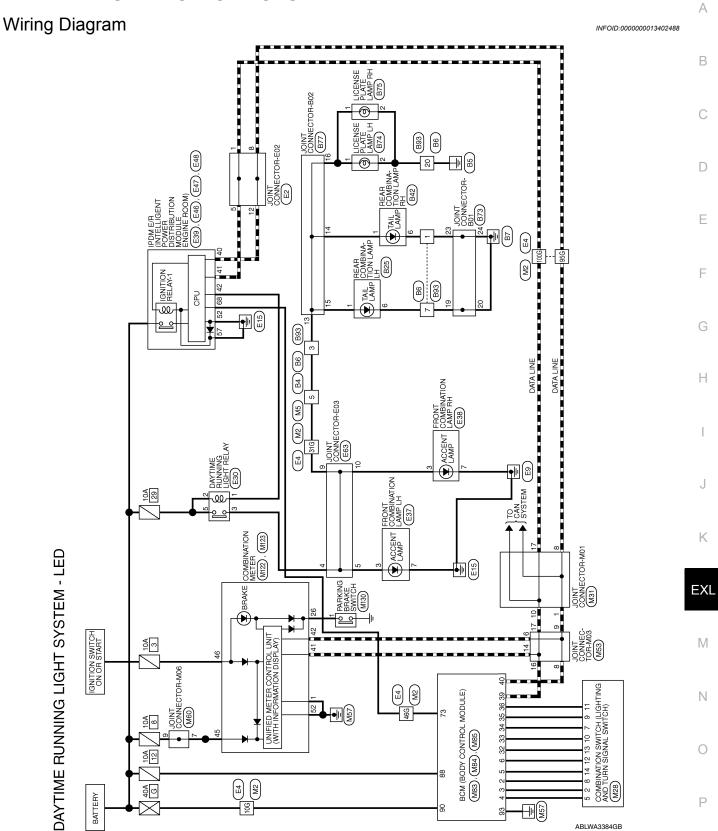
Connector No.	E50
Connector Name	Connector Name FRONT COMBINATION LAMP LH
Connector Color BLACK	BLACK



Signal Na	1	1
Color of Wire	В	В
Ferminal No.	6	10

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DAYTIME RUNNING LIGHT SYSTEM



SYSTEM CONNECTORS - LED Terminal No. Wire Signal Name		Connector No. M5		_	16 15 14 13 12 11 10			Terminal No. Color of Signal Name) \ \				Connector No. M31	Connector Name JOINT CONNECTOR-M01	Connector Color BLUE		-	H.S. [20 19 18 17 16 15 14 13 12 11 10]	Terminal No. Color of Signal Name	- L	В В	10 L –	17 L –				
SYSTEM CONNE	CTORS - LED	Color of Wire	>			7							Color of	Wire	P	BG											
No. M2	\vdash	M2 WIRE TO WIRE	WHITE		16 26 36 46 56	66 76 86 96 106	111G 12G 13G 14G 15G 16G 17G 18G 19G 20G 21G	Pzoglandpardpardpardpardpandpandpandpandpandpandpandpandpandpan	420430440446947694804779	01/05/20/\$100/\$100/\$100/\$100/\$100/\$100 \$100/\$100/	71:G7:26/7:26/7:26/7:26/7:26/7:26/7:26/7:26/	8001- 5046 50	M28	SWITCH	Connector Color WHITE			7 8 9 10 11		GR	BR	^	7	Œ	>-	SB	12 W –

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M83 BCM (BODY CONTROL MODULE) (WITH WITELIGENT KEY SYSTEM)	WHILE	53 22 51 50 49 48 47 46 45 44 43 42 41 73 72 71 70 69 68 67 76 65 65 64 63 62 61	or of Signal Name	IGN RELAY	4					M85	BCM (BCDT CONTROL MODULE) (WITH INTELLI- GENT KEY SYSTEM)	WHITE	59 88 87 86 85 64 83 82 81 95 84 93 92 91 90			or of Signal Name	G BATTERY (FUSE)	, BATTERY (F/L)	GND		
	Connector Color His.	60 59 58 57 56 55 54 58 80 79 77 77 76 75 74 73	Terminal No. Color of Wire	7.3						Connector No.	Connector Name	Connector Color		H.S.		Terminal No. Color of Wire	88 BG	∆	93 B		
Connector No. M60 Connector Name JOINT CONNECTOR-M06 Connector Color WHITE	6 5 4 3 2 1 1 10 16 15 14 13 12 11 10		Signal Name	ı	1					Signal Name	COMBINATION SW INPUT 1	COMBINATION SW OUTPUT 5	COMBINATION SW OUTPUT 4	COMBINATION SW OUTPUT 3	COMBINATION SW OUTPUT 2	COMBINATION SW OUTPUT 1	CAN-H	CAN-L			
me JOINT (or WHITE	9 8 7 6		Color of Wire	8	8					Color of Wire	3	LG	>	>	Œ	SB	_	_			
Connector No. Connector Name Connector Color	H.S.		Terminal No.	7	6					Terminal No.	9	32	33	34	35	36	39	40			
															19 20 39 40						
Connector No. M53 Connector Name JOINT CONNECTOR-M03 Connector Color BLUE	7 16 15 14 13 12 11 10		Signal Name	1	ı	ı	1	-	I		BOW (BODT CONTROL MODULE) (WITH INTELLI- GENT KEY SYSTEM)	ICK			10 11 12 13 14 15 16 17 18 30 31 32 33 34 35 36 37 38	Signal Name	COMBINATION	SW INPUT 5	COMBINATION SW INPUT 4	COMBINATION SW INPUT 3	COMBINATION SW INPUT 2
M53 Ime JOINT Iolor BLUE	20 19 18 17		Color of Wire	۵	۵	۵	Г	٦	_			olor BLACK			5 6 7 8 9 25 26 27 28 29	Color of Wire	-	ı	GR	BB	BG
Connector No. Connector Name Connector Color	H.S.		Terminal No.	9	8	6	14	16	17	Connector No.	Connector Name	Connector Color	E	76	1 2 3 4 5 21 22 23 24 25	Terminal No.	0	1	ო	4	5

Revision: December 2015 EXL-175 2016 Sentra NAM

M130 PARKING BRAKE SWITCH BLACK	-	Signal Name	1					omc/N leavis	Olginal Ivallie	1	1	1	1	1									
9 2		Color of Wire	SB					Color of	Wire	ŋ	В	0	Ь	_									
Connector No. Connector Name Connector Color	赋 H.S.	Terminal No.	-					- N logiman	ם ומווים	10G	31G	46G	95G	100G									
												Г											
M123 COMBINATION METER (WITH TYPE B)	47 48 49 50 51 52	Signal Name	CAN-H	CAN-L	BAT	IGN	GND		WIRE TO WIRE	1			56 46 36 36 16	98 89	216206196186176166156146136126116	30G 29G 28G 27G 26G 25G 24G 23G 22G	41G40G39G38G37G36G35G34G33G32G31G	50G 49G 48G 47G 46G 45G 44G 43G 42G	61G 60G 59G 58G 57G 56G 55G 54G 53G 52G 51G 77G 69G 68G 67G 66G 65G 54G 53G 52G 51G		81 G 80 G 79 G 77 G 77 G 77 G 75 G 74 G 73 G 72 G 71 G 90 G 89 G 88 G 87 G 86 G 85 G 84 G 83 G 82 G	95G 94G 93G 92G 91G	998 0 / 8 0 0 8 0 0 8 0 0 0 0 0 0 0 0 0 0
		Color of Wire	_	Ь	LG	GR	В	E4		olor WHITE	4		2	1 =	216206196	30G29G	41G40G39G	50G 49G	61G 60G 59G	2000	81G80G79C 90G89C	[55] \$	2
Connector No. Connector Name Connector Color	H.S.	Terminal No.	41	42	45	46	52	Connector No.	Connector Name	Connector Color			V I										
	20																						
M122 COMBINATION METER (WITH TYPE B)	10 11 12 13 14 15 16 17 18 19 19 13 25 23 24 35 58 37 38 39	Signal Name	GND	PKB SW					JOINT CONNECTOR-E02				7 6 5 4 3 2 1		Signal Name	1	ı	I	ı				
	26 28 29 29 29 29 29 29 29 29 29 29 29 29 29	Color of Wire	В	SB				E2		or BLUE			1 10 9 8		Color of Wire	_	_	۵	۵				
Connector No. Connector Name Connector Color	H.S. 12 3 4 5 6 1	Terminal No.	-	56				Connector No.	Connector Name	Connector Color			H S 11		Terminal No.	-	5	8	12				
			•		•			_	, –	, –	_			-	L	1	4	•				ABLIA	8419GB

Connector No.	E38	
Connector Name		FRONT COMBINATION LAMP RH
Connector Color	lor BLACK	CK
崎南 H.S.		6 2 3 4
Terminal No. Wire	Color of Wire	Signal Name
3	٦	1
7	B/W	1

37	FRONT COMBINATION LAMP LH	BLACK	5 1 2 3 4 8 8 4 8	of Signal Name	ı	-
. E37				Color o Wire	_	B/B
Connector No.	Connector Name	Connector Color	原 H.S.	Terminal No. Color of Wire	က	7

Connector No.	E30	
Connector Name		DAYTIME RUNNING LIGHT RELAY
Connector Color	or BLUE	ш
H.S.		- - - -
Terminal No. Wire	Solor of Wire	Signal Name
-	>	ı
2	LG	ı
ဧ	_	ı
5	LG	ı

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IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)	BROWN	55 55 54 53 52	Signal Name	SIGNAL GND
		[47] 47]	Color of Wire	Β/Y
Connector Name	Connector Color	原 H.S.	Terminal No.	25

	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)	ITE	41 40 39 38 37 47 46 45 44 43	Signal Name	CAN-L	CAN-H	DTRL RLY DRIVE
. E46		lor WH	48 48	Color of Wire	Д	Τ	>
Connector No.	Connector Name	Connector Color WHITE	崎 H.S.	Terminal No.	40	41	42

	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)	,CK	1	Signal Name	IGN SIGNAL	
- E39		lor BLACK	192	Color of Wire	0	
Connector No.	Connector Name	Connector Color	顺动 H.S.	Terminal No.	89	

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Revision: December 2015 EXL-177 2016 Sentra NAM

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DAYTIME RUNNING LIGHT SYSTEM

[LED HEADLAMP]

E E E E E E E E E E E E E E E E E E E	Signal Name	B42 REAR COMBINATION LAMP RH WHITE	Signal Name
B4 WIRE WIRE WHITE	Color of Wire LG		Color of Wire BR
Connector No. B4 Connector Name WIRE TO WIRE Connector Color WHITE 2 3 1 5 1 1 1 1 1 1 1 1	Terminal No. 5	Connector No. Connector Name Connector Color	Terminal No.
E63 JOINT CONNECTOR-E03 BLACK 1 2 3 4 5 6 6 7 8 9 10	Signal Name	B25 REAR COMBINATION LAMP LH WHITE 2 1 1 1	Signal Name
	Color of Wire L		Color of Wire LG BG
Connector No. Connector Color H.S.	Terminal No. (6	Connector No. Connector Name Connector Color H.S.	Terminal No. (6
E48 POWER DISTRIBUTION MODULE ENGINE ROOM) BLACK SS	Signal Name POWER GND	E E E E E E E E E E E E E E E E E E E	Signal Name
	Color of Wire B/Y	6 5 4	Color of Wire Wire LG LG BG BG
Connector No. Connector Name Connector Color	Terminal No. (nnector Nc nnector Nc	Terminal No. (
Con	<u> </u>		<u> </u>

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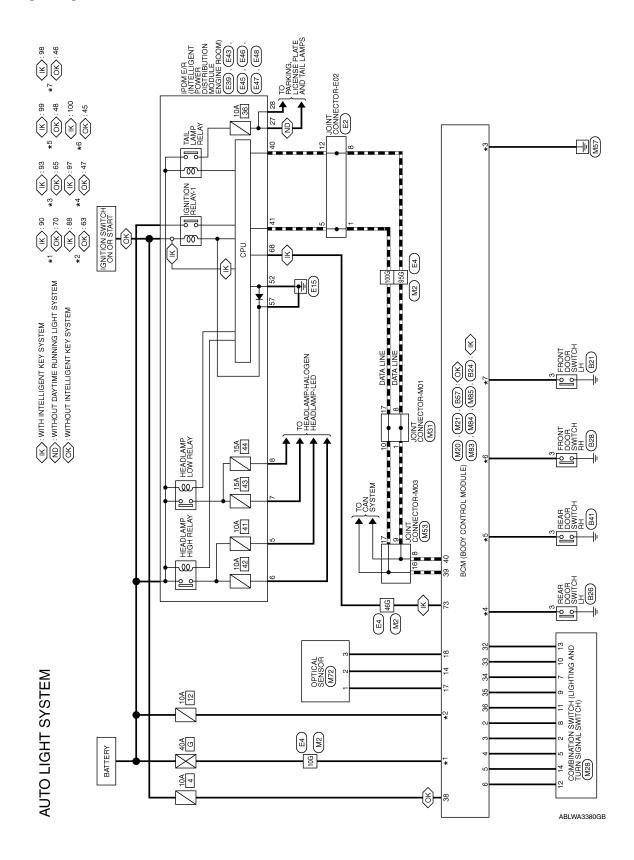
				А
Connector No. B75 Connector Name LICENSE PLATE LAMP RH Connector Color BROWN R	Signal Name - -			В
B75 LICENSE PLA BROWN				С
Connector No. B. Connector Name LI Connector Color B. Color	al No. Color of Wire GR GR			D
Connec Connec Connec	Terminal No.			Е
				F
Connector No. B74 Connector Name LICENSE PLATE LAMP LH Connector Color BROWN	Signal Name	3 TTE 3 10 11 12 13 19 20 14 15 16 17 18 19 20	Signal Name	G
o. B74 ame LICENSE olor BROWN	Color of Wire GR	0. B93 ame WIRE T olor WHITE 1 2 3 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Color of Wire L G G	ω
Connector No. Connector Color Connector Color	Terminal No.	Connector No. B93 Connector Name WIRE TO WIRE Connector Color WHITE 1 2 3 4 14 15 16 17 12 17 18 17 16 17 16 17 16 17 16 17 17 18 17 16 17 17 18 18 18 18 18 18 18 18 18 18 18 18 18	Terminal No. 1 3	J
				K
Connector No. B73 Connector Name JOINT CONNECTOR-B01 Connector Color BLACK L2 12 11 10 9 8 7 6 5 4 3 2 1 H.S. L2 12 22 12 12 19 18 17 16 15 14 13	Signal Name	Connector No. B77 Connector Name JOINT CONNECTOR-B02 Connector Color GREEN M.S.	Signal Name	EX
o. B73 ame JOINT CONNE olor BLACK 12 11 10 9 7 6 5 14 23 22 20 19 18 1 15 11 11 11 11 11 11	Color of Wire B B B B B B B B B B B B B B B B B B B	9 8 7 6	Color of Wire G G BB	OB N
Connector No. B73 Connector Name JOINT C Connector Color BLACK 12 11 10 9 8 14 15 12 21 20 15 15 15 15 15 16 17 16 9 8 17 17 17 15 15 18 18 18 18 19 18 18 10 18 18 10 18 18 10 18 18 10 18 18 10 18 18 10 18 18 10 18 18 10 18 18 10 18 18 10 18 18 10 18 18 10 18 18 10 18 18 10	Terminal No. 19 20 23 24	Connector No. Connector Color Connector Color H.S.	Terminal No. 13 14	

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AUTO LIGHT SYSTEM

Wiring Diagram



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Connector No. N	M20
Connector Name N	Connector Name MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)
Connector Color WHITE	VHITE

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	28	99	
	25	29	
	61	89	
	3 62	69	
	64 6	70	
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Signal Name	COMBINATION SW OUTPUT 2	COMBINATION SW OUTPUT 1	IGN SW	CAN-H	CAN-L
Color of Wire	Œ	SB	Я	٦	Ь
Terminal No. Color of Wire	35	36	38	39	40

Name	 lerminal No.	Ş≅
NATION IPUT 2	35	_ œ
NATION IPUT 1	36	SS
LIGHT	38	Œ
1 (& 2)	39	_
LIGHT R POWER	40	<u></u>
OUTPUT		
S & AUTO NSOR GND		
NATION TPUT 5		
NATION TPUT 4		

Signal Name	-	ı	-	_	
Color of Wire	Y	>	Д	_	
Terminal No. Wire	10G	46G	95G	100G	

M2 WIRE TO WIRE WHITE	11G 2G 3G 4G 5G 1GG 2G 1GG 1GG 1GG 1GG 1GG 1GG 1GG 1GG
Connector No. Connector Name Connector Color	S, H

Terminal No. Color of Signal Name	BG COMBINATION SW INPUT 2	W COMBINATION SW INPUT 1	SB SENSOR INPUT 1 (& 2	AUTO LIGHT Y SENSOR POWER SUPPLY OUTPUT	V KEYLESS & AUTO	LG COMBINATION SW OUTPUT 5	Y COMBINATION SW OUTPUT 4	V COMBINATION SW OUTPUT 3
Ferminal No	5	9	14	17	18	32	33	34

	19 20	39 40				
	9 10 11 12 13 14 15 16 17 18 19	29 30 31 32 33 34 35 36 37 38 33	Signal Name	COMBINATION SW INPUT 5	COMBINATION SW INPUT 4	COMBINATION SW INPUT 3
	8 2 9	27 28	Color of Wire	٦	GR	BR
H.S.	1 2 3 4 5	21 22 23 24 25 26	Terminal No. Color of Wire	5	ε	4

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AUTO LIGHT SYSTEM CONNECTORS

Revision: December 2015 **EXL-181** 2016 Sentra NAM

Connector Name MODULE) (WITHOUT INTELLIGENT KEY SYSTEM)

M21

Connector No.

Connector Color WHITE

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Fig. 1 Fig. 2 Fig. 3 Fig. 4 F	Connector No. M28 Connector Name COMBINAT Connector Color WHITE	lo. M28 lame COMBI color WHITE	MBINATION SWITCH	Connector No. Connector Name	or No.	Connector No. M31 Connector Name JOINT CONNECTOR-M01 Connector Color BLUE		Connector No. Connector Name	o. M53 ame JOINT olor BLUE	Connector No. M53 Connector Name JOINT CONNECTOR-M03 Connector Color BLUE
Terminal No. Color of Signal Name Terminal No. Color of Signal Name Terminal No. Wire Signal Name Terminal No. Color of Signal Name Terminal Name Terminal Name Terminal Name	南河 H.S.		9 10 11	原 用 S.H	20 19 1	7 6 5 4 3 2 1		H.S.	9 8 7	5 4 3 2 1 15 14 13 12 11
1 P	Terminal No	Color of Wire	Signal Name	Termina	I No. Color Wire		F	erminal No	Color of Wire	Signal Name
No.	2	GR	ı	-	В			8	۵	ı
No.	2	BR	ı	8	<u></u>			6	۵	I
L	7	>	ı	10	_			16	_	ı
Note	80	7	ı	17		ı		17	_	I
National Name Signal Name	6	æ	1							
M	10	>	ı							
M	-	SB	ı							
M M M M M M M M M M	12	>	ı							
M72 Connector No. M83 Connector No. M83 OPTICAL SENSOR Connector Name MODULE) (WITH CONNECTOR WHITE Connector Color WHITE Color of Signal Name Color of Signal Name Color of Signal Name Color of Color of Signal Name Color of Color of	13	LG	I							
M72 Sensor M83 Sensor M84 Sensor M84 Sensor M84 Sensor M90 14	0	ı								
WHITE WHITE Connector Name MCDULE) (WITH NOTICAL SENSOR Connector Name MCDULE) (WITH NOTICAL SENSOR NOTICAL	, softon and C	П		, tooddo		183				
WHITE WHITE Connector Name MODULE) (WITH NUTE INTELLIGENT KEY SYSTEM Connector Color WHITE Connector Color		. N. Z				NIOO CONTRACTOR OF THE CONTRAC				
1 2 3	Connector N	Vame OP Solor WHI	TICAL SENSOR	Connect		SCM (BODY CONTROL MODULE) (WITH NTELLIGENT KEY SYS	TEM)			
1 2 3	<u></u>	'		Connect	_	WHITE				
Color of Signal Name Color of Signal Name	(阿斯)	لتا	123							
Signat Name				H.S.						
Color of Wire Signal Name Terminal No. Wire Color of Wire Y - 73 V V - - V				60 59 58 80 79 78	57	51 50 49 48 47 46 71 70 69 68 67 66	44 64 63			
Y	Terminal No	Color of Wire		Termina						
S S S		>	ı	73			;			
^	2	SB	ı				(V)			
	ო	>	1							

Signal Name	COMBINATION SW OUTPUT 2	COMBINATION SW OUTPUT 1	CAN-H	CAN-L
Color of Wire	Н	SB	٦	Ь
Terminal No. Color of Wire	35	98	39	40

Signal Name	COMBINATION SW INPUT 2	COMBINATION SW INPUT 1	AUTO LIGHT SENSOR INPUT	AUTO LIGHT SENSOR POWER SUPPLY OUTPUT	KEYLESS TUNER, AUTO LIGHT SENSOR GND	COMBINATION SW OUTPUT 5	COMBINATION SW OUTPUT 4	COMBINATION SW OUTPUT 3
Color of Wire	BG	*	SB	>	>	P	>	>
Terminal No.	2	9	14	17	18	32	33	34

Connector No.). M84	
Connector Name		BCM (BODY CONTROL MODULE) (WITH INTELLI- GENT KEY SYSTEM)
Connector Color		BLACK
原 H.S.		
1 2 3 4 5 21 22 23 24 25	6 7 8 9 26 27 28 2	2 23 4 5 6 7 28 9 10 11 12 13 14 15 16 17 18 19 20 22 23 24 25 26 27 28 28 28 30 31 32 38 38 38 38 40
Terminal No.	Color of Wire	Signal Name
2		COMBINATION SW INPUT 5
е	GR	COMBINATION SW INPUT 4
4	BR	COMBINATION SW INPUT 3

Connector No.	E2
Connector Name	Connector Name JOINT CONNECTOR-E02
Connector Color BLUE	BLUE
H.S.	12 11 10 9 8 7 6 5 4 3 2 1



Signal Name	1	1	I	I	
Color of Wire	7	Т	Ь	Ь	
Terminal No. Wire	1	2	8	12	

ITE	89 88 87 86 85 84 83 82 81 83 85 84 83 85 84 85 85 85 85 85 85	Signal Name	RATTERY (FLISE)
lor WH	88 88 8	Color of Wire	BG
Connector Color WHITE	(京) H.S.	Terminal No. Wire	88



Connector Name

Connector No.

Signal Na	BATTERY (F	BATTERY	GND	
Color of Wire	BG	>	В	
Terminal No.	88	06	93	

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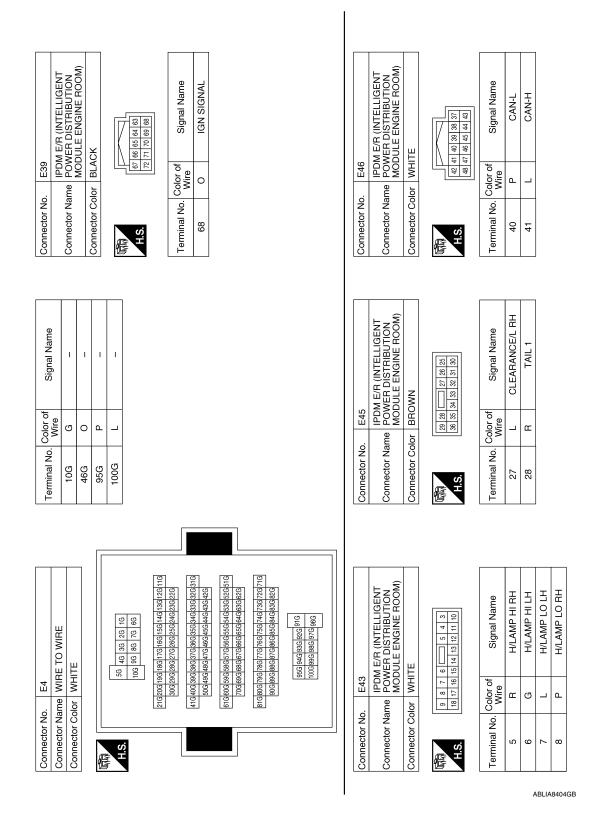
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Connector No.	E47		Connector No.	o. E48		Connector No.	lo. B21	
nector Name	e POW	Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM)	Connector N	ame POW MOD	Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM)	Connector Name FRONT Connector Color WHITE	lame FROI	Connector Name FRONT DOOR SWITCH LH Connector Color WHITE
Connector Color BROWN	r BRO	WN	Connector Color BLACK	olor BLAC	Ж	á	ַנ	
H.S.	28	55 54 55 52 52 52 53 53 53 53 53 53 53 53 53 53 53 53 53	原 H.S.		59 58 57 62 61 60	中国 H.S.		4
Terminal No. Color of Wire	olor of Wire	Signal Name	Terminal No. Wire	Color of Wire	Signal Name	Terminal No. Wire	Color of Wire	Signal Name
52	В/Υ	SIGNAL GND	22	В/У	POWER GND	င	\	I

Signal Name Signal Name			1	1			1
		ONT DOOR SWITCH RH	<u> </u>	2 3 4		I	
	Т	ne FRC	or WHI		Solor of Wire	ж	
B26 NHITE I 2 3 4 Color of Signal Name GR	Connector No	Connector Nan	Connector Cold	原 H.S.	Terminal No.	3	
B26 NHITE I 2 3 4 Color of Signal Name GR		•	,				ı
B26 NWITE Signal Name GR]
B26 B26 Nr WHI		R DOOR SWITCH LH	12	1 IK 1 1 1	Signal Name	I	
	306	REA	MH		or of /ire	ЯЯ	

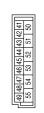
	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)	OK	130 108 108 107 106 106	Signal Name	DOOR SW (RL)	DOOR SW (DR)	DOOR SW (RR)	
B24		or BLACK	104103102	Color of Wire	GR	>	۵	
onnector No.	onnector Name	onnector Color	雨 H.S.	erminal No.	26	86	66	

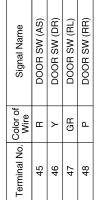
Terminal No.

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







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



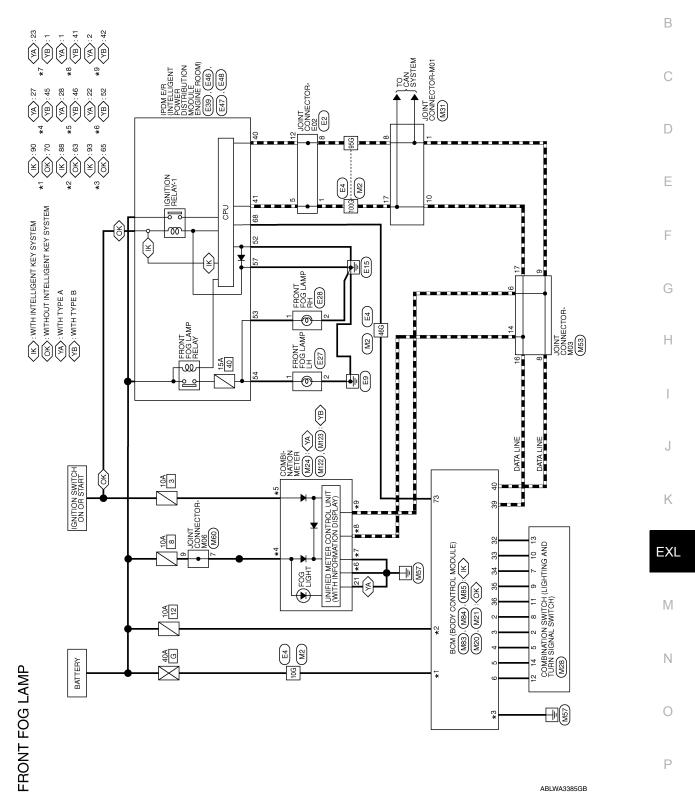


Signal Name	-
Color of Wire	Ь
Terminal No.	က

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FRONT FOG LAMP

Wiring Diagram



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FRONT FOG LAMP CONNECTORS

20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 40 39 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 21 Connector Name MODULE) (WITHOUT INTELLIGENT KEY SYSTEM) GND ILLUMINATION BATTERY (FUSE) GND (CIRCUIT) GND (POWER) BATTERY (F/L) Connector Name | COMBINATION METER (WITH TYPE A) Signal Name Signal Name CAN-H CAN-L BAT GND ΙĠΝ | 64 | 63 | 62 | 61 | 60 | 59 | 58 | 57 | 56 | 70 | 70 | 69 | 68 | 67 | 66 | 65 | WHITE WHITE M20 Color of Wire Color of Wire BG m Г GR В Ф В В Connector Color Connector Color Connector No. Connector No. Terminal No. Terminal No. 65 2 63 8 8 28 27 α 2 H.S. COMBINATION SW OUTPUT 5 COMBINATION SW OUTPUT 4 COMBINATION SW OUTPUT 3 COMBINATION SW OUTPUT 2 COMBINATION SW OUTPUT 1 COMBINATION SW INPUT 1 Signal Name Signal Name CAN-H CAN-L ı 1 Color of Wire Color of g SB ₾ ≥ ᆈᆫ > > > $\underline{\alpha}$ Terminal No. Terminal No. 100G 95G 10G 46G 9 32 33 34 35 36 39 13 14 15 16 17 18 19 20 33 34 35 36 37 38 39 40 BCM (BODY CONTROL MODULE) (WITHOUT INTELLIGENT KEY SYSTEM) COMBINATION SW INPUT 2 COMBINATION SW INPUT 5 COMBINATION SW INPUT 4 COMBINATION SW INPUT 3 Signal Name 71G72G73G74G75G76G77G78G79G80G810 82G83G84G85G86G87G88G89G90G 31G 32G 33G 34G 35G 36G 37G 38G 39G 40G 4 42G 43G 44G 45G 46G 47G 48G 49G 50G 91G 92G 93G 94G 95G 96G 97G 98G 99G 100G 1G 2G 3G 4G 5G 6G 7G 8G 9G 10G Connector Name | WIRE TO WIRE 4 5 6 7 8 9 10 11 12 24 25 26 27 28 29 30 31 32 Connector Color | WHITE WHITE M21 Color of Wire MZ BG GR BR Connector Name Connector Color Connector No. Connector No. Terminal No. 1 2 3 21 22 23 2 Ŋ က 4 2 E

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Connector No. M53 Connector Name JOINT CONNECTOR-M03 Connector Color BLUE	6 5 4 3 2 1 16 15 14 13 12 11 10	Signal Name	ı	ı	ı	1	1		ı			
M53 me JOINT or BLUE	20 19 18 17	Color of Wire	۵	۵	۵	_	-	 	_			
Connector No. Connector Name	H.S.	Terminal No. Color of Wire	9	8	o	41	16	17	2			
							7					
Connector Name JOINT CONNECTOR-M01 Connector Color BLUE	6 5 4 3 2 1 16 15 14 13 12 11 10	Signal Name	ı	ı	1	1						
ame JOINT	9 8 7	Color of Wire	۵	۵	_	_						
Connector No. Connector Color	H.S.	Terminal No.	-	8	10	17						
BINATION SWITCH	10 11 4 5 6 11 12 13 14	Signal Name	ı	1	1	I	ı	I	ı	ı	1	, , ,
me COM	1 L L 8 8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Color of Wire	GR	BR	>	_	Œ	\	SB	>	re	BG
Connector No. M28 Connector Name COMBINATION SV Connector Color WHITE	原.R.S.	Terminal No.	2	5	7	8	6	10	11	12	13	14

Connector No.	. M83	
Connector Name	me MOI	BCM (BODY CONTROL MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color WHITE	lor WHI	ПЕ
H.S.		
60 59 58 57 56 55 54 53 52	55 54 53 5	52 51 50 49 48 47 46 45 44 43 42 41
80 79 78 77 76	75 74 73 7	79 78 77 76 75 74 73 72 71 70 69 68 67 66 65 64 63 62 61
Terminal No. Wire	Color of Wire	Signal Name
73	>	IGN RELAY OUTPUT1 (USM)

 Terminal No Color of
M
 -

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Revision: December 2015 **EXL-189** 2016 Sentra NAM

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

COMBINATION SW COMBINATION SW INPUT 2

Signal Name

Color of Wire

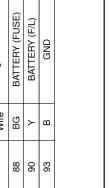
Terminal No.

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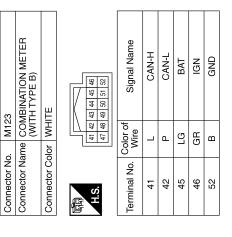




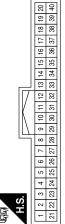


	Connector Name JOINT CONNECTOR-E02	Ш	88 7 6 5 4 8 3 2 1 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Signal Name	ı	1	1	ı
E2	me JOIN	lor BLU	12 11 10 9	Color of Wire	_	_	Ъ	۵
Connector No.	Connector Na	Connector Color BLUE	H.S.	Terminal No.	-	5	8	12

COMBINATION SW INPUT 1	COMBINATION SW OUTPUT 5	COMBINATION SW OUTPUT 4	COMBINATION SW OUTPUT 3	COMBINATION SW OUTPUT 2	COMBINATION SW OUTPUT 1	CAN-H	CAN-L
W	LG	\	^	В	SB	_	Ь
9	32	33	34	35	36	39	40



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



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

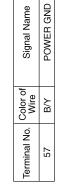
Connector No.	M122	Connector No. M122 Connector Name COMBINATION METER
Connector Color WHITE	riw)	(WITH TYPE B) WHITE
原 H.S.		
1 2 3 4 5 21 22 23 24 25	6 7 8 9	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 22 23 24 25 26 27 28 29 30 31 32 33 34 35 38 37 38 39 40
Terminal No.	Color of Wire	Signal Name
-	В	GND

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	FRONT FOG LAMP LH		۲ (<u></u>		Signal Name	1	ı					IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)	,	% % W	45 44 43	Signal Name	CAN-L	CAN-H		
		_	Ų.	²		Color of		В	-			o. E46			42 41 40 39 38 37	48 47 46 45 44 43	Color of Wire	۵	_		
Connector No.	Connector Name			H.S.		Terminal No.	-	2				Connector No.	Connector Name	Connector Color		H.5.	Terminal No.	40	41		
																			_		
Signal Name	ı	ı	ı	ı									IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)	,			Signal Name	IGN SIGNAL			
Color of Wire	g	0	Ь). E39		_	78 88 88	71 70	Color of Wire	0			
Terminal No.	10G	46G	95G	100G								Connector No.	Connector Name	Connector Color		H.5.	Terminal No.	89			
			Г																		
	IO WIRE			56 46 36 26 16 106 96 86 76 66	21920919911991791199139119		416 406 39G 38G 37G 36G 35G 34G 33G 32G 31G		61 G 600 G 59 G 58 G 57 G 56 G 55 G 54 G 53 G 52 G 51 G 70 G 69 G 68 G 67 G 66 G 65 G 64 G 63 G 62 G	81G80G79G77677G75G75G74G73G72G71G	95G 94G 93G 92G 91G 100G 99G 98G 97G 96G		Connector Name FRONT FOG LAMP RH Connector Color BLACK	,	\bigcirc		Signal Name	I	ı		
0. E4	ame WIRE I			56	21620619618	3062962	4164063963	L Doct Door	61G60G59G5 70G69G6	81G80G79G7	956	o. E28	ame FRONT olor BLACK		2		Color of Wire	*	В		
	Connector Name WIRE 10 WIRE			H.S.								Connector No.	Connector Name Connector Color		H.S.		Terminal No.	-	2		
		_										-						AB	LIA84	- 427GB	

E48	Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM)	LACK	
Connector No.	Connector Name P	Connector Color BLACK	







Connector No.	E47
Connector Name	Connector Name POWER DISTRIBUTION MODULE ENGINE ROC
Connector Color BROWN	BROWN



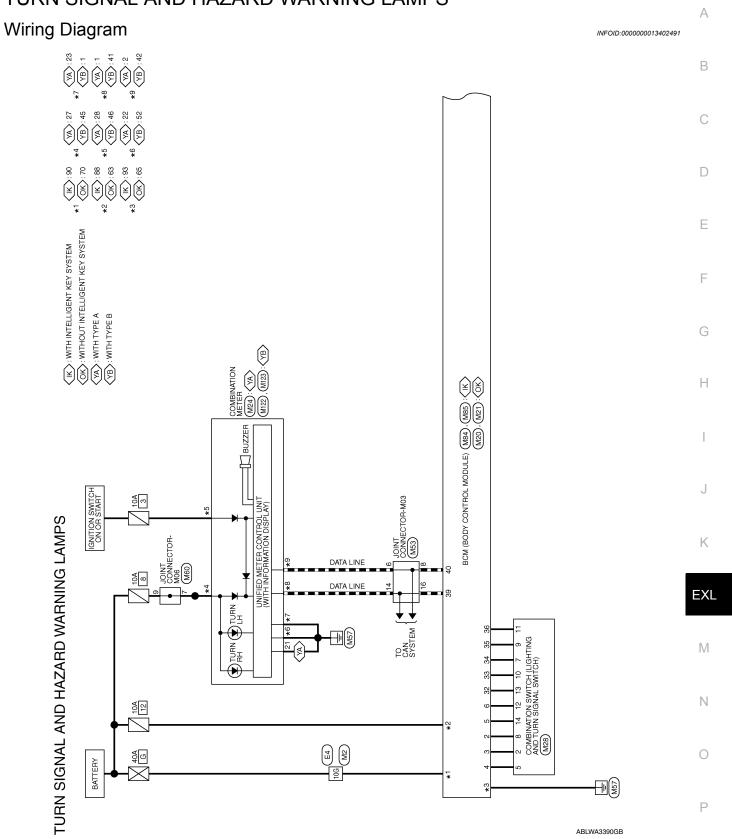


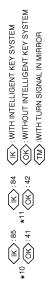
Signal Name	SIGNAL GND	FR FOG/L RH	FR FOG/L LH	
Color of Wire	B/Y	8	^	
Terminal No.	52	53	54	

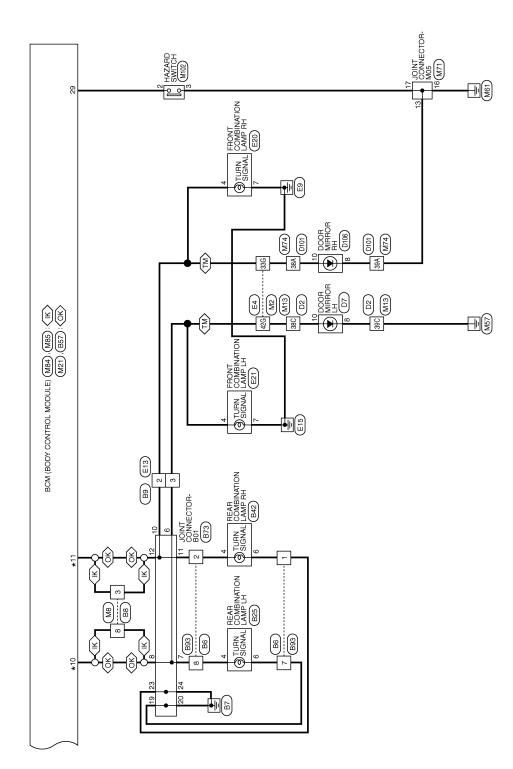
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< WIRING DIAGRAM > [LED HEADLAMP]

TURN SIGNAL AND HAZARD WARNING LAMPS

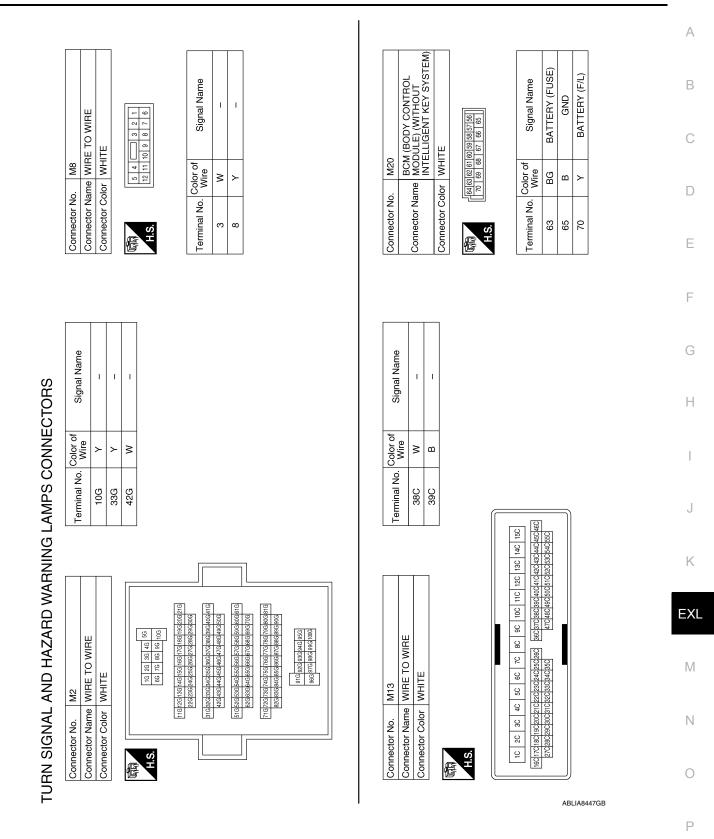






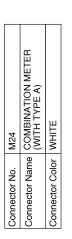
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[LED HEADLAMP]





Signal Name	CAN-H	CAN-L	GND ILLUMINATION	GND (POWER)	GND (CIRCUIT)	BAT	IGN	
Color of Wire	_	Ь	В	В	В	ГG	GR	
Terminal No. Wire	-	7	21	22	23	22	28	

Signal Name	CAN-H	CAN-L	GND ILLUMINATION	GND (POWER)	GND (CIRCUIT)	BAT	IGN	
Color of Wire	_	Ь	В	В	В	ГG	GR	
rminal No.	1	2	21	22	23	27	28	

	03			ı				_
	Connector Name JOINT CONNECTOR-M03						10	
	18					-	20 19 18 17 16 15 14 13 12 11 10	
	15					7	12	
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	l≨					4	14	
	9					2	15	
	_					9	16	
က္	≥	띨				7	17	
M53	9	BL				8	18	
	0	_				6	19	
	É	ᅙ					20	
ž	ž	ပ] [=			Ш
Ö	j	Ö						
ect	당	ect		•			48	
П	딭	nn		4	7		#I	
Connector No.	ပြ	Connector Color BLUE		넴	1		4	
	<u> </u>		' '	_	_	_	_	



Signal Name	I	I	I	I
Color of Wire	Ь	Д	٦	Γ
Terminal No. Wire	9	8	14	16

Signal Name	HAZARD SW	COMBINATION SW OUTPUT 5	COMBINATION SW OUTPUT 4	COMBINATION SW OUTPUT 3	COMBINATION SW OUTPUT 2	COMBINATION SW OUTPUT 1	CAN-H	CAN-L
	HAZA	COMBIN	COMBIN/ OUTI	COMBIN/ OUTF	COMBIN	COMBIN/ OUTI	CA	CA
Color of Wire	SB	ΓG	٨	^	Œ	SB	٦	Ь
Terminal No. Wire	29	32	33	34	35	36	39	40

Signal Name	HAZARD SW	COMBINATION SW OUTPUT 5	COMBINATION SW OUTPUT 4	COMBINATION SW OUTPUT 3	COMBINATION SW OUTPUT 2	COMBINATION SW OUTPUT 1	CAN-H	CAN-L
Color of Wire	SB	LG	Y	^	Œ	SB	٦	Ь
Terminal No. Wire	29	32	33	34	35	36	39	40

Signal Name	1	ı	ı	ı	I	1
Color of Wire	ш	>	SB	Ν	ГG	BG
Terminal No. Wire	6	10	11	12	13	14

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



Signal Name	COMBINATION SW INPUT 5	COMBINATION SW INPUT 4	COMBINATION SW INPUT 3	COMBINATION SW INPUT 2	COMBINATION SW INPUT 1
Color of Wire	٦	GR	BR	BG	M
Terminal No. Color of Wire	2	3	4	5	9

Connector Name COMBINATION SWITCH	Connector Color WHITE	1 2 3 4	
VIION S		4 5 6	

COMBINATION SWITCH

Connector No.



Signal Name	_	I	I	1
Color of Wire	GR	BR	>	Γ
Terminal No. Wire	2	5	7	8

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< WIRING DIAGRAM > [LED HEADLAMP]

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Connector Name JOINT CONNECTOR-M Connector Color WHITE	CONNECTOR-M06	Connector No. Connector Name	ne JOINT or BLUE	Connector No. M71 Connector Name JOINT CONNECTOR-M05 Connector Color BLUE	Connector Name Connector Color	time WIRE T	M74 WIRE TO WIRE	
H.S.	7 6 5 4 3 2 1	H.S.	9 8 7 20 19 18 17	6 5 4 3 2 1 16 15 14 13 12 11 10	H.S.			
					1A 2A 3A	4A 5A	6A 7A 8A 9A 10A 11A 12A 13A	3A 14A 15A
Terminal No. Color of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name	16A17A18A19A20A21A22A23A24A25A26A	0A21A22A23A	- 18g	A43A44A45A46A
W 7	1	13	В	1	27A28A29A3	27A28A29A30A31A32A33A34A35A	4744849494504514524534544554	A53A54A55A
M 6	ı	16	В	1				
		17	В	ı	Terminal No.	Color of Wire	Signal Name	
						>	ı	
					39A	В	ı	
Connector No. M84		Terminal No.	Color of	Signal Name	Connector No.). M85		
BCM (E Connector Name MODUI	BCM (BODY CONTROL MODULE) (WITH		Wire	HAZARD SW	Connector Name		BCM (BODY CONTROL MODULE) (WITH	
Connector Color BLACK	LIGENT KEY SYSTEM)	32	5	COMBINATION SW OUTPUT 5	Connector Color		:LLIGENT KEY SYSTEM)	
		33	>	COMBINATION SW OUTPUT 4	A.	01701001001		
所 S.H		34	>	COMBINATION SW OUTPUT 3	S'H	95 94 6	95 94 93 92 91 90	
1 2 3 4 5 6 7 8 9 9 11	17 18	35	Œ	COMBINATION SW OUTPUT 2				
ெ	30 31 32 33 34 35 36 37 38 39 40	36	SB	COMBINATION SW				
Terminal No. Color of Wire	Signal Name	39		CAN-H	Terminal No.	Color of Wire	Signal Name	
7 F	COMBINATION SW INPUT 5	40	۵	CAN-L	84	*	FLASHER OUTPUT (RIGHT)	
3 GR	COMBINATION SW INPUT 4				85	>	FLASHER OUTPUT (LEFT)	
4 BB	COMBINATION SW INPUT 3				88	BG	BATTERY (FUSE)	
5 BG	COMBINATION SW INPUT 2				93	- 8	GND	
M 9	COMBINATION SW INPUT 1							

< WIRING DIAGRAM >

[LED HEADLAMP]

Connector No. M123 Connector Name COMBINATION METER (WITH TYPE B)	Connector Color WHITE		H.S. 47 48 49 50 51 52		Terminal No. Color of Signal Name Wire	41 L CAN-H	42 P CAN-L	45 LG BAT	GR	52 B GND	Connector No. E13	Connector Name WIRE TO WIRE	Connector Color WHITE			7 2 3 4 5 6 7 8 9 10 11	13 14 15 16 17 18 19 20 21 22 23 24		Color of	l erminal No. Wire Signal Name	2	3 ^						
M122 COMBINATION METER (WITH TYPE B)			10 11 12 13 14 15 16 17 18 19 20	30 31 32 33 34 35 36 37 38 39 40	Signal Name	GND					Signal Name		ı	ı	1													
Connector No. M122 Connector Name COME (WITH	Connector Color WHITE	南	3 4 5 6 7 8 9	21 22 23 24 25 26 27 28 29	Terminal No. Wire	1 B					Terminal No Color of			33G Y	42G V													
	7]					<u> </u>		5]		1		<u> </u>			
22 ZARD SWITCH ITE		4 3 2 1			Signal Name	-	-					E TO WIRE	<u> </u>			56 46 36 26 16	8G 7G	0 + 1 0 c 1	30G29G28G27G26G25G24G23G22G		41 u 40 u 38 u 38 u 37 u 38 u 39 u 39 u 35 u 35 u 35 u 35 u 35 u 35		61 G 60 G 59 G 58 G 57 G 56 G 55 G 54 G 53 G 52 G 51 G 70 G 69 G 68 G 67 G 66 G 65 G 64 G 63 G 62 G	3786776675674673672677	90G89G88G87G86G85G84G83G82G	050 040 030 090 91G	100G99G 98G 97G 96G]
Connector No. M102 Connector Name HAZARD SWITCH Connector Color WHITE	_	ς; □			Terminal No. Wire	2 SB	3 B				Connector No. E4	Connector Name WIRE TO WIRE	Connector Color WHITE			v.		0000000	306/290	000000	419409390		616 606 590	819809790	068 906		, 121	
<u> </u>					_ ≇_						<u>ٽ</u>	ŏ	ဝ]	F	7	•									ABLIA	484500	ЗB

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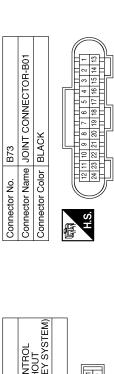
				Α
2 8 7 7	Signal Name	IATION	Signal Name	В
Connector No. B6 Connector Name WIRE TO WIRE Connector Color WHITE 6 5 4 1 10 9 1 1 1 10 1 1 1 1 1		R COMBIN TE TE T		С
No. B6 Name WIRE T Color WHITE 6 5 4 6 6 6 7 19 13 12 12 12 12 12 12 13 12 12 12 13 12 12 12 12 12 12 12 12 12 12 12 12 12	Color of Wire Wire SB SB SB	No. B25 Name REAR C LAMP LI Color WHITE	Color of Wire SB BG BG	D
Connector No. Connector Name Connector Color H.S.	Terminal No. 1 2 2 7 7 8	Connector No. B25 Connector Name REAR COMBINATION LAMP LH Connector Color WHITE 2	Terminal No. 4 6	Е
Г				F
E21 FRONT COMBINATION BLACK 1 2 3 4 5 6 7 8	Signal Name	WIRE	Signal Name	G H
E21 LAMPLL LAMPLL BLACK	Wire Wire V V B/R	Connector No. B9 Connector Name WIRE TO WIRE Connector Color WHITE M.S. [2] [1] [0] 9 8 7 6 5 4 [24] [25] [22] [21] [20] [19] [19] [17] [16]	Wire SB	
ctor Nc	Terminal No. Co	Connector Name WIRE T Connector Color WHITE TETT TO 9 8 THE THE TETT TO THE T	Terminal No. C	ı
Conne	Tem	Conne Conne Conne Conne	Term	J
				K
E20 LAMP RH BLACK 1 2 3 4 5 6 7 8	Signal Name	TO WIRE	Signal Name	EXL
DATE OF THE PROPERTY OF BLACK	Color of Wire PM Y PM A	B8 WIRE TO WIRE Or WHIE Or WHITE	Wire BG LG	
Connector No. Connector Color	Terminal No. C	Connector No. B8 Connector Name WIRE TO WIRE Connector Color WHITE The state of	Terminal No.	N
	<u> </u>	O O O O	<u>pa</u>	0

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[LED HEADLAMP]



Signal Name	ı	ı	ı	ı	ı	1	1	1	1	1
Color of Wire	SB	BR	LG	>	Œ	BG	В	В	٦	В
Terminal No. Color of Wire	9	7	80	10	11	12	19	50	23	24

Signal Name	-	1	
Color of Wire	Э	В	
Terminal No.	38C	38C	

Connector Name WIRE TO WIRE Connector Color WHITE

D2

Connector No.

70 60 50 40 30 20 10 20 10 30 30 30 30 30 30	
2 <u>8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8</u>	
35 100 10	
4C 3C	
23C22C8	
9240 <u>2</u>	
7C 2502	
36 375	
100	
11C 10C 9C 10C 9SC 9SC 10C 9SC 9SC 10C 9SC 9SC 9SC 9SC 9SC 9SC 9SC 9S	
12C 34104 5105	
13C 13C 33C52C6	
140	
H.S. 15C	

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



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

		REAR COMBINATION LAMP RH	TE	1	Signal Name	ı	ı
r	. B42		lor WHITE	0 8	Color of Wire	ш	_
	Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	4	y

Connector Name WIRE TO WIRE Connector Color WHITE 1 2 3 4 6 H.S. 7 8 9 10 11 12 13 19 20		-	Г	0							
2 6	connecto	r No.		393							
11 2 4 5 1 1 1 2 1 3 1 9	Connecto	r Nan	Je V	₩	ш	2	⅀	뮕			
2 3 7 7 8 9 9 10 11 12 13 13 14 15 5 14 15 15 15 15 15 15 15 15 15 15 15 15 15	Connecto	r Colc	<u>ر</u>	Ĭ							
7 8 9 10 11 12 13											
7 8 9 10 11 12 13 19	福	-	2	60	_		_	4	5	9	
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81 /1 91 61 41		`	ю	14	15	16	17	18	20	8	

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9	S	₹		me				
5	ç	8		Signal Name	1	ı	1	1
4	13	18		igna				
_	2	1		S				
	10 11 12	15 16 17						
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က	6	14		jo e				
2	٥	0		Solor	_	<u>د</u>	В	BB
-	1	٠		<u>o</u>				
S F	i i		J	Terminal No. Wire	1	2	7	8

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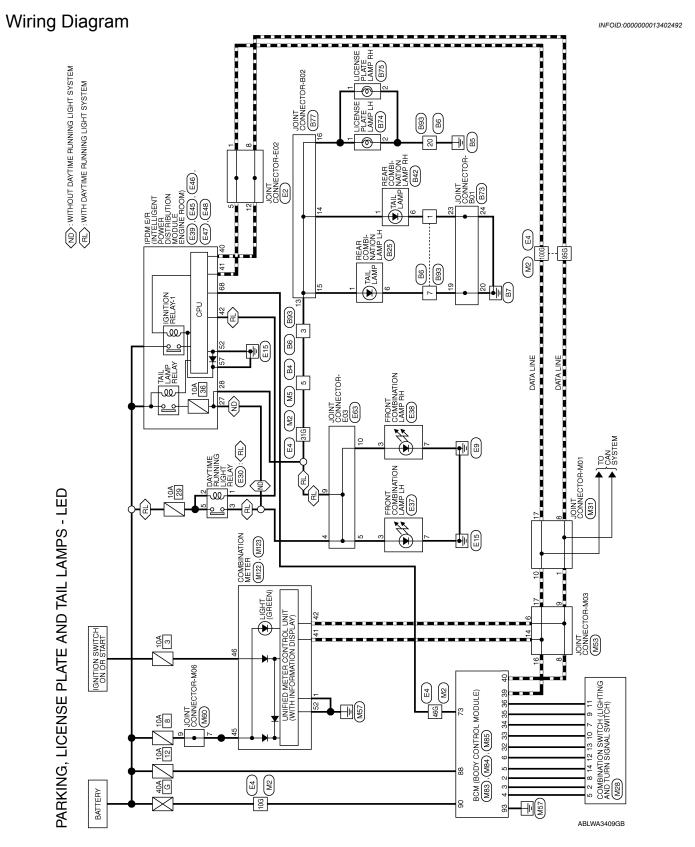
OR RH		Signal Name		
D106 e DOOR MIRR	6 5 4 3 2 11 11 10 9 8	Color of Si Wire B		
Connector Name DOOR MIRROR RH Connector Color WHITE	H.S.	Terminal No. C		
		34 24 14 1A		
		74 64 54 48 39 24 14 56 56 56 56 56 56 56 5	Signal Name - -	
Connector No. Connector Name WIRE TO WIRE Connector Color WHITE		1 % 1 111		
Connector No. D101 Connector Name WIRE T Connector Color WHITE	(i)	154 144 138 124 118 101 94 146454444444444444444444444444444444444	Terminal No. Color of Wire 38A G 39A B	
Conr	H.S.	L J Jeby	Tem	
ЭВ СН	[<u></u>	Signal Name		
D7 DOOR MIRRO WHITE	6 5 4 3 2 2 12 11 10 9 8	o ot		
Connector Name DOOR MIRROR LH Connector Color WHITE	ં	Color Wir. 8 B		
00 00 00		Terr		ABLIA8453GB

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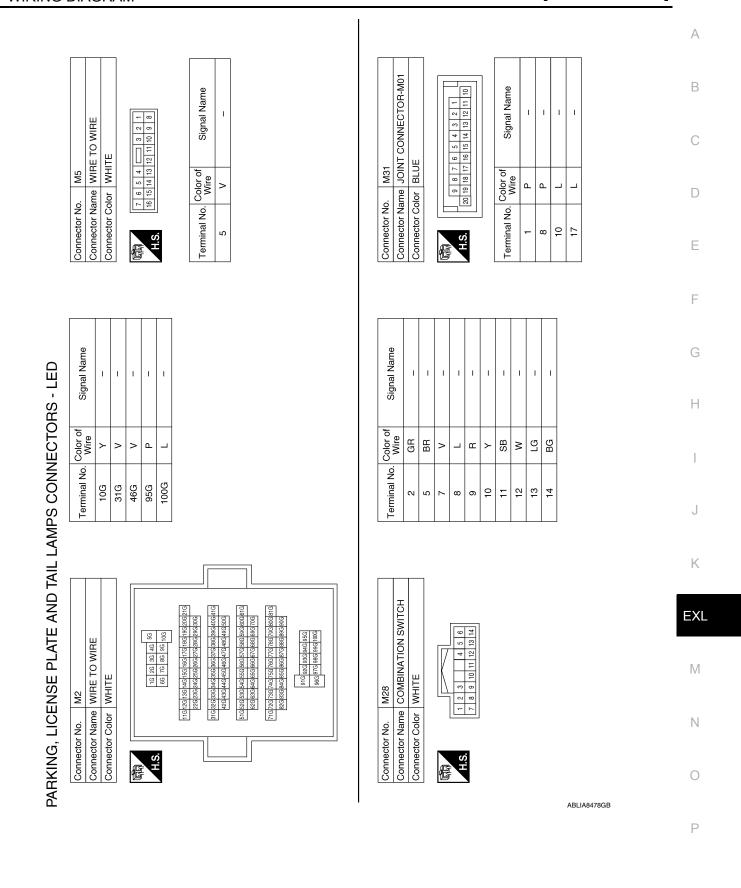
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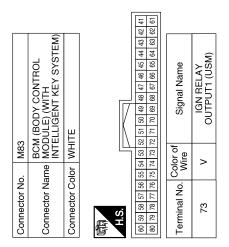


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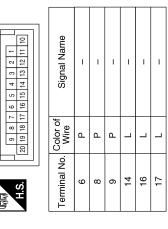
Connector No.). M85	
Sonnector Na	BCN ame MOI	Connector Name MODULE) (WITH INTELLIGENT KEY SYSTEM)
Connector Color WHITE	olor WHI	TE
斯 H.S.	89 88	95 94 93 92 91 90
Terminal No.	Color of Wire	Signal Name
88	BG	BATTERY (FUSE)
06	٨	BATTERY (F/L)
93	В	GND

Connector No.	0.	M60
Connector N	ame	Connector Name JOINT CONNECTOR-M06
Connector Color WHITE	olor	WHITE
E		9 7 8 5 4 3 2 1

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ŀ	_		은	Ш	ЭС		
l		-	20 19 18 17 16 15 14 13 12 11 10		Signal Name		
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l		က	13		na		
l		5 4 3 2	14		Sig		
l		2	15		0,		
l		9	16				
l			17				
l		9 8 7	8		e of		
l		6	19		ĕ₽	≥	∣≥
l			8		87		
					lo.		
[NA PA		H.S.		Terminal No. Wire	7	σ:

Signal Name	COMBINATION SW INPUT 2	COMBINATION SW INPUT 1	COMBINATION SW OUTPUT 5	COMBINATION SW OUTPUT 4	COMBINATION SW OUTPUT 3	COMBINATION SW OUTPUT 2	COMBINATION SW OUTPUT 1	CAN-H	CAN-L
Color of Wire	BG	8	LG	>	^	ш	SB	L	Ь
Terminal No.	5	9	32	33	34	38	98	68	40

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



			1	19 20 39 40				
4	BCM (BODY CONTROL MODULE) (WITH INTELLI- GENT KEY SYSTEM)	BLACK		9 10 11 12 13 14 15 16 17 18 19 29 30 31 32 33 34 35 36 37 38 39	Signal Name	COMBINATION SW INPUT 5	COMBINATION SW INPUT 4	COMBINATION SW INPUT 3
. M84		l		6 7 8	Color of Wire		GR	BB
Connector No.	Connector Name	Connector Color	原 H.S.	1 2 3 4 5 21 22 23 24 25	Terminal No.	2	е	4

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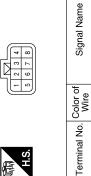
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	OR-E02		2 1		lame							<u>Q</u>	Ę.					lame										АВ
	T CONNECT		7 6 5 4 3		Signal Name	ı	1 1		ı				LIGHT RELAY			[Signal Name	1	I	1	1						С
No.		Color BLUE	12 11 10 9 8		ر ا			L 0	Γ					Color BLUE		8		lo. Color of Wire	>	LG	_	LG						D
Connector No.	Connector	Connector Color	原 H.S.		Terminal No.	- l	ه م	0 5	7			Connector No.		Connector Color		E	H.S.	Terminal No.	-	2	ဇ	5						Е
													1		1	Ī												F
	METER				Signal Name	CAN-H	CAN-L	BAT	IGN	פואם		Signal Name	1		ı	1	1											G
83	Connector Name COMBINATION METER (WITH TYPE B)		43 44 45 46	47 48 49 50 51 52			/S	В	<u> </u>	5																		Н
No. M123	Vame COI	Color WH	14	47 48	Color of Wire	_	۵	LG	GR (ם		Color of Wire	ŋ	œ	0	۵	_											I
Connector No.	Connector N	Connector Color WHITE		Ö.	Terminal No.	41	42	45	46	22		Terminal No.	10G	31G	46G	95G	100G											J
	METER				14 15 16 17 18 19 20 1 34 35 36 37 38 39 40		Signal Name	GND								\(\frac{1}{2}\)	59 92	3 15G 14G 13G 12G 11G 3 25G 24G 23G 22G	030000000000000000000000000000000000000	345G44G43G42G		355G54G53G52G51G 365G64G63G62G	375G74G73G72G71G 385G84G83G82G	926 916	910 960			K
M122	Connector Name COMBINATION METER (WITH TYPE B)	WHITE			8 9 10 11 12 13 28 29 30 31 32 33							Connector No. E4	WHITE	1		56	g g	21620G 19G 18G 17G 16G 15G 14G 13G 12G 30G 29G 28G 27G 26G 25G 24G 23G 22G	210000000000000000000000000000000000000	50G 49G 48G 47G 46G 45G 44G 43G 42G		61 G 60 G 59 G 58 G 57 G 56 G 55 G 54 G 53 G 52 G 70 G 69 G 68 G 67 G 66 G 65 G 64 G 63 G 62 G	81G80G79G78G77G76G75G74G 90G89G88G87G86G85G84G	95G 94G 93G 92G 91G	1000 0000 0000			M
Connector No.	ctor Name (Connector Color			3 4 5 6 7 23 24 25 26 27		al No. Wire	1 B				Connector No.	Connector Color 1					 [2]		-		[61	<u> </u>					Ν
Connec	Conne	Conne	唇	6.	21 22 23		Terminal No.					Conne		500	Œ		6.0											0
											1													ABLIA	3480GE	3		Р

Connector No.	, E39	
Connector Name		IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	lor BLACK	CK
雨 H.S.	67 67	67 86 65 64 63 72 71 70 69 68
Terminal No. Wire	Color of Wire	Signal Name
89	0	IGN SIGNAL

Connector No.	E38
Connector Name	Connector Name FRONT COMBINATION LAMP RH
Connector Color BLACK	BLACK



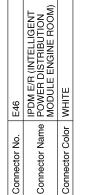
B/W

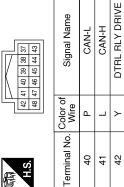
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Connector No. E37	Connector Name FRONT COMBINATION LAMP LH	Connector Color BLACK	
Connec	Connec	Connec	

Signal Name	_	ı	
Color of Wire	٦	B/R	
Terminal No. Wire	3	7	

Connector No.	E47
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	BROWN
同词 H.S.	51





Signal Name SIGNAL GND

B∕

52

Terminal No. Color of Wire

Connector No.	E45
Connector Name	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM
Connector Color BROWN	BROWN
(京) 29 28 35 H.S.	28 28

28 28 77 26 25 36 35 34 33 32 31 30	Signal Name	CLEARANCE/L RH	+ IIVI
36 35 34	Color of Wire	7	מ
呵奇 H.S.	Terminal No.	27	oc.

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PARKING, LICENSE PLATE AND TAIL LAMPS

< WIRING DIAGRAM >

[LED HEADLAMP]

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Connector No. E48 Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM Connector Color BLACK H.S. Terminal No. Color of Signal Name 57 B/Y POWER GND

Connector No.). B42	
Connector Name	tme RE,	REAR COMBINATION LAMP RH
Connector Color WHITE	lor WH	里
所 H.S.	9	8 4 9 1
Terminal No. Color of Wire	Color of Wire	Signal Name
1	BB	1
9	٦	ı

Connector No.	, B25	
Connector Name		REAR COMBINATION LAMP LH
Connector Color	lor WHITE	ПЕ
H.S.	6 2	■ 4 ■ 1
Terminal No. Wire	Color of Wire	Signal Name
1	ГС	I
9	BG	1

Connector No.). B6	
Connector Name	ame WIF	WIRE TO WIRE
Connector Color	olor WHITE	ITE
E SH	9	3 2 1
	20 19	13 12 11 10 9 8 7 18 17 16 15 14 8 7
Terminal No.	Color of Wire	Signal Name
-	_	ı
ဇ	ГG	1
7	BG	ı
20	<u>m</u>	ı

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Revision: December 2015 **EXL-207** 2016 Sentra NAM

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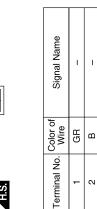
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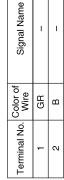
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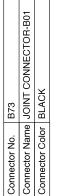
Connector No.	B75
Connector Name	Connector Name LICENSE PLATE LAMP RH
Connector Color	BROWN

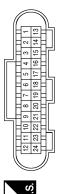












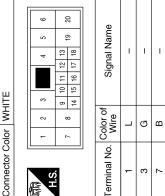
Signal Name	1	1	1	I
Color of Wire	В	В	Т	В
Terminal No. Wire	19	20	23	24



Connector Name | JOINT CONNECTOR-B02

B77

Connector No.



唇	H.S.

	- =
	2 2
	13 2 12
	4 4
	5 4 15 14
곱	9 9
썅	<u>∞</u> <u>∞</u>
	9 8 7
흥	8
ၓ	
5	
6	16
=	H.S.
Connector Color GREEN	惨

7 6 5 4 3 2 1 7 16 15 14 13 12 11 10	Signal Name	1	1	I	ı
9 8 7 20 19 18 17	Color of Wire	ŋ	BR	ГG	GR
H.S.	Terminal No. Wire	13	14	15	16

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STOP LAMP

Wiring Diagram

⟨OS⟩: WITHOUT REAR SPOILER
⟨SP⟩: WITH REAR SPOILER

JOINT CONNECTOR-B02 B77 JOINT CONNECTOR-B01 B73 (B93 (B)

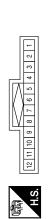
STOP LAMP

BATTERY

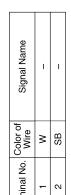
Revision: December 2015



STOP LAMP CONNECTORS



12 11 10 9 8 7 6 5 4 3 2 1	Signal Name	ı	-
6 01 11	Color of Wire	SB	SB
H.S.	Terminal No. Wire	11	12



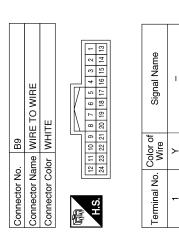
3 4

Signal N	1	-	
Color of Wire	Ν	SB	
Terminal No.	1	2	
			•

Signal Name	ı	
Color of Wire	SB	
rminal No.	1	

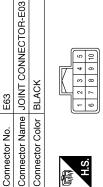
Signal Name	1	
Color of Wire	SB	
Terminal No.	-	

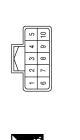
Signal Name	1	
Color of Wire	SB	
Terminal No.	1	

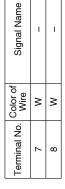


Connector No.	No.	B6	ယ							
Connector Name WIRE TO WIRE	Name	3	III	1	0	MF	3E			
Connector Color WHITE	Color	3	Į	щ						
晋	9	ro.	4	Ш		\vdash	m	2	-	
ć.	8	Ş	13 12 11	12		- 2	6		r	
	2	20	18	17	18 17 16 15 14	15	14	ρ	,	
-			ıl	ıl	ıl	ıl	ı			_

Signal Name	1	ı	1	_
Color of Wire	_	>	BG	В
Terminal No. Wire	-	4	7	20







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Connector Name REAR COMBINATION LAMP Connector Name LAMP (WITHOUT REAR SPOILER) Connector Color WHITE Connector Color BLACK	Connector No. B42	B42	Connector No. B46	B46
Connector Color WHITE Connector Color BLACK	onnector Name	REAR COMBINATION LAMP RH	Connector Name	HIGH-MOUNTED STOP LAMP (WITHOUT REAR
	onnector Color	WHITE		SPOILER)
			Connector Color	BLACK

Connector Name REAR COMBINATION LAMP

B25

Connector No.

Connector Color WHITE

	Signal Name	I	I
	Color of Wire	>	В
原南 H.S.	Terminal No. Wire	-	2

H.S.	Terminal N	-	2	
	Signal Name	1	ı	
		>		
2	Terminal No. Wire	2	9	
	ame			
7	Signal Name	1	1	

Color of Wire

Terminal No.

BB B

9 α

B77	Connector Name JOINT CONNECTOR-B02
Connector No. B77	Connector Name
B73	connector Name JOINT CONNECTOR-B01
Connector No. B73	Connector Name
B71	HIGH-MOUNTED STOP
nnector No. B71	:

Connector Name JOINT CONNECTOR-B01	CK	9 8 7 6 5 4 3 2 11	Signal Name	ı	1	ı	1
me JOII	lor BLA	24 23 22 21	Color of Wire	В	В	_	α
Connector Na	Connector Color BLACK	H.S.	Terminal No. Color of Wire	19	20	23	77

Connector Color | GREEN

Signal Name

Color of Wire

Terminal No.

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> Ø 4

Connector No.	. B71	
Connector Name		HIGH-MOUNTED STOP LAMP (WITH REAR SPOILER)
Connector Color WHITE	lor WHI	TE
崎 H.S.	4	2 1
Terminal No. Wire	Color of Wire	Signal Name
2	В	ı
3	Т	1

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	ć	20		ne				
	0+			Signal Name	١,		١,	,
	13	18		nal		ľ	ļ '	Ċ
	12	17		Sig				
П	10 11 12 13	14 15 16 17		0,				
4	10	15						
	6	14)t				
	o	0		olor (Wire	_	>	В	В
	1	,		0				
<u>ن</u>			J	Terminal No. Wire	-	4	7	20

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BACK-UP LAMP

Wiring Diagram

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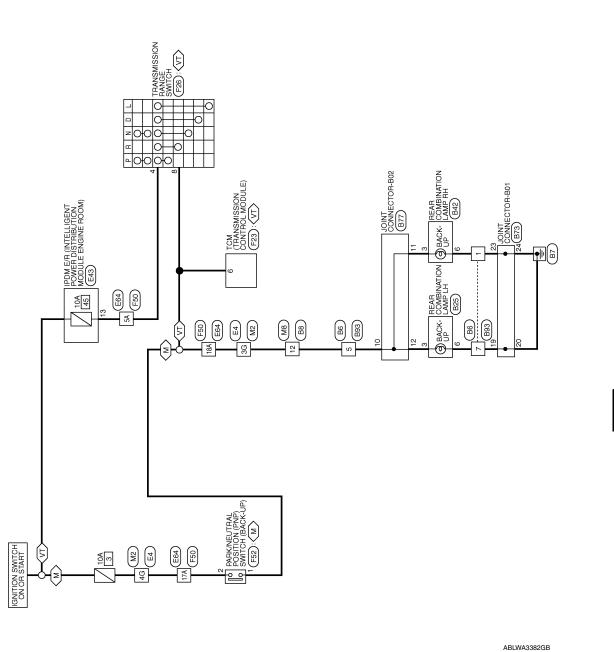
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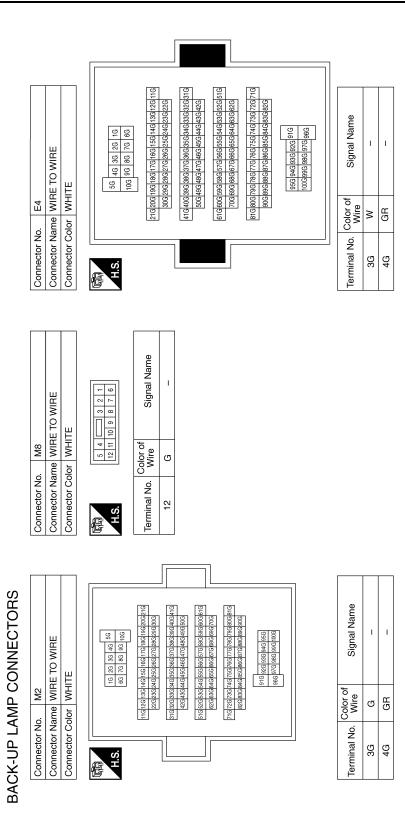
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BACK-UP LAMP

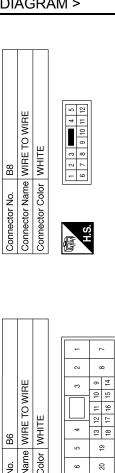




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			Α
MODULE) MODULE) 88 39 40 47 48 48 18 19 20 43 44 42 8 8 9 10 41 42	Signal Name R RANGE SW	Signal Name	В
lame TCM (TRAN CONTROL N C			С
Connector No. F23 Connector Name TCM (TRANSMISSION CONTROL MODULE) CONTR	No. Color of Wire	LG SB COlor of Wire G SB G COlor of G COlor	D
Connector No. Connector Connector Na. H.S.	Terminal No. 6	Terminal No. 5A 17A 18A	Е
			F
HE 114 24 14 14 14 14 14 14 14 14 14 14 14 14 14	Signal Name	SA 42A 43A 43A 43A 43A 43A 43A 43A 43A 43A 43	G
O WIF	30A 24 25A	Connector No. F50 Connector Name WIRE TO WIRE Connector Color BLACK A 110A 10A 20A 28A 34 11A 20A 28A 34 11A 20A 28A 34 11A 20A 28A 34 11A 2A 38A 11A 3A 11A 2A 38A 11A 3A 11A	Н
Connector No. E64 Connector Name WIRE T Connector Color BLACK A0A51A A0A51		Connector No. F50 Connector Name WIRE T Connector Color BLACK LA 134 LA	I
Соппес	Terminal No. 5A 17A 17A 18A	Connec Connec	J
			K
E43 IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) WHITE 8 7 6 6 6 4 3 7 16 115 115 115 115 115 115 115 115 115	Signal Name A/T ECU IGN	TRANSMISSION PANGE SWITCH BLACK fr of Signal Name	EXL
E43 IPDM E/R (INTELLI POWER DISTRIBU MODULE ENGINE WHITE 	Sign A/T	ANSMISSIC ACK ACK Sign	M
	Color of Wire	1 2 5 1 9 1 6 1	Ν
Connector No. Connector Name Connector Color H.S.	Terminal No.	Connector No. Connector Name Connector Color H.S. 4 L. 8 Color 8 Color	0
		ABLIA8407GB	

Revision: December 2015 EXL-215 2016 Sentra NAM



Signal Name	1	
Color of Wire	Μ	
Terminal No.	12	

Connector No.	B73
Connector Name	Connector Name JOINT CONNECTOR-B01
Connector Color BLACK	BLACK
H.S. 121 121 121 121 121 121 121 121 121 12	12 11 10 9 8 7 6 5 4 3 2 1

Signal Name	-	1	-	1
Color of Wire	В	В	٦	В
Terminal No. Color of Wire	19	50	23	24

Connector No.	No.	B6	9					
Connector Name WIRE TO WIRE	Nam	≥	IRE TO	Š	果			
Connector Color WHITE	Colo	>	HITE					
個	9	r2	4		е е	2	-	
2		Ī		Ĺ		Ī	Ī	

Signal Name	ı	_	ı
Color of Wire	٦	M	BG
Terminal No. Wire	-	9	7

Signal Name	ı	1	ı	
Color of Wire	_	Μ	BG	
Terminal No.	1	5	7	

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

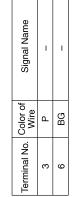
9 4 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	Signal Name	ı	_
	Color of Wire	SB	Γ
H.S.	Terminal No. Color of Wire	ဇ	9

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



Signal Name	ı	_
Color of Wire	ŋ	SB
Terminal No.	-	2

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



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B93	IRE TO WIRE	HITE
Connector No. B:	Connector Name WIRE TO WIRE	Connector Color WHITE

9	٤	7
2	19	
4	55	8
	12	17
	Ξ	9
	9	15
က	6	14
7	-	0
-	7	

Signal Name	=	I	-
Color of Wire	٦	8	В
Terminal No. Color of Wire	1	5	7

			Ì	1								1		
Connector No.	Ž	o.		B77	_									
Connector Name JOINT CONNECTOR-B02	Ž	am	е	2	Ž	1	20	ź	Œ	ΞŢ	SF	8-P	02	
Connector Color GREEN	ő	응	_	ß	딡	딞								
Œ	[Г	
													-	
Į			6	8	7	9	2	4	က	2	-		_	
S.		20	19	18	17	20 19 18 17 16 15 14 13 12 11	15	14	13	12	Ξ	9		

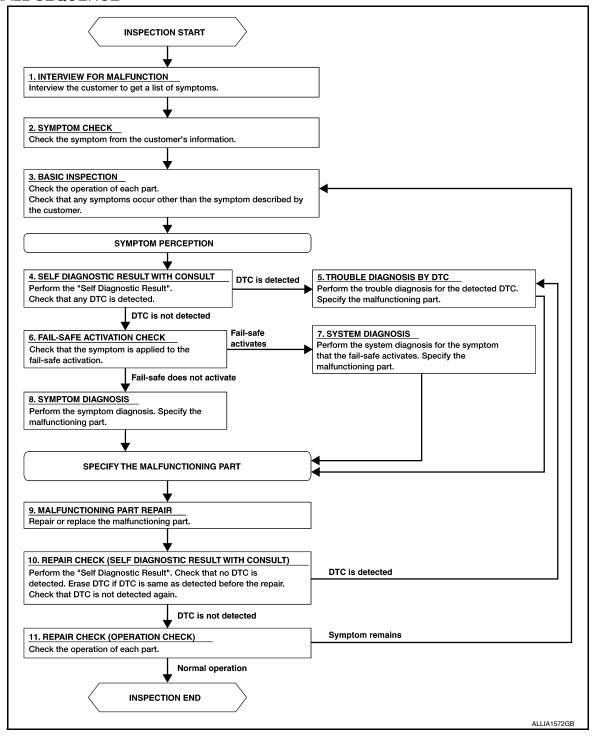
Signal Name	-	ı	ı
Color of Wire	Μ	SB	Д
Terminal No.	10	F	12

BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

OVERALL SEQUENCE



DIAGNOSIS AND REPAIR WORK FLOW

<pre></pre>	EADLAMP]
DETAILED FLOW	
1.INTERVIEW FOR MALFUNCTION	
Find out what the customer's concerns are.	
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. <u>Does the fail-safe activate?</u>	
YES >> GO TO 7.	
NO >> GO TO 8.	
/.SYSTEM DIAGNOSIS	
Perform the system diagnosis for the system in which the fail-safe activates. Specify the malfunction	tioning 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.	
4.0	
10.REPAIR CHECK (SELF DIAGNOSTIC RESULT WITH CONSULT) Perform the "Self Diagnostic Result". Verify that no DTCs are detected. Erase all DTCs detected.	al made at Co. O.

Is any DTC detected?

DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION > [LED HEADLAMP]

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

< BASIC INSPECTION > [LED HEADLAMP]

LED HEADLAMP OPERATION INSPECTION

Work Procedure

1. CHECK START

- 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.
- 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".

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[LED HEADLAMP]

DTC/CIRCUIT DIAGNOSIS

HEADLAMP (HI) CIRCUIT

Component Function Check

INFOID:0000000013402497

1. CHECK HEADLAMP (HI) OPERATION

(II) 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.
- 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)	II DIVI L/IX	42	10 A

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

(P)With CONSULT

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

Fr	(+) ont combination la	mp	(-)	Test item		Voltage (Approx.)
Conr	nector	Terminal				
RH	RH E51				Hi	Battery voltage
IXII	LST	9	Ground	EXTERNAL	Off	0
LH	E50	9	Glound	LAMPS	Hi	Battery voltage
	E30				Off	0

HEADLAMP (HI) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

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Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 3.

3.CHECK HEADLAMP (HI) POWER SUPPLY CIRCUIT

- 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		IPDN	Л E/R	Continuity	
Coni	nector	Terminal	Connector	Terminal	Continuity
RH	E51	0	E43	5	Yes
LH	E50	9	E43	6	ies

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		Continuity
RH	E51	10	Ground	Yes
LH	E50	10	Giouna	165

Is the inspection result normal?

YES >> Replace the headlamp bulb. Refer to EXL-257, "Bulb Replacement".

NO >> Repair or replace the harness or connector.

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[LED HEADLAMP]

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HEADLAMP (LO) CIRCUIT

Component Function Check

1. CHECK HEADLAMP (LO) OPERATION

(P)With CONSULT

- 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

- 1. Start IPDM E/R auto active test. Refer to PCS-9, "Diagnosis Description".
- 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

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

1. CHECK HEADLAMP (LO) FUSE

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

Unit	Location	Fuse No.	Capacity
Headlamp LO (RH)	IPDM E/R	43	15A
Headlamp LO (LH)	IFDIVI E/K	44	154

Is the inspection result normal?

YES >> GO TO 2.

>> Replace the blown fuse after repairing the affected circuit.

2.CHECK HEADLAMP (LO) OUTPUT VOLTAGE

(P)With CONSULT

NO

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

Fr	(+) ont combination la	mp	(-)	(-) Test item		Voltage (Approx.)	
Conr	nector	Terminal				, , , ,	
DU	F20				Lo	Battery voltage	
RH	E38	4	Overal	EXTERNAL	Off	0	
LH	E37	I	Ground	LAMPS	Lo	Battery voltage	
LN	E37				Off	0	

Is the inspection result normal?

YES >> Perform the LED headlamp diagnosis. Refer to EXL-228, "Diagnosis Procedure".

NO >> GO TO 3.

HEADLAMP (LO) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

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.

Continuity	IPDM E/R		Front combination lamp		
Continuity	Connector Terminal		Terminal	nector	Coni
Yes	8	E43	1	E38	RH
165	7	E43	'	E37	LH

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to <u>PCS-31, "Removal and Installation"</u>.

NO >> Repair or replace harness.

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DAYTIME RUNNING LIGHT RELAY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

DAYTIME RUNNING LIGHT RELAY CIRCUIT

Component Function Check

Component Function Check

INFOID:0000000013402501

1.CHECK DAYTIME RUNNING LIGHT OPERATION

(P)CONSULT

- Select "EXTERNAL LAMPS" in "Active Test" mode of "IPDM E/R".
- 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

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

(+) Daytime running light relay		(-)	Voltage (Approx.)	
Connector	Terminal		(· .pp. 6/11)	
E30	2 Ground		Pattony voltago	
£30	5	Giouna	Battery voltage	

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.

f 4.CHECK DAYTIME RUNNING LIGHT RELAY CONTROL SIGNAL OUTPUT

(P)CONSULT

- Install daytime running light relay.
- Turn ignition switch ON.

DAYTIME RUNNING LIGHT RELAY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

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

	(+) M E/R	(-) Test item		item	Voltage (Approx.)
Connector	Terminal				
E46	42	Ground	EXTERNAL	On	0 V
□40	42		LAMPS	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".

${f 5.}$ 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.
- Check continuity between IPDM E/R harness connector and daytime running light relay harness connector.

IPDI	IPDM E/R		Daytime running light relay		
Connector	Terminal	Connector Terminal		Continuity	
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			Continuity	
Connector	Connector Terminal		Continuity	
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

1. CHECK DAYTIME RUNNING LIGHT RELAY

- 1. Turn ignition switch OFF.
- 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
Tern	ninals	Con	uition	Continuity
5	2	Voltago	Applied	Yes
5	3	Voltage	Not applied	No

Is the inspection result normal?

YES >> Daytime running light relay is normal.

NO >> Replace daytime running light relay.

Revision: December 2015 EXL-227 2016 Sentra NAM

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INFOID:0000000013402503

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[LED HEADLAMP]

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				Continuity
Connector		Terminal	Ground	Continuity
RH	E38	E	Giouna	Yes
LH	E37	3		165

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 <u>EXL-149</u>, "<u>LED Headlamp Control Module</u>".

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 <u>EXL-228</u>, "<u>Diagnosis Procedure</u>".

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

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

PARKING LAMP CIRCUIT

Component Function Check

INFOID:0000000013402505

$oldsymbol{1}$. CHECK PARKING LAMP OPERATION

CONSULT

- Select "EXTERNAL LAMPS" in "Active Test" mode of "IPDM E/R".
- While operating the test items, check that the parking lamp is turned ON.

TAIL : Parking lamp ON Off : Parking lamp OFF

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Is the inspection result normal?

YES >> Parking lamp circuit is normal.

NO >> Refer to EXL-229, "Diagnosis Procedure".

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Diagnosis Procedure

INFOID:0000000013402506

Regarding Wiring Diagram information, refer to <a>EXL-202, "Wiring Diagram".

Location

IPDM E/R

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1. CHECK PARKING LAMP FUSE

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

Capacity	
10A	

Parking lamps Is the inspection result normal?

Unit

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

2.CHECK PARKING LAMP CIRCUIT

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

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IPDI	M E/R		Continuity
Connector	Terminal	Ground	No
E45	27		No

Fuse No.

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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?

YFS >> GO TO 4.

NO >> Replace applicable LED lamp.

f 4.CHECK PARKING LAMP OUTPUT VOLTAGE

(P)CONSULT

- Disconnect front combination lamp connector.
- Turn ignition switch ON.

EXL-229 Revision: December 2015 2016 Sentra NAM

PARKING LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

- Select "EXTERNAL LAMPS" in "Active Test" mode of "IPDM E/R".
- While operating the test items, check voltage between IPDM E/R harness connector and ground.

(+) IPDM E/R		(-)	Test item		Voltage (Approx.)
Connector	Terminal				(1)
E45	27	Ground	EXTERNAL	TAIL	Battery voltage
E45	27		LAMPS	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.

F	Front combination lamp			IPDM E/R		
Conr	onnector Terminal		Connector	Terminal	- Continuity	
RH	E38	3 E45	E45	27	Yes	
LH	E37	3	L43	21	165	

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		Continuity		
Con	Connector		Ground	Continuity	
RH	E38	7	Ground	Yes	
LH	E37	1		165	

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

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

TAIL LAMP CIRCUIT

Component Function Check

INFOID:0000000013402509

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1. CHECK TAIL LAMP OPERATION

CONSULT

- 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

f : 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

(P)CONSULT

1. Disconnect rear combination lamp RH or LH connector.

Turn ignition switch ON.

- 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.

Re	(+) Rear combination lamp Connector Terminal		(-)	Test	Test item	
Conn			7			Voltage (Approx.)
RH	DII DAG				TAIL	Battery voltage
KII	B42	D42	Craund	EXTERNAL	Off	0 V
1 4	LH B25		Ground	LAMPS	TAIL	Battery voltage
LH					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.

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TAIL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

	Rear combination lamp			IPDM E/R		
Coni	Connector Terminal		Connector	Terminal	Continuity	
RH	B42	1	E45	28	Yes	
LH	B25	1	E43	26	res	

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		Continuity		
Connector		Terminal	Ground	Continuity	
RH	B42	6	Ground	Yes	
LH	B25	O		res	

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

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

LICENSE PLATE LAMP CIRCUIT

Component Function Check

INFOID:0000000013402511

1. CHECK TAIL LAMP LH OPERATION

OID:0000000013402511

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

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(P)CONSULT

- 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.

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

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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".

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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".

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2.CHECK LICENSE PLATE LAMP POWER SUPPLY CIRCUIT

- 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			IPDN	Continuity	
Connector Terminal		Terminal	Connector	Terminal	Continuity
RH	B75	E45	28	Yes	
LH	B74	I	LTO	20	163

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Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

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${f 3.}$ CHECK LICENSE PLATE LAMP GROUND CIRCUIT

Check continuity between license plate lamp harness connector and ground.

	License plate lan		Continuity		
	Connector	Terminal	Ground	Continuity	
RH	B75	2	Giodila	Yes	
LH	B74	2		168	

Is the inspection result normal?

LICENSE PLATE LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

YES >> Check corresponding bulb socket and harness. Repair or replace if necessary.

NO >> Repair or replace harness.

FRONT FOG LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

FRONT FOG LAMP CIRCUIT

Component Function Check

INFOID:0000000013402513

1. CHECK FRONT FOG LAMP OPERATION

(E)CONSULT

- 1. Select "EXTERNAL LAMPS" in "Active Test" mode of "IPDM E/R".
- While operating the test items, check that the front fog lamp is turned ON.

Fog : Front fog lamp ON
Off : Front fog lamp OFF

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Is the inspection result normal?

YES >> Front fog lamp circuit is normal.

NO >> Refer to EXL-235, "Diagnosis Procedure".

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Diagnosis Procedure

INFOID:0000000013402514

Regarding Wiring Diagram information, refer to EXL-187, "Wiring Diagram".

1. CHECK FRONT FOG LAMP FUSE

- Turn ignition switch OFF.
- 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

(P)CONSULT

- Disconnect front fog lamp connector.
- Turn ignition switch ON.
- Select "EXTERNAL LAMPS" in "Active Test" mode of "IPDM E/R".
- While operating the test items, check the voltage between front fog lamp harness connector and ground.

	(+) Front fog lamp		(-)	Test	Test item		
Conr	nector	Terminal				(Approx.)	
RH	E28	1			Fog	Battery voltage	
IXII	LZO			ı	Crow	Ground	EXTERNAL
LH	E27	1	Glound	LAMPS	Fog	Battery voltage	
LH	Ln E21	ı			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.
- Disconnect IPDM E/R connector.
- 3. Check continuity between IPDM E/R harness connector and front fog lamp harness connector.

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FRONT FOG LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

	Front fog lamp			IPDM E/R		
Coni	Connector Terminal		Connector	Terminal	Continuity	
RH	E28	1	E47	53	Yes	
LH	E27	1	L47	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		Continuity	
Connector		Connector Terminal		Continuity
RH	E28	2	Ground	Yes
LH	E27	2		res

Is the inspection result normal?

YES >> Replace bulb. Refer to EXL-259. "Removal and Installation".

NO >> Repair or replace harness.

TURN SIGNAL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

TURN SIGNAL LAMP CIRCUIT

Component Function Check

INFOID:0000000013402515

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1. CHECK TURN SIGNAL LAMP

©CONSULT

- 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 blinkingRH : Turn signal lamp RH blinkingOFF : 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 <a>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

- 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 Connector Terminal		(-)	Voltage	
Con			(-)	voilage	
LH	E21				
RH	E20	4	Ground	(V) 15 10 5 0	

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

Door min	ror	(-)	Voltage
Connector	Terminal	(-)	voltage

LH	D7			
RH	D106	10	Ground	(V) 15 10 5 0

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

	Rear combination lamp		()	Voltage	
Cor	nnector	Terminal	(-)	voltage	
LH	B25				
RH	B42	4	Ground	(V) 15 10 5 0 PKID0926E	

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 3.

3.CHECK TURN SIGNAL LAMP POWER SUPPLY CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect BCM connector.
- 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		ВСМ		Continuity	
	Connector	Terminal	Connector	Terminal	Continuity
LH	E21	4	M85	85	Yes
RH	E20	4	IVIOS	84	162

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

Door mirror lamp		BCM		Continuity	
Connector		Terminal	Connector	Terminal	Continuity
LH	D7	10	M85	85	Yes
RH	D106	10	COIVI	84	162

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

Rear combination lamp			BCM		Continuity
	Connector	Terminal	Connector	Terminal	Continuity
LH	B25	4	M85	85	Yes
RH	B42	4	IVIOS	84	165

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair the harness or connector.

4. CHECK TURN SIGNAL LAMP SHORT CIRCUIT

TURN SIGNAL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

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1. Check continuity between the BCM harness connector and ground.

	BCM		Continuity
Connector	Terminal	Ground	Continuity
M85	84	Ground	No
COIVI	85		INO

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	- (-)	Continuity	
LH	E21	7	Ground	Yes	
RH	E20	,	Giouria	168	

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

Rear combination lamp			()	Continuity	
Connec	onnector Terminal		(-)	Continuity	
LH	B25	6	Ground	Yes	
RH	B42	U	Giouna	165	

Check continuity between the door mirror harness connector and ground.

Door mirror			()	Continuity	
Connector		Terminal	(-)	Continuity	
LH	D7	Q	Ground	Yes	
RH	D106	0	Giodila	165	

Are the inspection results normal?

YES >> Replace the malfunctioning lamp.

NO >> Repair or replace the harness or connectors.

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[LED HEADLAMP]

OPTICAL SENSOR

Component Function Check

INFOID:0000000013402517

1. CHECK OPTICAL SENSOR SIGNAL WITH CONSULT

CONSULT

- 1. Turn ignition switch ON.
- Select "HEADLAMP" in "Data Monitor" mode of "BCM".
- Turn lighting switch to AUTO.
- With the optical sensor illuminating, check the monitor status.

Monitor item	Condition		Voltage (Approx.)
OPTISEN (DTCT) Op	Optical sensor	When illuminating	3.1 V or more *
	Optical serisor	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 <a>EXL-180, "Wiring Diagram".

1. CHECK OPTICAL SENSOR POWER SUPPLY INPUT

- 1. Turn ignition switch ON.
- 2. Turn lighting switch to AUTO.
- Check voltage between optical sensor harness connector and ground.

(+) Optical sensor			Valle	
		(–)	Voltage (Approx.)	
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.

(+) Optical sensor			Voltage (Approx.)
		(-)	
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.

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(+) Optical sensor		(-)		Condition	Voltage (Approx.)	
Connector	Terminal				X 11 - 7	
M72	2	Ground	Optical sensor	When illuminating	3.1 V or more *	
IVI / Z	2	Giouna	Optical serisor	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.
- Disconnect optical sensor connector and BCM connector.
- 3. Check continuity between optical sensor harness connector and BCM harness connector.

Optica	l sensor	Bo	CM	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M72	1	M84	17	Yes

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

${f 5.}$ CHECK OPTICAL SENSOR (SHORT) CIRCUIT

Check continuity between optical sensor harness connector and ground.

Optical sensor			Continuity
Connector	Terminal	Ground	Continuity
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

- Turn ignition switch OFF.
- Disconnect optical sensor connector and BCM connector.
- Check continuity between optical sensor harness connector and BCM harness connector.

Optica	Optical sensor		ВСМ	
Connector	Terminal	Connector	Terminal	Continuity
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.

1. CHECK OPTICAL SENSOR SIGNAL CIRCUIT (OPEN)

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

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OPTICAL SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

Optical	sensor	В	CM	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M72	2	M84	14	Yes

Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair or replace harness.

 $8.\mathsf{CHECK}$ OPTICAL SENSOR CIRCUIT (SHORT)

Check continuity between optical sensor harness connector and ground.

Optical sensor			Continuity
Connector	Terminal	Ground	Continuity
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

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1. CHECK HAZARD SWITCH SIGNAL WITH CONSULT

CONSULT

- 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	Cor	Monitor status	
HAZARD SW	Hazard switch	ON	On
TIAZAIND OW	Hazaru switch	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.
- Check voltage between hazard switch harness connector and ground.

	(+) Hazard switch (-) Voltage (Approx.)		Voltage (Approx.)
Connector	Terminal		(PF)
M102	2	Ground	Battery voltage

<u>Is the inspection result normal?</u>

YES >> GO TO 4.

NO >> GO TO 2.

2.check hazard switch signal circuit (open)

- 1. Disconnect BCM connector.
- Check continuity between hazard switch harness connector and BCM harness connector.

Hazaro	Hazard switch		всм	
Connector	Terminal	Connector	Terminal	Continuity
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			Continuity
Connector	Terminal	Ground	Continuity
M102	2		No

HAZARD SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

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			Continuity
Connector	Terminal	Ground	Continuity
M102	3		Yes

Is the inspection result normal?

YES >> Replace hazard switch. Refer to EXL-268, "Removal and Installation".

NO >> Repair or replace harness.

EXTERIOR LIGHTING SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[LED HEADLAMP]

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SYMPTOM DIAGNOSIS

EXTERIOR LIGHTING SYSTEM SYMPTOMS

Symptom Table

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 <u>EXL-228</u> , " <u>Diagnosis Procedure</u> ".	
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/out- put 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".	

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EXTERIOR LIGHTING SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[LED HEADLAMP]

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	_

EXTERIOR LIGHTING SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[LED HEADLAMP]

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Symptom		Possible cause	Inspection item
Turn signal lamp does not blink	Indicator lamp is normal (Applicable side per- forms high flasher acti- vation)	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 Bulb (rear turn signal lamp) Rear turn signal lamp) Rear turn signal lamp	Turn signal lamp circuit Refer to EXL-237, "Component Function Check".
	Indicator lamp is included	Combination switch input/out- put signal circuit Combination switch BCM	Combination switch Refer to BCS-76, "Symptom Table".
	One side	Combination meter	_
Turn signal indicator lamp does not blink	Both sides (Always)	Turn signal indicator BCM Combination meter	Combination meter "Data Monitor""TURN IND" BCM (FLASHER) "Active Test""FLASHER"
(Turn signal lamp is nor- mal)	Both sides (Only when activating hazard warning lamp with ignition switch OFF)	Combination meter power sup- ply/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"

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NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[LED HEADLAMP]

NORMAL OPERATING CONDITION

Description INFOID:000000013402522

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

< SYMPTOM DIAGNOSIS >

[LED HEADLAMP]

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

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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

(P)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	HI or PASS	On
	(2ND)	LO	Off

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-31, "Removal and Installation".

NO >> Replace BCM. Refer to <u>BCS-78</u>, "Removal and Installation".

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BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

[LED HEADLAMP]

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
 Select "HLLO Select "HL LO REQ" in "Data Monitor" mode of "IPDM E/R".
- 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

< SYMPTOM DIAGNOSIS >

[LED HEADLAMP]

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

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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

(P)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
	Lighting switch	OFF	Off

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-31, "Removal and Installation".

NO >> Replace BCM. Refer to <u>BCS-78</u>. "Removal and Installation".

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Revision: December 2015 EXL-251 2016 Sentra NAM

BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

[LED HEADLAMP]

BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

Description INFOID:000000013402529

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

(I) 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	ON	On
	(With lighting switch 1ST)	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".

INFOID:0000000013402531

PERIODIC MAINTENANCE

HEADLAMP AIMING ADJUSTMENT

Aiming Adjustment

PREPARATION BEFORE ADJUSTING

Before performing aiming adjustment, check the following:

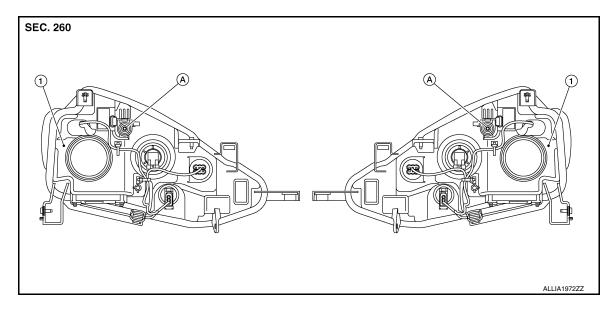
- Ensure all tires are inflated to correct pressure.
- Place vehicle and screen on level surface.
- Ensure there is no load in vehicle other than the driver (or equivalent weight placed in driver's position).
- Coolant and engine oil filled to correct level, and fuel tank full.
- Remove cargo and/or 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.

- · 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 adiustable.
- · 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.



Front combination lamp

Adjusting screw

Aiming Adjustment procedure

Position the screen. 1.

NOTE:

- Stop the vehicle facing the screen.
- Place the screen on a plain road vertically.
- Face the screen with the vehicle. Maintain 10 m (33 ft) between the headlamp bulb center and the screen.
- Start the engine. Turn the headlamp (LO) ON.

EXL-253 Revision: December 2015 2016 Sentra NAM

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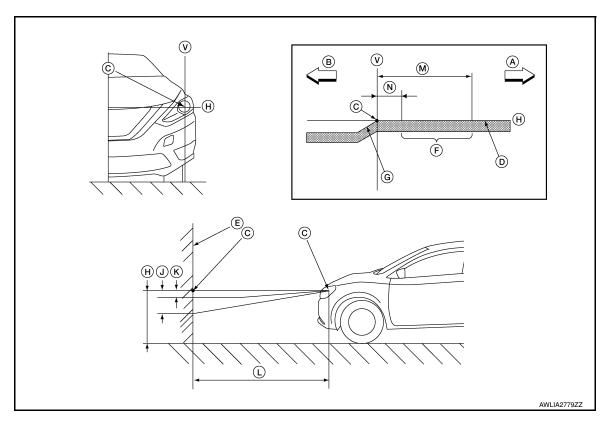
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CAUTION:

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

G. Step

D. Cutoff line

K. -13.3 mm (-0.52 in)

N. 133 mm (5.24 in)

E. Screen

H. Horizontal center line of head lamp

10 m (33 ft)

V. Vertical center line of headlamp

Center of headlamp bulb (H-V point)

Aim evaluation segment

26.6 mm (1.05 in)

399 mm (15.71 in)

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

FRONT FOG LAMP

< PERIODIC MAINTENANCE >

[LED HEADLAMP]

FRONT FOG LAMP

Aiming Adjustment

INFOID:0000000013402532

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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.

- 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 adiustable.
- · 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.
- Start the engine. Turn the front fog lamp ON.

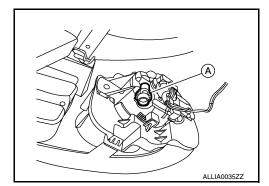
NOTE:

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.

Adjust aiming by turning the adjusting screw (A).



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FRONT FOG LAMP

< PERIODIC MAINTENANCE >

[LED HEADLAMP]

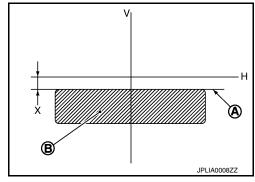
5. Adjust the cutoff line height (A) with the aiming adjustment screw so that the distance (X) between the horizontal center line of front fog lamp (H) and (A) becomes 100 mm (4 in).

A : Cutoff line

B : High illuminance area

H : Horizontal center line of front fog lampV : Vertical center line of front fog lamp

X : Cutoff line height



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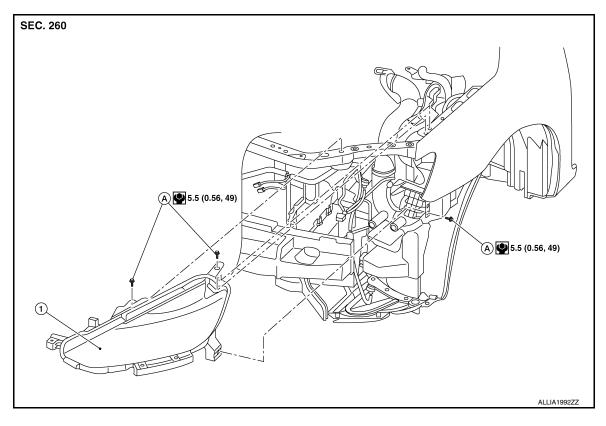
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REMOVAL AND INSTALLATION

FRONT COMBINATION LAMP

Exploded View INFOID:0000000013402533



1. Front combination lamp Bolt

NOTE:

LH shown, RH similar.

Removal and Installation

INFOID:0000000013402534

REMOVAL

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

INSTALLATION

Installation is in the reverse order of removal.

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 dam-
- 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.

EXL-257 Revision: December 2015 2016 Sentra NAM EXL

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FRONT COMBINATION LAMP

< REMOVAL AND INSTALLATION >

[LED HEADLAMP]

· 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 <u>EXL-257</u>, "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.

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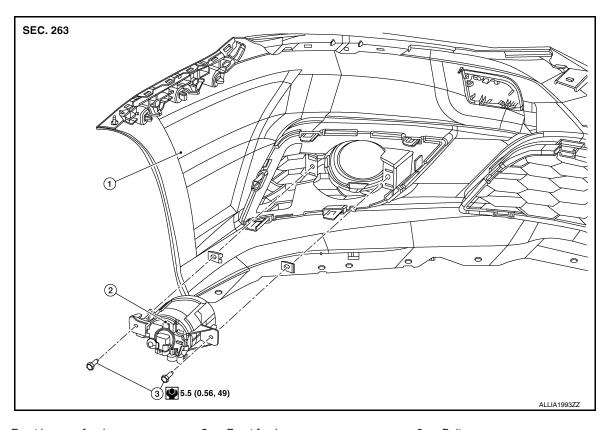
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FRONT FOG LAMP

Exploded View INFOID:0000000013475448



1. Front bumper fascia

Front fog lamp 2

Bolt 3.

Removal and Installation

INFOID:0000000013402536

FOG LAMP

Removal

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.

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

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FRONT FOG LAMP

< REMOVAL AND INSTALLATION >

[LED HEADLAMP]

- 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 >

[LED HEADLAMP]

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".

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HIGH-MOUNTED STOP LAMP

Removal and Installation

INFOID:0000000013402541

HIGH-MOUNTED STOP LAMP - WITH REAR SPOILER

Removal

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

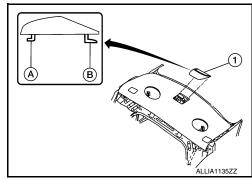
Installation

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

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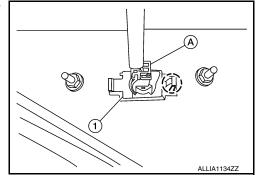
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REMOVAL

- 1. Remove the license lamp finisher. Refer to <a>EXT-44, "Removal and Installation".
- 2. Disconnect the harness connector (A) from the license plate lamp (1).
- 3. Release pawl and remove.

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INSTALLATION

Installation is in the reverse order of removal.

Bulb Replacement

INFOID:0000000013402547

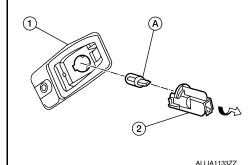
WARNING:

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.

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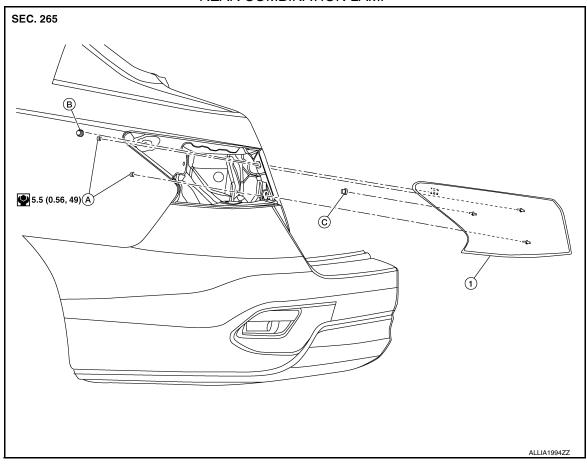
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REAR COMBINATION LAMP

Exploded View

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.

REAR COMBINATION LAMP

< REMOVAL AND INSTALLATION >

[LED HEADLAMP]

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• 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

- 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

- Remove the rear combination lamp. Refer to <u>EXL-134, "Removal and Installation"</u>.
- 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.

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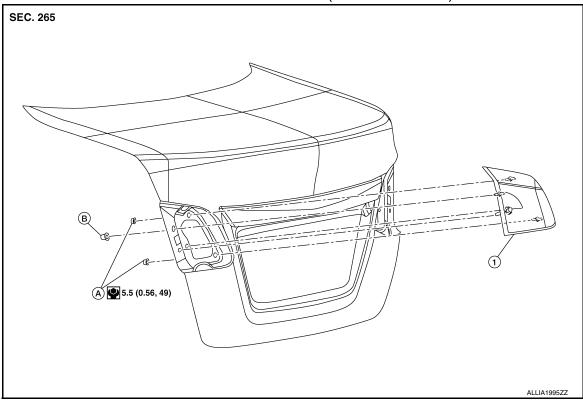
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Revision: December 2015 EXL-265 2016 Sentra NAM

Exploded View

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

- Partially remove trunk lid trim. Refer to <u>INT-45, "Removal and Installation"</u>.
- 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.

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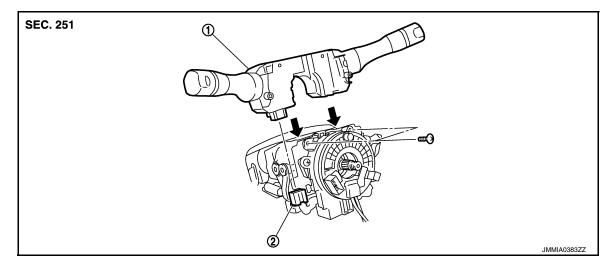
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COMBINATION SWITCH

Exploded View



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)".
- Remove the steering column covers. Refer to <u>IP-16, "Removal and Installation"</u>.
- 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".

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Revision: December 2015 EXL-267 2016 Sentra NAM

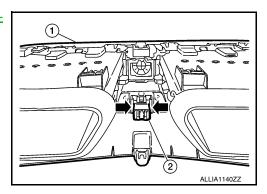
HAZARD SWITCH

Removal and Installation

INFOID:0000000013402556

REMOVAL

- 1. Remove cluster lid C (1). Refer to <u>IP-20, "Removal and Installation Cluster Lid C"</u>.
- 2. Release pawls at (←) and remove hazard switch (2).



INSTALLATION

Installation is in the reverse order of removal.

OPTICAL SENSOR

< REMOVAL AND INSTALLATION >

[LED HEADLAMP]

OPTICAL SENSOR

Removal and Installation

INFOID:0000000013402557

REMOVAL

- В 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.

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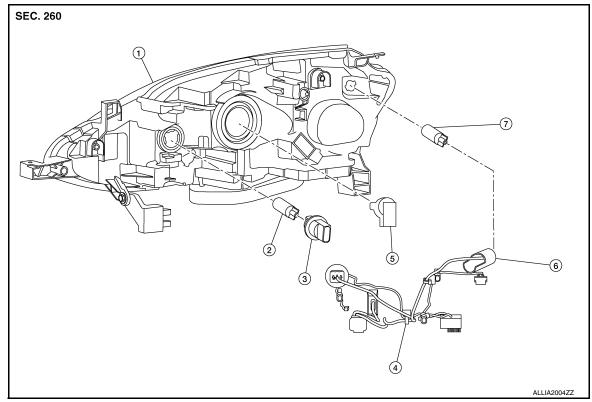
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UNIT DISASSEMBLY AND ASSEMBLY

FRONT COMBINATION LAMP

Exploded View

INFOID:0000000013402558



- 1. Front combination lamp (RH)
- 4. Harness connector
- 7. Side marker lamp bulb socket
- 2. Turn signal lamp bulb
- 5. High beam lamp bulb
- 3. Turn signal lamp bulb socket
- 6. Side marker lamp bulb

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 <u>EXL-257</u>, "Removal and Installation".

DISASSEMBLY

- 1. Remove front combination lamp. Refer to EXL-257, "Removal and Installation".
- Rotate headlamp (high beam) bulb counterclockwise and remove.
- 3. Disconnect the harness connector from the headlamp (high beam) bulb.
- 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.

FRONT COMBINATION LAMP

< UNIT DISASSEMBLY AND ASSEMBLY >

[LED HEADLAMP]

7. Remove side marker lamp bulb from bulb socket.

ASSEMBLY

Assembly is in the reverse order of disassembly.

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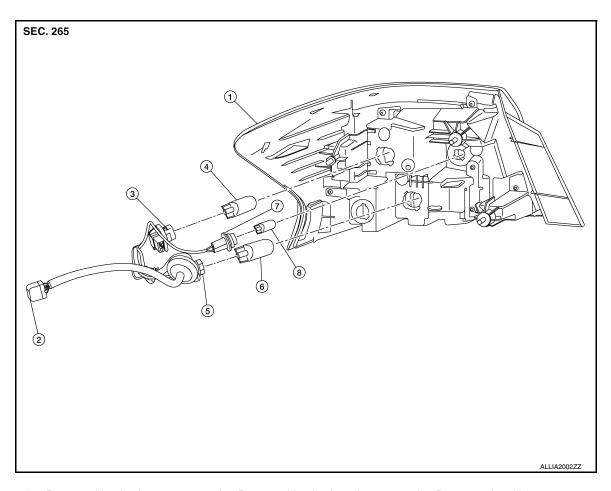
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REAR COMBINATION LAMP

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.
- 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.

REAR COMBINATION LAMP

< UNIT DISASSEMBLY AND AS	SSEMBLY >

[LED HEADLAMP]

ASSEMBLY

Assembly is in the reverse order of disassembly.

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[LED HEADLAMP]

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.