EXTERIOR LIGHTING SYSTEM

CONTENTS

LED HEADLAMP

PRECAUTION6
PRECAUTIONS 6 Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TEN-SIONER" SIONER" 6 Precaution for Work 6
PREPARATION7
PREPARATION
SYSTEM DESCRIPTION8
COMPONENT PARTS8Component Parts Location8Optical Sensor9Hazard Switch9Daytime Running Light Relay9LED Headlamp Control Module10
SYSTEM11
HEADLAMP SYSTEM11HEADLAMP SYSTEM : System Description11HEADLAMP SYSTEM : Fail-safe12
AUTO LIGHT SYSTEM
DAYTIME RUNNING LIGHT SYSTEM
TURN SIGNAL AND HAZARD WARNING LAMPSYSTEM14TURN SIGNAL AND HAZARD WARNING LAMPSYSTEM : System Description14

PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMP SYSTEM	F
BACK-UP LAMP SYSTEM16 BACK-UP LAMP SYSTEM : System Description16	Н
FRONT FOG LAMP SYSTEM	I
FRONT FOG LAMP SYSTEM : Fail-Safe17	J
EXTERIOR LAMP BATTERY SAVER SYSTEM17 EXTERIOR LAMP BATTERY SAVER SYSTEM : System Description17	K
DIAGNOSIS SYSTEM (BCM)19	
COMMON ITEM	EX
HEADLAMP	Μ
FLASHER	N
INT LAMP	O
DOOR LOCK	ſ
DIAGNOSIS SYSTEM (IPDM E/R)25 Diagnosis Description25 CONSULT Function (IPDM E/R)26	

D

Е

ECU DIAGNOSIS INFORMATION	29
BCM, IPDM E/R	
WIRING DIAGRAM	30
HEADLAMP	
DAYTIME RUNNING LIGHT SYSTEM	
AUTO LIGHT SYSTEM	
FRONT FOG LAMP SYSTEM	
TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM Wiring Diagram	
PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM	
STOP LAMP	
BACK-UP LAMP	
BASIC INSPECTION	85
DIAGNOSIS AND REPAIR WORK FLOW	
LED HEADLAMP OPERATION INSPECTION 8 Work Procedure	
DTC/CIRCUIT DIAGNOSIS	8 9
HEADLAMP (HI) CIRCUIT	89
HEADLAMP (LO) CIRCUIT	91
DAYTIME RUNNING LIGHT RELAY CIRCUIT	
Component Function Check Diagnosis Procedure Component Inspection	93 93
LED HEADLAMP	

PARKING LAMP CIRCUIT	
Component Function Check	
Diagnosis Procedure	

FRONT SIDE MARKER LAMP CIRCUIT Component Function Check Diagnosis Procedure	. 99
TAIL LAMP CIRCUIT Component Function Check Diagnosis Procedure	101
LICENSE PLATE LAMP CIRCUIT Component Function Check Diagnosis Procedure	103
FRONT FOG LAMP CIRCUIT Component Function Check Diagnosis Procedure	105
TURN SIGNAL LAMP CIRCUIT Component Function Check Diagnosis Procedure	107
OPTICAL SENSOR Component Function Check Diagnosis Procedure	110
HAZARD SWITCH Component Function Check Diagnosis Procedure	113
SYMPTOM DIAGNOSIS	115
EXTERIOR LIGHTING SYSTEM SYMPTOMS. Symptom Table	
NORMAL OPERATING CONDITION Description	
BOTH SIDE HEADLAMPS (HI) ARE NOT TURNED ON Description Diagnosis Procedure	119
BOTH SIDE HEADLAMPS (LO) ARE NOT	
TURNED ON Description Diagnosis Procedure	120
PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMPS ARE NOT TURNED ON Description Diagnosis Procedure	121
BOTH SIDE FRONT FOG LAMPS ARE NOT	
TURNED ON Description Diagnosis Procedure	122
PERIODIC MAINTENANCE	123
HEADLAMP AIMING ADJUSTMENT Inspection Aiming Adjustment Procedure	123

Revision: October 2014

FRONT FOG LAMP AIMING ADJUSTMENT . Aiming Adjustment	
REMOVAL AND INSTALLATION	. 128
FRONT COMBINATION LAMP Exploded View Removal and Installation Bulb Replacement	. 128 . 128
FRONT FOG LAMP Exploded View Removal and Installation Bulb Replacement	. 130 . 130
DOOR MIRROR TURN SIGNAL LAMP Removal and Installation	
OPTICAL SENSOR Exploded View Removal and Installation	. 133
LIGHTING & TURN SIGNAL SWITCH Exploded View Removal and Installation	. 134
HAZARD SWITCH Exploded View Removal and Installation	. 135
REAR COMBINATION LAMP Exploded View Removal and Installation Bulb Replacement	. 136 . 136
HIGH-MOUNTED STOP LAMP Exploded View Removal and Installation Bulb Replacement	. 138 . 138
LICENSE PLATE LAMP Exploded View Removal and Installation Bulb Replacement	. 139 . 139
BACK-UP LAMP ASSEMBLY Exploded View Removal and Installation Bulb Replacement	. 141 . 141
REAR REFLEX REFLECTOR Exploded View Removal and Installation	. 143
UNIT DISASSEMBLY AND ASSEMBLY	. 144
FRONT COMBINATION LAMP Exploded View Disassembly and Assembly	. 144
REAR COMBINATION LAMP Exploded View	

NT 126	Disassembly and Assembly145	
126	SERVICE DATA AND SPECIFICATIONS	A
128	(SDS)	
128	SERVICE DATA AND SPECIFICATIONS	В
128	(SDS)	
128	Bulb Specifications146	
128	HALOGEN HEADLAMP	С
130	PRECAUTION147	
130		D
130	PRECAUTIONS	
130	Precaution for Supplemental Restraint System	
132	(SRS) "AIR BAG" and "SEAT BELT PRE-TEN-	Е
132	SIONER"	
133		
133	PREPARATION148	F
133	PREPARATION148	
	Special Service Tool	
		G
134 134	SYSTEM DESCRIPTION 149	
134	COMPONENT PARTS149	
135	Component Parts Location	Н
135	Optical Sensor	
135	Hazard Switch	
136	Daytime Running Light Relay150	
136	SYSTEM	
136	STSTEM	
136	HEADLAMP SYSTEM151	J
400	HEADLAMP SYSTEM : System Description151	
 138 138	HEADLAMP SYSTEM : Fail-safe151	
136	AUTO LIGHT SYSTEM152	K
138	AUTO LIGHT SYSTEM : System Description 152	
139	DAYTIME RUNNING LIGHT SYSTEM	EXL
139	DAYTIME RUNNING LIGHT SYSTEM : System Description	
139 139	Description	в. Л
	TURN SIGNAL AND HAZARD WARNING LAMP	Μ
141	SYSTEM	
141	TURN SIGNAL AND HAZARD WARNING LAMP	NI
141	SYSTEM : System Description154	Ν
141	PARKING, LICENSE PLATE, SIDE MARKER AND	
143	TAIL LAMP SYSTEM154	0
143	PARKING, LICENSE PLATE, SIDE MARKER	0
143	AND TAIL LAMP SYSTEM : System Description154	
Y. 144	PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMP SYSTEM : Fail-Safe	Р
-1 -144		
144	BACK-UP LAMP SYSTEM	
144	BACK-UP LAMP SYSTEM : System Description 156	
144	FRONT FOG LAMP SYSTEM156	
145	FRONT FOG LAMP SYSTEM : System Descrip-	
145	tion	
-	FRONT FOG LAMP SYSTEM : Fail-Safe157	
EXL	3 2015 Murano	

EXTERIOR LAMP BATTERY SAVER SYSTEM157 EXTERIOR LAMP BATTERY SAVER SYSTEM : System Description
DIAGNOSIS SYSTEM (BCM) 158
. ,
COMMON ITEM
HEADLAMP159
HEADLAMP : CONSULT Function (BCM - HEAD- LAMP)
FLASHER161
FLASHER : CONSULT Function (BCM - FLASH- ER)
DIAGNOSIS SYSTEM (IPDM E/R) 162
Diagnosis Description
CONSULT Function (IPDM E/R)
ECU DIAGNOSIS INFORMATION166
BCM, IPDM E/R
WIRING DIAGRAM167
HEADLAMP
Wiring Diagram
DAYTIME RUNNING LIGHT SYSTEM 172 Wiring Diagram
AUTO LIGHT SYSTEM 178
Wiring Diagram178
FRONT FOG LAMP SYSTEM 185 Wiring Diagram 185
TURN SIGNAL AND HAZARD WARNING
LAMP SYSTEM 190
Wiring Diagram190
PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM
STOP LAMP
BACK-UP LAMP 212
Wiring Diagram
BASIC INSPECTION220
DIAGNOSIS AND REPAIR WORK FLOW 220 Work Flow
DTC/CIRCUIT DIAGNOSIS223
HEADLAMP (HI) CIRCUIT 223

Component Function Check	
HEADLAMP (LO) CIRCUIT 22 Component Function Check 22 Diagnosis Procedure 22	5
DAYTIME RUNNING LIGHT RELAY CIRCUIT	_
22 Component Function Check	7 7
PARKING LAMP CIRCUIT 23 Component Function Check 23 Diagnosis Procedure 23	0
FRONT SIDE MARKER LAMP CIRCUIT 23 Component Function Check 23 Diagnosis Procedure 23	2
TAIL LAMP CIRCUIT 23 Component Function Check 23 Diagnosis Procedure 23	4
LICENSE PLATE LAMP CIRCUIT	6
FRONT FOG LAMP CIRCUIT 23 Component Function Check 23 Diagnosis Procedure 23	8
TURN SIGNAL LAMP CIRCUIT 24 Component Function Check 24 Diagnosis Procedure 24	0
OPTICAL SENSOR	3
HAZARD SWITCH24Component Function Check24Diagnosis Procedure24	6
SYMPTOM DIAGNOSIS24	8
EXTERIOR LIGHTING SYSTEM SYMPTOMS.24 Symptom Table	
NORMAL OPERATING CONDITION25 Description	
BOTH SIDE HEADLAMPS (HI) ARE NOT TURNED ON	2
BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON	3

PARKING, LICENSE PLATE, SIDE MARKER	
AND TAIL LAMPS ARE NOT TURNED ON	
Description	
Diagnosis Procedure	
0	. 201
BOTH SIDE FRONT FOG LAMPS ARE NOT	
TURNED ON	. 255
Description	. 255
Diagnosis Procedure	. 255
PERIODIC MAINTENANCE	. 256
HEADLAMP AIMING ADJUSTMENT	. 256
Inspection	
Aiming Adjustment Procedure	
FRONT FOG LAMP AIMING ADJUSTMENT.	
Aiming Adjustment	. 259
REMOVAL AND INSTALLATION	004
REMOVAL AND INSTALLATION	. 261
FRONT COMBINATION LAMP	. 261
Exploded View	. 261
Removal and Installation	
Bulb Replacement	
FRONT FOG LAMP	
Exploded View	. 263
Removal and Installation	
Bulb Replacement	. 263
DOOR MIRROR TURN SIGNAL LAMP	. 265
Removal and Installation	
OPTICAL SENSOR	
Exploded View	
Removal and Installation	. 266
LIGHTING & TURN SIGNAL SWITCH	267
Exploded View	
Removal and Installation	. 207
HAZARD SWITCH	. 268
Exploded View	. 268

Removal and Installation	268	
REAR COMBINATION LAMP Exploded View	269	A
Removal and Installation Bulb Replacement		В
HIGH-MOUNTED STOP LAMP Exploded View Removal and Installation Bulb Replacement	271 271	С
LICENSE PLATE LAMP Exploded View Removal and Installation Bulb Replacement	272 272 272	D
BACK-UP LAMP ASSEMBLY Exploded View Removal and Installation Bulb Replacement	274 274	F
REFLEX REFLECTOR Exploded View Removal and Installation	276	G
UNIT DISASSEMBLY AND ASSEMBLY	. 277	Н
FRONT COMBINATION LAMP Exploded View Disassembly and Assembly	277	I
REAR COMBINATION LAMP Exploded View Disassembly and Assembly	278	J
SERVICE DATA AND SPECIFICATIONS (SDS)		K
SERVICE DATA AND SPECIFICATIONS (SDS) Bulb Specifications		EXI
		M

Ν

Ο

Ρ

< PRECAUTION > 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, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the SR section.
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

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

WARNING:

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

Precaution for Work

INFOID:000000011573897

- 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 >

PREPARATION

PREPARATION

Special Service Tool

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

Tool number (TechMate No.) Tool name		Description	(
 (J-46534) Trim Tool Set		Removing trim components	E
	AWJIA04832Z		F

Н

G

А

В

J

Κ

EXL

M

Ν

0

Р

INFOID:000000011573898

COMPONENT PARTS

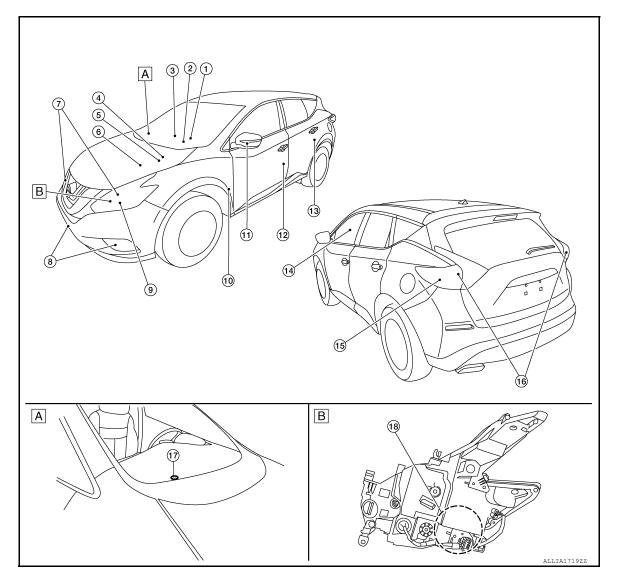
< SYSTEM DESCRIPTION >

[LED HEADLAMP]

SYSTEM DESCRIPTION COMPONENT PARTS

Component Parts Location

INFOID:000000011552694



A. Right hand side of instrument panel B. Front combination lamp (back)

No.	Part	Function
1.	Combination meter	Refer to MWI-9, "METER SYSTEM : System Description".
2.	BCM	 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 <u>BCS-4. "BODY CONTROL SYSTEM : Component Parts Location"</u> for detailed installation location.

COMPONENT PARTS

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

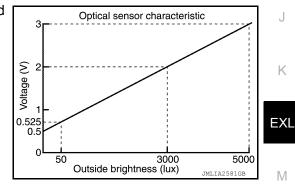
No.	Part	Function
3.	Combination switch (Lighting and turn signal switch)	Refer to <u>MWI-5</u> , " <u>METER SYSTEM</u> : <u>Component Parts Location</u> " for detailed instal- lation location.
4.	IPDM E/R	 Supplies voltage to the load according to the request from BCM (via CAN communication). Refer to <u>PCS-5</u>, "Component Parts Location" for detailed installation location.
5.	Front fog lamp relay	Supplies voltage to front fog lamps when operated by IPDM E/R.
6.	Daytime running lamp relay	Supplies voltage to the daytime running lamps according to request from IPDM E/R. Refer to component below.
7.	Front combination lamps	Refer to EXL-146, "Bulb Specifications".
8.	Front fog lamps	Refer to EXL-146, "Bulb Specifications".
9.	Front turn signal lamp LH	Refer to EXL-146, "Bulb Specifications".
10.	Parking brake switch	Transmits the parking brake switch signal to the combination meter to operate the daytime light system.
11.	Door mirror turn signal LH	Refer to EXL-146, "Bulb Specifications".
12.	Front door switch LH	Transmits the door open signal to the BCM to operate the autolight system.
13.	Rear door switch LH	Refer to <u>DLK-22</u> , "Front Door Switch" for front door switch or <u>DLK-22</u> , "Rear Door <u>Switch"</u> for rear door switch.
14.	Hazard switch	Refer to EXL-9, "Hazard Switch" for detailed installation location.
15.	Rear turn signal lamp LH	Refer to EXL-146, "Bulb Specifications".
16.	Rear combination lamps	Refer to EXL-146, "Bulb Specifications".
17.	Optical sensor	Refer to EXL-9, "Optical Sensor".
18.	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.

Optical Sensor

INFOID:000000011552695

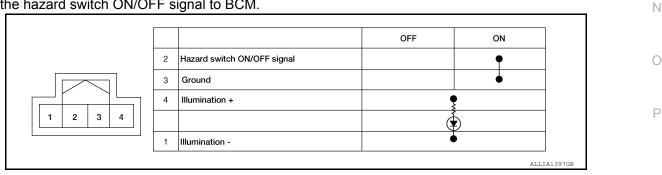
INFOID:000000011552696

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



Hazard Switch

Inputs the hazard switch ON/OFF signal to BCM.



Daytime Running Light Relay

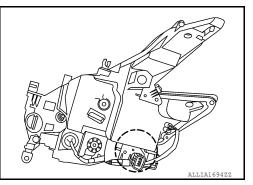
Power is provided to the daytime running light relay according to request from IPDM E/R.



INFOID:000000011552724

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.

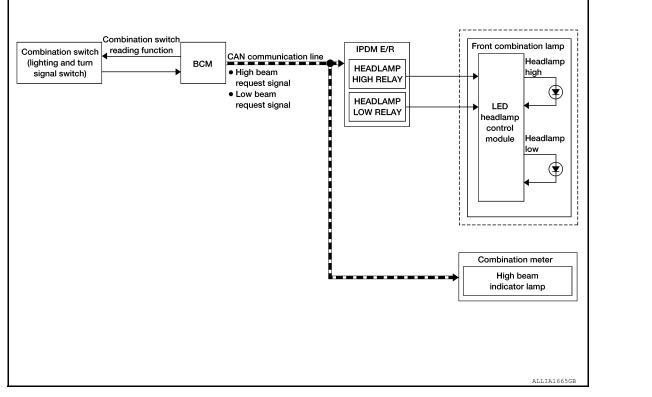


INFOID:000000011569141

SYSTEM HEADLAMP SYSTEM

HEADLAMP SYSTEM : System Description

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 <u>EXL-12, "AUTO LIGHT SYSTEM : System Description"</u>.)
- 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 module.
- LED headlamp control module turns the headlamp (LO) ON according to the power supply from IPDM E/R.

HEADLAMP (HI) OPERATION

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

Headlamp (HI) ON condition

- Lighting switch HI with the lighting switch 2ND
- Lighting switch HI with the lighting switch AUTO and ignition switch ON (Only when the illumination judgment by auto light system is ON and the illumination judgment by high beam assist system is ON. For details, refer to EXL-12, "AUTO LIGHT SYSTEM : System Description".)
- Lighting switch PASS

INFOID:000000011564153

В

D

Ε

Н

Κ

EXL

Μ

Ν

< SYSTEM DESCRIPTION >

- 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 and supplies
 power supply to LED headlamp control module.
- LED headlamp control module turns the headlamp (HI) ON according to the power supply from IPDM E/R.

HEADLAMP WARNING OPERATION

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

HEADLAMP SYSTEM : Fail-safe

INFOID:000000011564154

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.

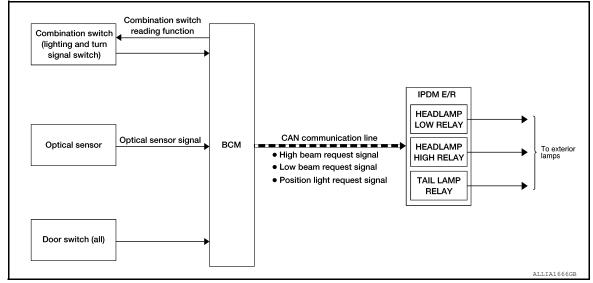
If No CAN Communication Is Available With BCM

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:000000011564140

SYSTEM DIAGRAM



OUTLINE

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

Control by BCM

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

Control by IPDM E/R

- Relay control function
- Auto light system has the auto light function and delay timer function.
- Auto light function automatically turns ON/OFF the exterior lamps* and each illumination automatically, depending on the outside brightness.

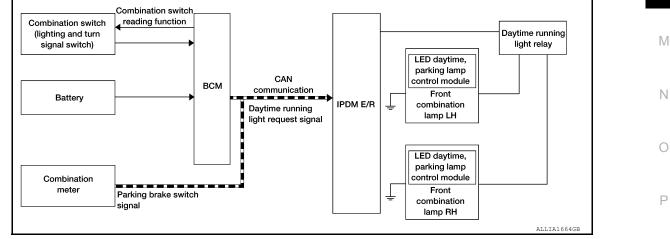
EXL-12

2015 Murano

SVSTEM DESCRIPTION >

ΓΙ ΕΠ ΗΕΔΠΙ ΔΜΡΙ

- 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.	А
*: Headlamps (LO/HI), parking lamps, side marker lamps and tail lamps. Headlamp HI depends on the combi- nation switch (lighting and turn signal switch) condition.	В
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. 	С
 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. 	D
 BCM transmits each request signal to IPDM E/R and combination meter via CAN communication according to ON/OFF condition by the auto light function. 	
NOTE: ON/OFF timing differs based on the sensitivity from the setting. The setting can be set by CONSULT. Refer to <u>BCS-19. "HEADLAMP : CONSULT Function (BCM - HEADLAMP)"</u> .	E
AUTO LIGHT ADJUSTMENT SYSTEM	F
The auto light adjustment system automatically, dims/brightens the display, according to brightness outside the vehicle, when lighting switch 1ST, lighting switch 2ND or lighting switch AUTO is operated. Refer to <u>INL-8</u> , <u>"ILLUMINATION CONTROL SYSTEM : System Description"</u> .	G
DELAY TIMER FUNCTION	G
BCM turns the exterior lamp OFF depending on the vehicle condition with the auto light function when the igni- tion switch is turned OFF.	Н
 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 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, "HEAD-LAMP : CONSULT Function (BCM - HEADLAMP)"</u> . NOTE:	I
When any position other than the light switch AUTO is set, the auto light system function switches to the exterior lamp battery saver function.	J
DAYTIME RUNNING LIGHT SYSTEM	
DAYTIME RUNNING LIGHT SYSTEM : System Description	Κ
SYSTEM DIAGRAM	EXI
Combination quitab	



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.

< SYSTEM DESCRIPTION >

DAYTIME RUNNING LIGHT OPERATION

- BCM detects the combination switch (lighting and turn signal switch) condition by the combination switch (lighting and turn signal switch) reading function.
- · BCM detects the vehicle condition according to ignition switch
- BCM detects the parking brake condition by the parking brake switch signal received from combination meter using CAN communication.
- BCM transmits the daytime running light request signal to IPDM E/R using CAN communication according to the daytime running light ON condition.

Daytime running light ON condition:

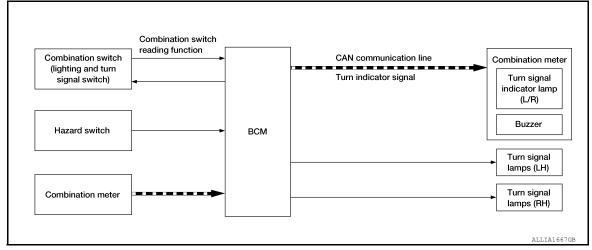
- Vehicle condition READY
- Lighting switch OFF or 1ST
- Lighting switch AUTO, and the auto light function OFF judgment
- Parking brake switch OFF
- IPDM E/R controls the daytime running light relay (ground-side) to turn ON according to the daytime running light request signal.
- Power is supplied from the daytime running light relay to front combination lamp RH and LH, and then daytime running lamps are illuminated.

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM : System Description

INFOID:0000000011564096

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 circuit 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

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

А

В

Ε

Κ

EXL

M

Ν

Ο

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

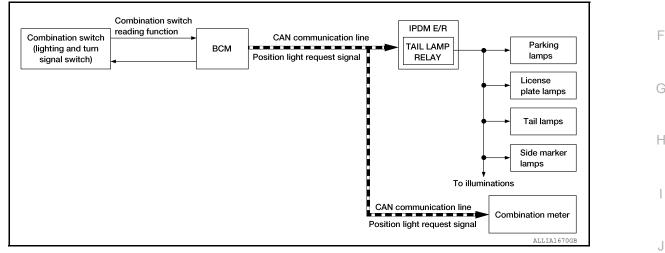
HIGH FLASHER OPERATION

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

The blinking speed is normal while operating the hazard warning lamp. PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMP SYSTEM

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

SYSTEM DIAGRAM



OUTLINE

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

PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMPS OPERATION

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

Parking, license plate, side marker and tail lamps ON condition:

- Lighting switch 1ST
- Lighting switch 2ND
- Lighting switch AUTO, and the auto light function ON judgment
- Lighting switch AUTO, with the front fog lamp switch ON and the ignition switch ON
- IPDM E/R turns the integrated tail lamp relay ON and turns the parking, license plate, side marker and tail lamps ON according to the position light request signal.
- Combination meter turns the tail lamp indicator lamp ON according to the position light request signal.

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

INFOID:000000011564098

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

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

INFOID:000000011564264

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

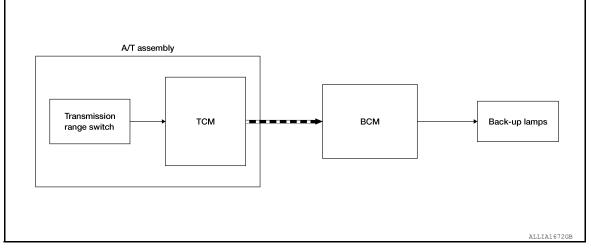
Turns OFF the tail lamp relay when the ignition switch is turned OFF

- Illumination
- Tail lamps
- Side marker lamps

BACK-UP LAMP SYSTEM

BACK-UP LAMP SYSTEM : System Description

SYSTEM DIAGRAM



OUTLINE

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

BACK-UP LAMP OPERATION

- TCM detects the shift selector lever position status from transmission range switch.
- TCM sends request signal via CAN communication and turns the back-up lamps on when back-up lamp con-٠ ditions are satisfied.

Back-up lamp ON condition:

- Ignition switch ON

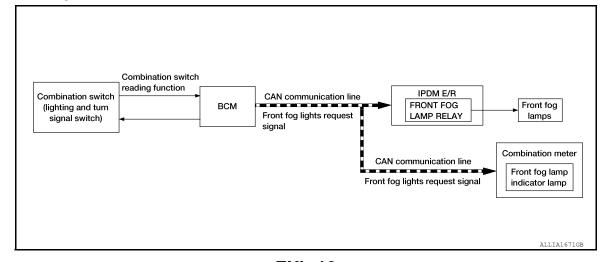
- Shift selector lever position R

FRONT FOG LAMP SYSTEM

FRONT FOG LAMP SYSTEM : System Description

INFOID:000000011564099

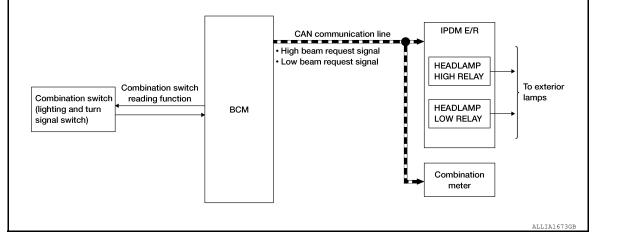
SYSTEM DIAGRAM





[LED HEADLAMP]

< SYSTEM DESCRIPTION > OUTLINE Front fog lamp is controlled by combination switch (lighting and turn signal switch) reading function, front fog А 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 condition is satisfied (except for the high beam ON): Lighting switch 2ND D 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. Ε Combination meter turns the front fog lamp indicator lamp ON according to the front fog lights request signal. FRONT FOG LAMP SYSTEM : Fail-Safe INFOID:000000011564100 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 Н Control part Fail-safe operation Front fog lamp Front fog lamp relay OFF EXTERIOR LAMP BATTERY SAVER SYSTEM EXTERIOR LAMP BATTERY SAVER SYSTEM : System Description INFOID:000000011564262 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, for preventing battery discharge.
- *: Headlamp (HI/LO).

Revision: October 2014

Κ

EXL

M

Ν

Ρ

< SYSTEM DESCRIPTION >

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 \rightarrow ACC/ON
- Lighting switch is changed

< SYSTEM DESCRIPTION > **DIAGNOSIS SYSTEM (BCM) COMMON ITEM**

COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

INFOID:000000011565064

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							– н
System	Sub System	ECU Identification	Self Diagnostic Result	Data Monitor	Active Test	Work support	Configuration	CAN Diag Support Mntr	I J
Door lock	DOOR LOCK		×	×	×	×			-
Rear window defogger	REAR DEFOGGER			×	×	×			K
Warning chime	BUZZER			×	×				-
Interior room lamp timer	INT LAMP			×	×	×			EXL
Exterior lamp	HEADLAMP			×	×	×			
Wiper and washer	WIPER			×	×	×			-
Turn signal and hazard warning lamps	FLASHER			×	×	×			M
Air conditioner	AIR CONDITIONER			×					-
Intelligent Key system	INTELLIGENT KEY		×	×	×	×			
Combination switch	COMB SW			×					N
BCM	BCM	×	×			×	×	×	-
Immobilizer	IMMU		×	×	×				0
Interior room lamp battery saver	BATTERY SAVER			×	×				-
Back door open	TRUNK			×					-
Vehicle security system	THEFT ALM			×	×	×			Р
RAP system	RETAINED PWR			×					-
Signal buffer system	SIGNAL BUFFER			×	×				-
TPMS	AIR PRESSURE MONITOR		×	×	×				-

FREEZE FRAME DATA (FFD)

G

А

В

С

< SYSTEM DESCRIPTION >

The BCM records the following vehicle condition at the time a particular DTC is detected, and displays it on CONSULT.

CONSULT screen item	Indication/Unit	Description				
Vehicle Speed	km/h	Vehicle speed at the moment a particular DTC is detected				
Odo/Trip Meter	km Total mileage (Odometer value) at the moment a particular DTC is detected					
	SLEEP>LOCK	-	While turning BCM status from low power consumption mode to normal mode (Power supply position is "LOCK"*).			
	SLEEP>OFF		While turning BCM status from low power consumption mode to normal mode (Power supply position is "OFF".)			
	LOCK>ACC		While turning power supply position from "LOCK"*to "ACC"			
	ACC>ON		While turning power supply position from "ACC" to "IGN"			
	RUN>ACC		While turning power supply position from "RUN" to "ACC" (Vehicle is stopped and selector lever is in P position.)			
	CRANK>RUN		While turning power supply position from "CRANKING" to "RUN" (From cranking up the engine to run it)			
	RUN>URGENT		While turning power supply position from "RUN" to "ACC" (Emer- gency stop operation)			
	ACC>OFF		While turning power supply position from "ACC" to "OFF"			
	OFF>LOCK	Power position status at the moment a particular DTC is detected*	While turning power supply position from "OFF" to "LOCK"*			
Vehicle Condition	OFF>ACC		While turning power supply position from "OFF" to "ACC"			
	ON>CRANK		While turning power supply position from "IGN" to "CRANKING"			
	OFF>SLEEP		While turning BCM status from normal mode (Power supply position is "OFF".) to low power consumption mode			
	LOCK>SLEEP		While turning BCM status from normal mode (Power supply posi- tion is "LOCK"*.) to low power consumption mode			
	LOCK		Power supply position is "LOCK" (Ignition switch OFF)*			
	OFF		Power supply position is "OFF" (Ignition switch OFF)			
	ACC		Power supply position is "ACC" (Ignition switch ACC)			
	ON		Power supply position is "IGN" (Ignition switch ON with engine stopped)			
	ENGINE RUN		Power supply position is "RUN" (Ignition switch ON with engine running)			
	CRANKING		Power supply position is "CRANKING" (At engine cranking)			
IGN Counter	0 - 39	 The number of times that ignition switch is turned ON after DTC is detected The number is 0 when a malfunction is detected now. The number increases like 1 → 2 → 338 → 39 after returning to the normal condition whenever ignition is switched OFF → ON. The number is fixed to 39 until the self-diagnosis results are erased if it is over 39. 				

NOTE:

*: Power supply position shifts to "LOCK" from "OFF", when ignition switch is in the OFF position, selector lever is in the P position, and any of the following conditions are met:

- Closing door
- · Opening door
- Door is locked using door request switch
- Door is locked using Intelligent Key

The power supply position shifts to "ACC" when the push-button ignition switch (push switch) is pushed at "LOCK".

HEADLAMP

HEADLAMP : CONSULT Function (BCM - HEADLAMP)

DATA MONITOR

2015 Murano

INFOID:000000011565065

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

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 back door switch.		
OPTI SEN (DTCT) [V]	Indicates outside brightness voltage signal from optical sensor.		
OPTI SEN (FILT) [V]	Indicates outside brightness voltage signal from optical sensor filtered by BCM.		

ACTIVE TEST

Test Item	Description				
FR FOG LAMP	This test is able to check front fog lamp operation [On/Off].	J			
DAYTIME RUNNING LIGHT	This test is able to check daytime running lamp operation [On/Off].				
ILL DIM SIGNAL	This test is able to check head lamp illumination dimming operation [On/Off].				

WORK SUPPORT

Setting	Description	EXL
MODE2*	Auto lamp function ON.	
MODE1	Auto lamp function OFF.	
MODE4	This mode is not used.	M
MODE3*	Wiper link function operates in INT, LOW and HI.	
MODE2	Wiper link function operates in LOW and HI.	
MODE1	Wiper link function OFF.	N
MODE4	Less sensitive than normal setting (turns ON later).	
MODE3	More sensitive than MODE2.	0
MODE2	More sensitive than normal setting (turns ON earlier).	
MODE1*	Normal setting.	
	MODE2* MODE1 MODE4 MODE3* MODE2 MODE1 MODE4 MODE3 MODE3 MODE2	MODE2* Auto lamp function ON. MODE1 Auto lamp function OFF. MODE4 This mode is not used. MODE3* Wiper link function operates in INT, LOW and HI. MODE1 Wiper link function operates in LOW and HI. MODE1 Wiper link function OFF. MODE1 Wiper link function OFF. MODE1 Wiper link function OFF. MODE4 Less sensitive than normal setting (turns ON later). MODE3 More sensitive than normal setting (turns ON earlier). MODE2 More sensitive than normal setting (turns ON earlier).

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

Support Item	Setting	Description
	MODE 8	
	MODE 7	
	MODE 6	
ILL DELAY SET	MODE 4	Auto lamp delay timer.
ILL DELAT SET	MODE 5	
	MODE 3	
	MODE 2	
	MODE 1*	

* : Initial setting FLASHER

FLASHER : CONSULT Function (BCM - FLASHER)

INFOID:000000011565066

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
3-TIME FLASHER SETTING	ON*	3-Time flasher setting ON.
	OFF	3-Time flasher setting OFF.

* : Initial setting INT LAMP

INT LAMP : CONSULT Function (BCM - INT LAMP)

INFOID:000000011565067

DATA MONITOR

Monitor Item [Unit]	Description
REQ SW -DR [On/Off]	Indicates condition of door request switch LH.
REQ SW -AS [On/Off]	Indicates condition of door request switch RH.
REQ SW -RR [On/Off]	Indicates condition of rear door request switch RH.
REQ SW -RL [On/Off]	Indicates condition of rear door request switch LH.

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

Monitor Item [Unit]	Description	
PUSH SW [On/Off]	Indicates condition of push-button ignition switch.	P
UNLK SEN -DR [On/Off]	Indicates condition of door unlock sensor.	
DOOR SW-DR [On/Off]	Indicates condition of front door switch LH.	E
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.	C
DOOR SW-BK [On/Off]	Indicates condition of back door switch.	
CDL LOCK SW [On/Off]	Indicates condition of lock signal from door lock and unlock switch.	Г
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.	E
TRNK/KAT MNTR [On/Off]	Indicates condition of luggage room lamp switch.	
RKE-LOCK [On/Off]	Indicates condition of lock signal from Intelligent Key.	
RKE-UNLOCK [On/Off]	Indicates condition of unlock signal from Intelligent Key.	F

ACTIVE TEST

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

WORK SUPPORT

NOTE:

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

Support Item	Setting	Description	J
SCENARIO LIGHTING SETTING	On	NOTE:	_
	Off*	Do not use this function since interior room lamp control is changed.	K
FOG LAMP OVERRIDE	On*	Fog lamp override function ON.	_
	Off	Fog lamp override function OFF.	
* · Initial cotting			EXL

* : Initial setting DOOR LOCK

DOOR LOCK : CONSULT Function (BCM - DOOR LOCK)

SELF DIAGNOSTIC RESULT Refer to <u>BCS-52, "DTC Index"</u>.

DATA MONITOR

Monitor Item [Unit]	Description	0
REQ SW-DR [On/Off]	Indicates condition of door request switch LH.	
REQ SW-AS [On/Off]	Indicates condition of door request switch RH.	P
REQ SW-BD/TR [On/Off]	Indicates condition of back door request switch.	
DOOR SW-DR [On/Off]	Indicates condition of front door switch LH.	
DOOR SW-AS [On/Off]	Indicates condition of front door switch RH.	
DOOR SW-RR [On/Off]	Indicates condition of rear door switch RH.	
DOOR SW-RL [On/Off]	Indicates condition of rear door switch LH.	

Revision: October 2014

EXL-23

INFOID:000000011565068

Μ

Ν

< SYSTEM DESCRIPTION >

Monitor Item [Unit]	Description
DOOR SW-BK [On/Off]	Indicates condition of back door switch.
CDL LOCK SW [On/Off]	Indicates condition of lock signal from door lock and unlock switch.
CDL UNLOCK SW [On/Off]	Indicates condition of unlock signal from door lock and unlock switch.
KEY CYL LK-SW [On/Off]	Indicates condition of lock signal from door key cylinder switch.
KEY CYL UN-SW [On/Off]	Indicates condition of unlock signal from door key cylinder switch.

ACTIVE TEST

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

WORK SUPPORT

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

* : Initial setting

DIAGNOSIS SYSTEM (IPDM E/R)		А
Diagnosis Description	11565069	\frown
AUTO ACTIVE TEST		В
Description In auto active test mode, the IPDM E/R sends a drive signal to the following systems to check their operat • Front wiper (LO, HI) • Front fog lamps • Parking lamps	tion:	С
 Side marker lamps Tail lamps License plate lamps 		D
 Daytime running lamps Headlamps (LO, HI) A/C compressor Cooling fans (LO, HI) 		Е
Operation Procedure CAUTION:		F
Do not start the engine. NOTE: When auto active test is performed with hood opened, sprinkle water on windshield before hand.		G
 NOTE: If auto active test mode cannot be actuated, check door switch system. Refer to <u>DLK-</u> <u>"Component Function Check"</u>. 	<u>179,</u>	Н
 When auto active test mode has to be cancelled halfway through test, turn ignition switch OFF. Close the hood and lift the wiper arms from the windshield. (Prevent windshield damage due to windshield) 	viner	
operation)	vipei	
 Turn ignition switch OFF. Turn the ignition switch ON, and within 20 seconds, press the front door switch LH 10 times. Then turr ignition switch OFF. 	n the	J
4. Turn the ignition switch ON within 10 seconds. After that the horn sounds once, and the auto active starts.	test	
5. After a series of the following operations is repeated 3 times, auto active test is completed.		Κ
Inspection in Auto Active Test Mode When auto active test mode is actuated, the following operation sequence is repeated 3 times.		

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

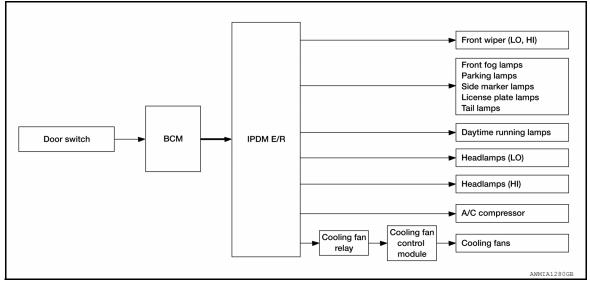
Operation se- quence	Inspection Location	Operation	
1	Front wiper	LO for 3 seconds \rightarrow HI for 3 seconds	M
2	 Front fog lamps Parking lamps Side marker lamps Tail lamps License plate lamps 	10 seconds	Ν
3	Daytime running lamps	10 seconds	0
4	Headlamps	LO ⇔ HI 5 times	
5	A/C compressor	$ON \Leftrightarrow OFF 5 times$	P
6*	Cooling fans	LO for 5 seconds \rightarrow HI for 5 seconds	— P

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

DIAGNOSIS SYSTEM (IPDM E/R)

< SYSTEM DESCRIPTION >

Concept of auto active test



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

Diagnosis chart in auto active test mode

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

CONSULT Function (IPDM E/R)

INFOID:000000011565070

CAUTION:

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

DIAGNOSIS SYSTEM (IPDM E/R)

< SYSTEM DESCRIPTION >

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.	В
Self Diagnostic Result	The IPDM E/R self diagnostic results are displayed.	
Data Monitor	The IPDM E/R input/output data is displayed in real time.	
Active Test	The IPDM E/R activates outputs to test components.	

ECU IDENTIFICATION

The IPDM E/R part number is displayed.

SELF DIAGNOSTIC RESULT

Refer to PCS-21, "DTC Index".

DATA MONITOR

Monitor Item [Unit]	Main Signals	Description
MOTOR FAN REQ [%]	×	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 commu- nication line.
TAIL&CLR REQ [On/Off]	×	Indicates position light request signal received from BCM on CAN communica- tion 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 communica- tion line.
FR WIP REQ [Stop/1LOW/Low/Hi]	×	Indicates front wiper request signal received from BCM on CAN communication line.
WIP AUTO STOP [STOP P/ACT P]	×	Indicates condition of front wiper auto stop signal.
WIP PROT [Off/BLOCK]	×	Indicates condition of front wiper fail-safe operation.
IGN RLY1 -REQ [On/Off]		Indicates ignition switch ON signal received from BCM on CAN communication line.
IGN RLY [On/Off]	×	Indicates condition of ignition relay.
PUSH SW [On/Off]		Indicates condition of push-button ignition switch.
INTER/NP SW [On/Off]		Indicates condition of CVT shift position.
ST RLY CONT [On/Off]		Indicates starter relay status signal received from BCM on CAN communication line.
IHBT RLY -REQ [On/Off]		Indicates starter control relay signal received from BCM on CAN communication line.
ST/INHI RLY [Off/ ST /INHI]		Indicates condition of starter relay and starter control relay.
DETENT SW [On/Off]		Indicates condition of CVT shift selector (park position switch).
DTRL REQ [Off]		Indicates daytime light request signal received from BCM on CAN communica- tion line.
HOOD SW [On/Off]		Indicates condition of hood switch.
THFT HRN REQ [On/Off]		Indicates theft warning horn request signal received from BCM on CAN commu- nication line.
HORN CHIRP [On/Off]		Indicates horn reminder signal received from BCM on CAN communication line.
HOOD SW 2 [On/Off]		Indicates condition of hood switch 2.

Revision: October 2014

А

D

Е

DIAGNOSIS SYSTEM (IPDM E/R)

< SYSTEM DESCRIPTION >

ACTIVE TEST

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

< ECU DIAGNOSIS INFORMATION >

ECU DIAGNOSIS INFORMATION BCM, IPDM E/R

List of ECU Reference

INFOID:000000011564102

А

ECU	Reference	
	BCS-30, "Reference Value"	<u> </u>
DOM	BCS-50, "Fail Safe"	
BCM	BCS-51, "DTC Inspection Priority Chart"	
	BCS-52, "DTC Index"	
	PCS-13, "Reference Value"	
IPDM E/R	PCS-20, "Fail Safe"	
	PCS-21, "DTC Index"	

Н

J

EXL

Μ

Ν

Ο

Ρ

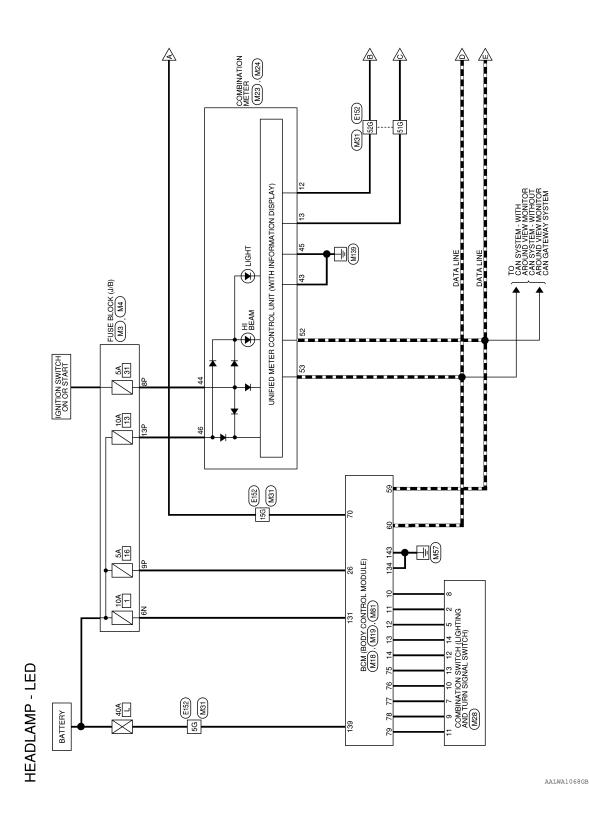
< WIRING DIAGRAM >

WIRING DIAGRAM

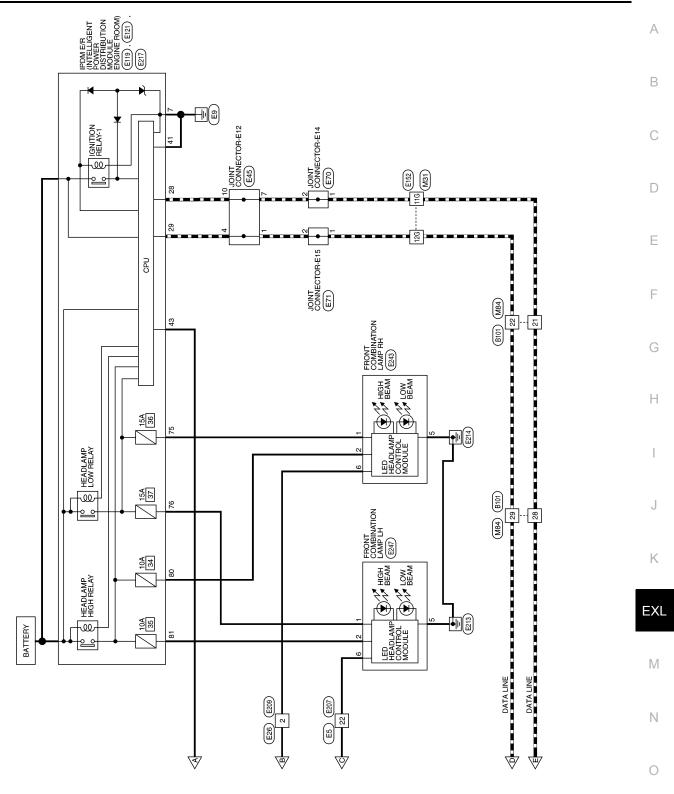
HEADLAMP

Wiring Diagram

INFOID:000000011564103



HEADLAMP



AALWA1069GB

Hard And And And And And And And And And An	Connector No. M18 Connector Name BCM (BODY CONTROL MODULE) Connector Color GREEN MODULE) Connector Color GREEN MODULE) Connector Color GREEN	35 34 33 21 30 28<	0. M23 Intere COMBINATIon Intere COMBINATIon Interest M23 Interest M23 Interest M23 Interest M23 Interest M23 Interest M23 Interest M24 Interes M24	3 L CAN-H
ORS - LED Connector Name FUSE (J/B) Connector Name FUSE Image: Connector Name FUSE Connector Name FUSE Image: Connector Name FUSE Image: Connector Name FUSE <t< td=""><td>Connec Connec Connec Connec</td><td></td><td>Connector Nc Connector Na Connector Co Connector Co H.S. H.S. H.S. H.S. A5 A5</td><td>53</td></t<>	Connec Connec Connec Connec		Connector Nc Connector Na Connector Co Connector Co H.S. H.S. H.S. H.S. A5 A5	53
	Connector No. Connector Name Connector Color	Mire Wire BG W	Terminal No. Color of 76 P Wire 77 R G 79 W V	
IEADLAMP CONnector Name With Connector Name FU Connector Name FU Connector Name FU Image: Signed state Signed state		Sign	E) DY CONTROL E) 50 40 48 47 46 45 44 70 69 66 56 64 44 Signal Name CAN-L CAN-L CAN-L CAN-L	COMBI SW OUT 5
HEADLAMI Connector N Connector S Connector G Connector C Connector C Connector N Connector N Connector S Connector C Connector C Connector C Connector N Conn <td< td=""><td></td><td></td><td></td><td>BG</td></td<>				BG
AALIA3	HEADLAM Connector N Connector C	Terminal Nc 6N	Connector Connector Connector H.S. Terminal N 59 60 60	

Revision: October 2014

Signal Name	M81 BCM (BODY CONTROL BCM (BODY CONTROL WHITE WITE WITE WITE WITE WITE WITE WITE W	
Terminal No. Color of Wire 11 W 112 P 12 P 13 BG 13 14 G	Connector No. M81 Connector Name BCM (B Connector Name BCM (B Connector Color WHITE 131 W 133 GR	
TURN TURN H) H) H) H H H H H H H H H H H H H H H	Signate Sig	
M28 COMBINATION (LIGHTING ANI SIGNAL SWITC WHITE 7 8 9 1011112	Color of Wire of Golor of All and All	
METER Connector No. Metrer Connector No. Connector No. Connector Color 14 15 16 14 19 20 34 36 37 38	Terminal No.	
M24 COMBINATION WHITE	Terminal No. Color of Wire Signal Name 12 Y LED HEAD LAMP F 13 GR M31 Connector No. M31 GR Connector Name WIRE TO WIRE GR Connector Color WHITE GR 110 2030 3463546956957769609509000 GR 110 20205505346356369346366960560000 GR 110 20205505346366960577696069606000 GR 110 2020550534636696056776960696060000 GR 110<	
Connector No. Connector Name Connector Color N List List List List 23 4 5 6 7	Terminal No. Collinal No. Colli	

< WIRING DIAGRAM >

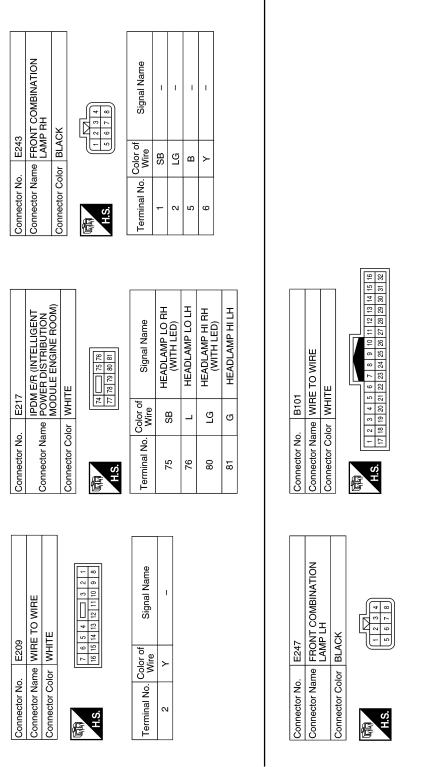
Revision: October 2014

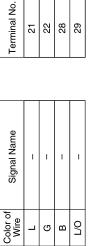
Ρ

E E	Signal Name	Connector No. E71 Connector Name JOINT CONNECTOR-E15 Connector Color BLACK	Signal Name
Description E26 Dior WHTE T B 9 10	Color of Wire ∀	0. E71 ame JOINT C olor BLACK	. Color of Wire L
Connector No. E26 Connector Name WIRE TO WIRE Connector Color WHITE	Terminal No. 2	Connector No. Connector Name Connector Color	Terminal No. 1 2
ES WHTE TO WIRE 2 3 4 5 6 7 8 9 00 11 12 14 15 16 17 18 19 20 21 22 23 24	Signal Name	Connector No. E70 Connector Name JOINT CONNECTOR-E14 Connector Color BLACK	Signal Name
Connector No. E5 Connector Name WIRE TO WIRE Connector Color WHITE	o. Color of Wire GR	No. E70 Name JOINT C Color BLACK	o. Mire P P
Connector No. Connector Name Connector Color H.S.	Terminal No. 22	Connector No. Connector Name Connector Color H.S.	Terminal No. 1 2
0 19 3 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
E E E	Signal Name	E45 JOINT CONNECTOR-E12 BLUE BLUE	Signal Name
No. M84 Name WIRE TO Color WHITE	Definition of Color of Wire P	10. E45 ame JOINT color BLUE	Color of Wire of
Connector No. M84 Connector Name WIRE TO WIRE Connector Color WHITE	Terminal No. 21 28 29 29	Connector No. Connector Name Connector Color H.S.	Terminal No. 1 4 7 10

AALIA3055GB

i DIAGRAM >		J
	0. E207 ame WIRE TO WIRE blor WIHTE olor WIHTE 212 22 22 22 22 22 Vire - LO -	A B C D
	Connector No. E207 Connector Name WIRE TO WIRE Connector Color WHITE E212120191817 22 2120191817 22 2120191817 22 2120191817 22 2120191817 22 2120191817	E
E121 PDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) WHITE 7 7 12 13 14 15 16 17 18 16 17 18 16 17 18 18 11 18 11 18 11 18 11 18 11 18 11 18 10 10 10 10 10 10 10 10 10 10	Signal Name	G
Connector No. E121 Connector Name POWEF Connector Color WHITE List Terminal No. Color of 7 B B	Terminal No. Color of Wire 5G P 11G P 12G L 15G L 51G GR 51G GR 51G Y	l
		K EXL
E119 IPDM ER (INTEL POWER DISTRIE MODULE ENGIN WHITE WHITE Intervention Signal Nice Signal L CAN L IGN Signal	Solution E152 Connector No. E152 Connector Name WIRE TO WIRE Connector Name WIRE TO WIRE Mine Mine To wire Solution Solution Solution Solution Solution Solution<	Μ
Connector Name Connector Name Connector Color	ANITA3026GB	N





N ß 9

_

Signal Name

Color of Wire

Terminal No.

Т ī

٩

29 28 23 24

I

_

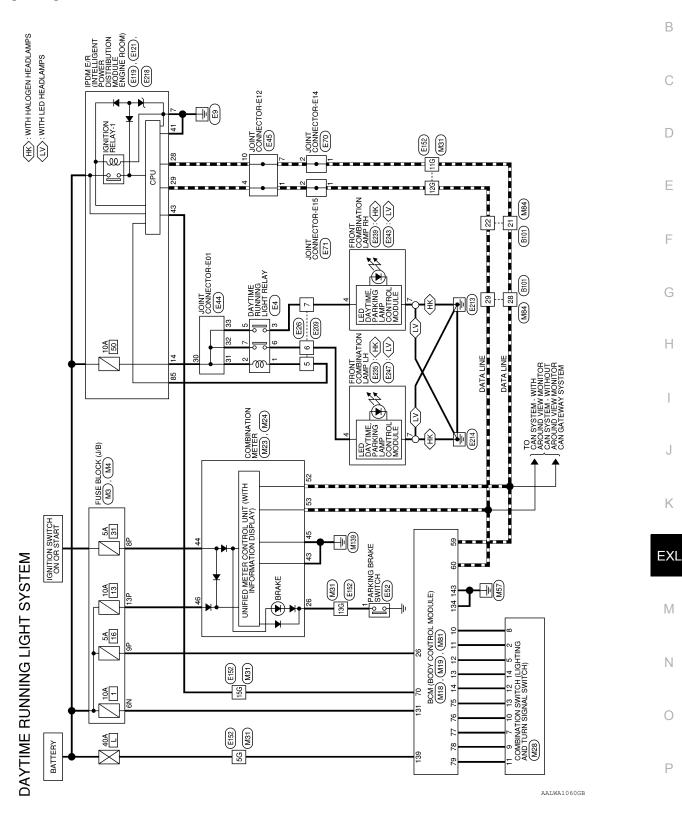
L

٩ _

[LED HEADLAMP]

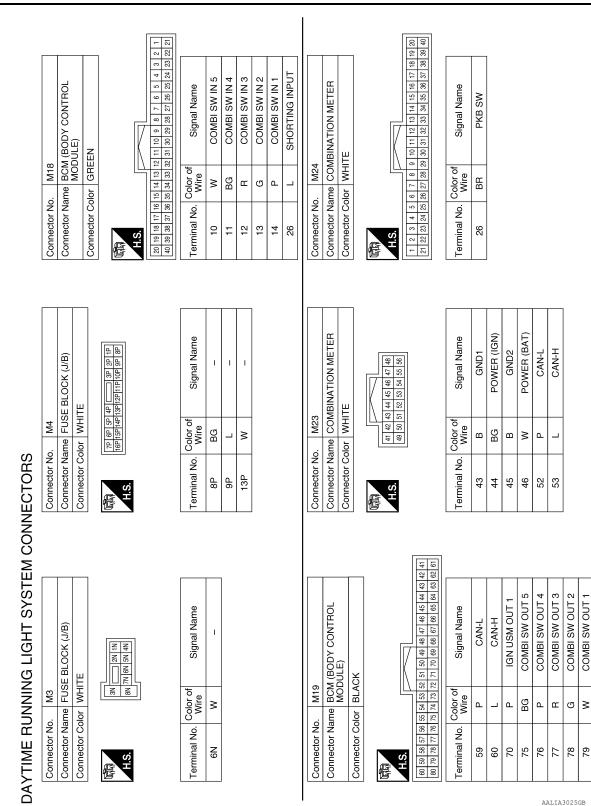
DAYTIME RUNNING LIGHT SYSTEM

Wiring Diagram



INFOID:000000011564104

А



2015 Murano

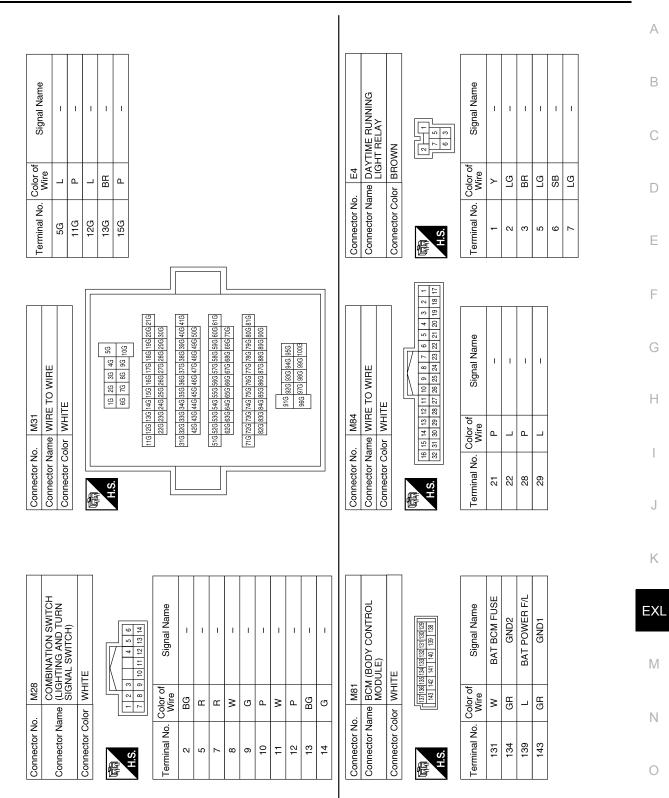
< WIRING DIAGRAM >

[LED HEADLAMP]

DAYTIME RUNNING LIGHT SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]

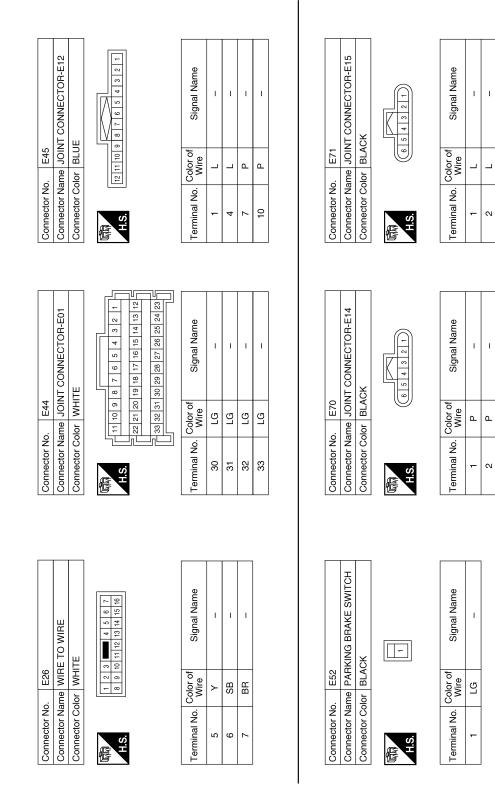


AALIA3026GB

Р

	DAYTIME RUNNING LIGHT SYSTEM	
>		

< WIRING DIAGRAM >

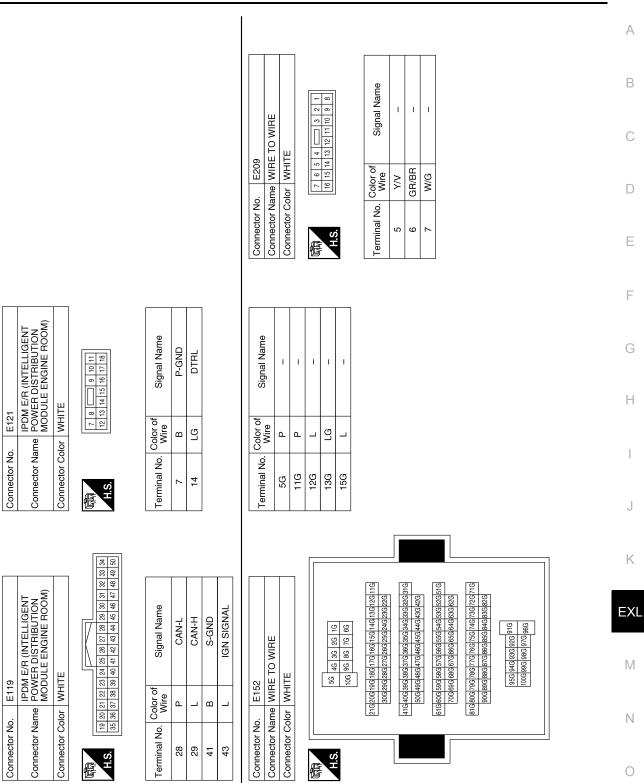


AALIA3027GB

DAYTIME RUNNING LIGHT SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]



AALIA3028GB

J

DAYTIME RUNNING LIGHT SYSTEM

< WIRING DIAGRAM >

E235 Connector No. FRONT COMBINATION Connector Name HALOGEN HEADLAMPS) Each BLACK Connector Name 0rof Signal Name * - *	Signal Name Connector No. OGEN HEADLAMPS) Connector Name OGEN HEADLAMPS) Connector Name OGEN HEADLAMPS) Connector Name CK - CK - - - <t< th=""><th>E239 FRONT COMBINATION LAMP RH (WITH HALOGEN HEADLAMPS) BLACK</th><th>1 2 3 5 6 7 8</th><th>of Signal Name – – – – – – – – – – – – – – – – – – –</th><th>B101 WIRE TO WIRE WHITE</th><th>of Signal Name</th></t<>	E239 FRONT COMBINATION LAMP RH (WITH HALOGEN HEADLAMPS) BLACK	1 2 3 5 6 7 8	of Signal Name – – – – – – – – – – – – – – – – – – –	B101 WIRE TO WIRE WHITE	of Signal Name
	Connector Name Connector Name Connector Name Connector Color Terminal No. Colo Terminal No. Color Terminal No. Color		。 王 王	°> >	inector No. Inector Name Inector Color 17 18 19	05 05
ecto ecto ecto ecto ecto ecto ecto				Color of Wire GR/BR B		Color of Wire GR/BR B

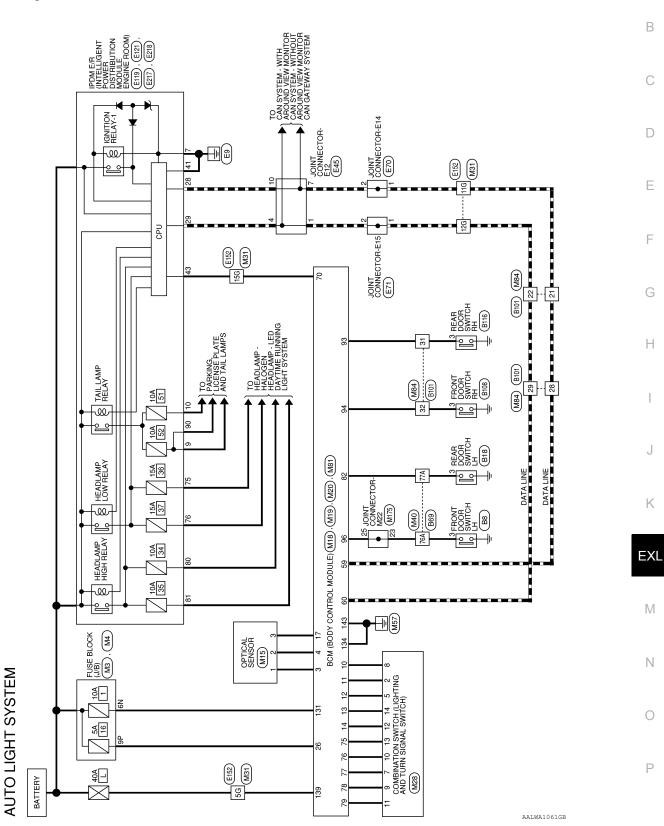
AALIA3029GB

AUTO LIGHT SYSTEM

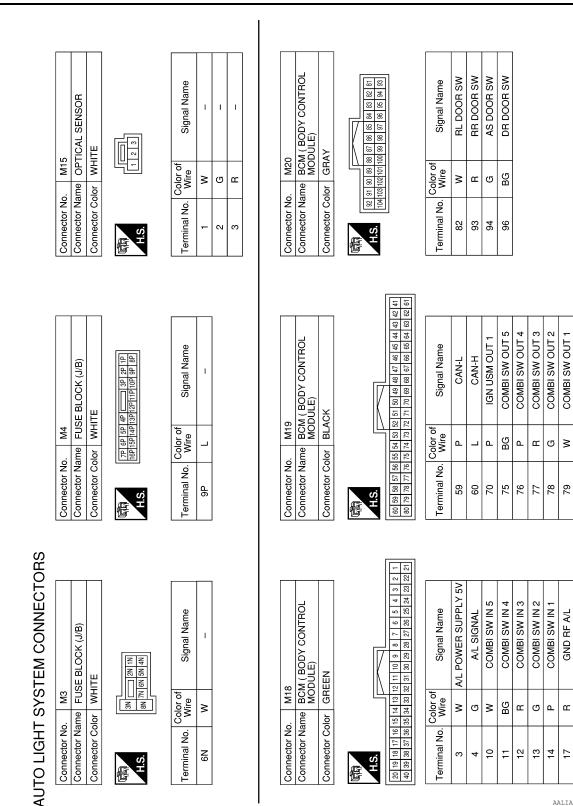
Wiring Diagram

INFOID:000000011564105

А



Revision: October 2014



AALIA3030GB

SHORTING INPUT

_

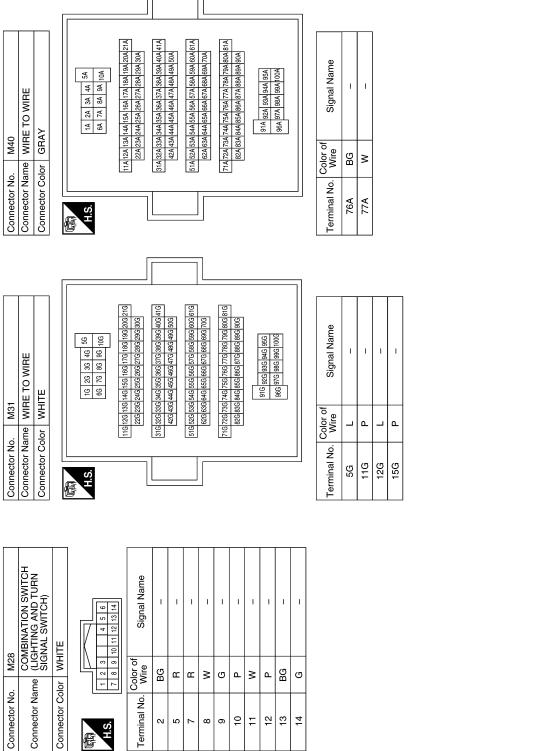
26

AUTO LIGHT SYSTEM

< WIRING DIAGRAM >

AUTO LIGHT SYSTEM

< WIRING DIAGRAM >



BG

ω 6 9 ÷ 12 13 4

 \sim

Terminal No. N ß

H.S. 偃

AALIA3031GB

Ο

Connector No.

А

В

С

D

Е

F

Н

J

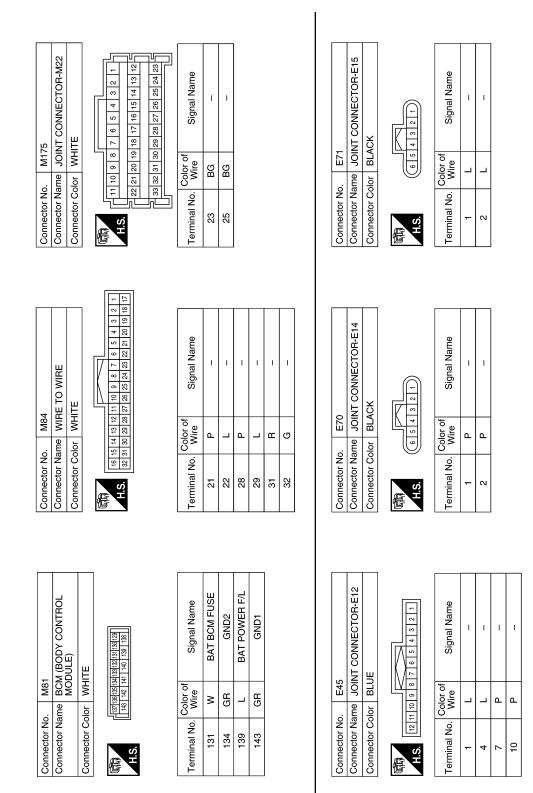
Κ

EXL

Μ

Ν

Ρ



AALIA3032GB

< WIRING DIAGRAM >

E121

Connector No.

E119

Connector No

AUTO LIGHT SYSTEM

[LED HEADLAMP]

А

В

С

D

Е

F

Н

J

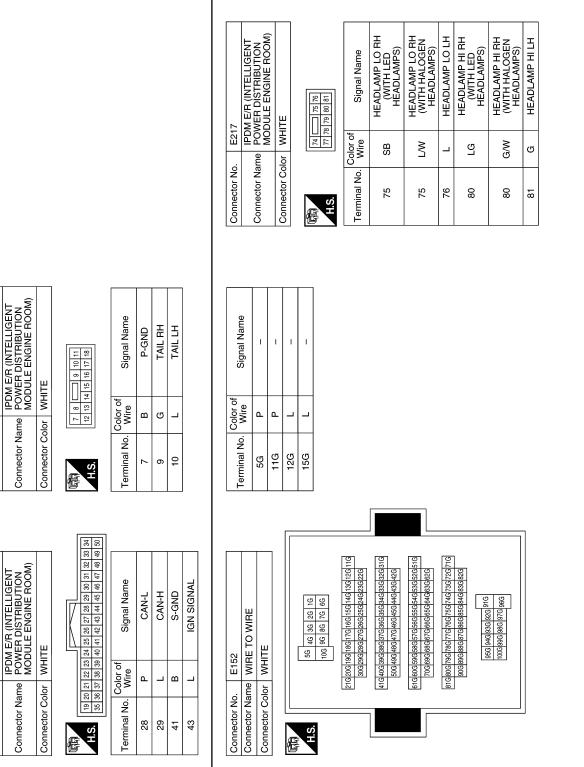
Κ

EXL

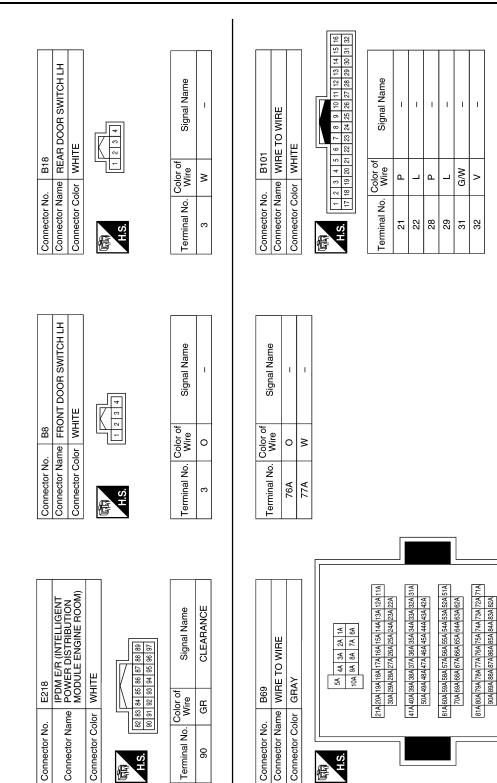
Μ

Ν

0



AALIA3033GB



AUTO LIGHT SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]

AALIA3034GB

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

佢

E

				В
				С
				D
				E
				F
WITCH RH	Signal Name			G
Connector No. B116 Connector Name REAR DOOR SWITCH RH Connector Color WHITE				Н
Connector No. B116 Connector Name REAR C Connector Color WHITE	Vo. Color of Wire G/W			I
Connector No. Connector Nam Connector Colo	Terminal No. 3			J
				K
SWITCH RH	Signal Name			EXL
B108 WHITE				M
	No. Color of Wire <			Ν
Connector No. Connector Nam Connector Cold	Terminal No. 3			0
			AALIA3035GB	

А

AALIA3035GB

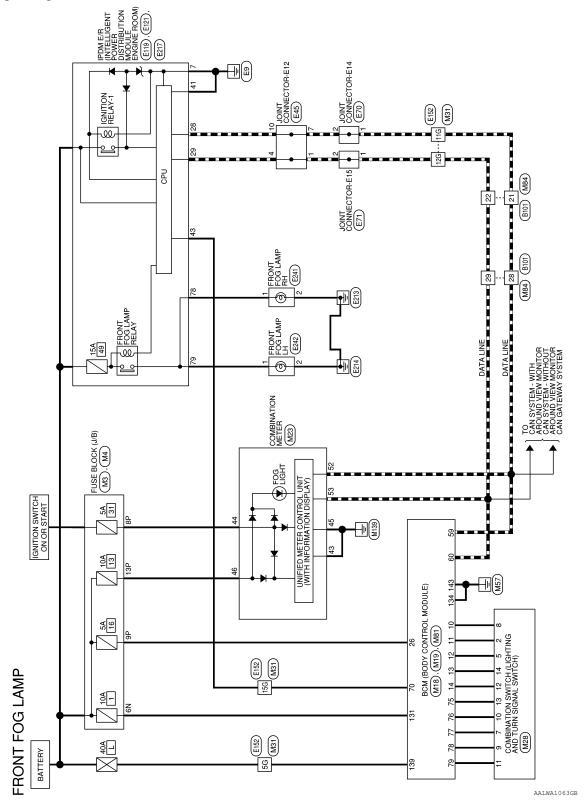
Ρ

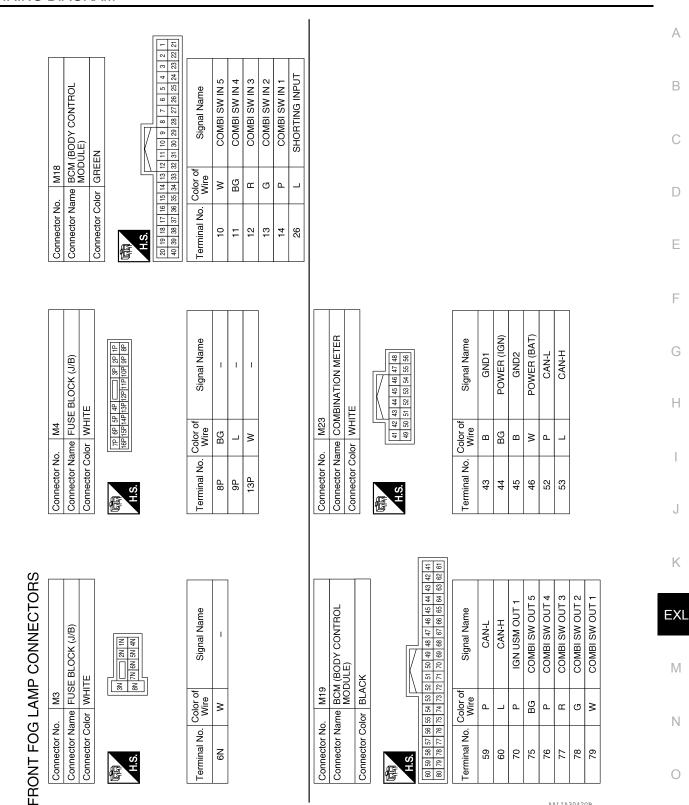
FRONT FOG LAMP SYSTEM

Wiring Diagram



INFOID:000000011564107





AALIA3042GB

Ρ

< WIRING DIAGRAM >

А

В

С

D

Е

F

Н

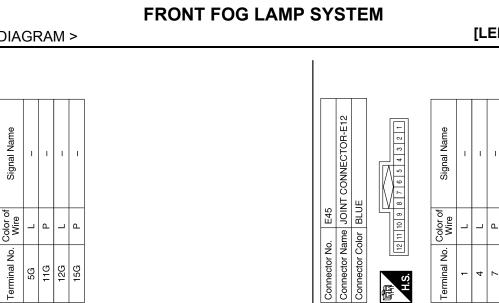
J

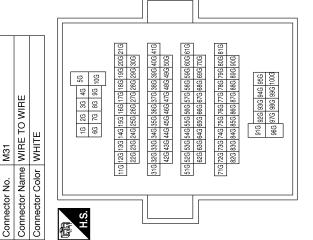
Κ

Μ

Ν

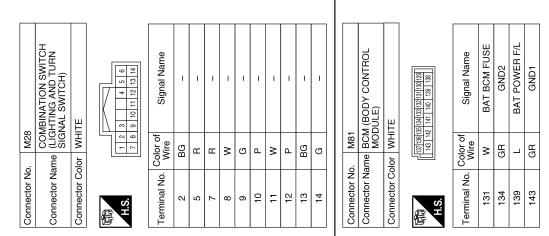
0





				1		
					- I	1
					~	18
					e	19
					4	32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17
					2	21
					9	22
				- 117	7	23
		ш			80	24
		≝			o	25
					10	26
		ΙΥ			÷	27
	+	Ш	E		12	28
	M84	≝	F		13	29
	2	>	>		4	30
		Ē	P		16 15 14 13 12 11 10 9	31
	Nо	Na	ပီ		16	32
	or	٦	2			
	ect	ect	ect			
	Ĩ	Ē	Ē			Й. Г
	Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE		Ţ	

Signal Name	I	I	I	I
Color of Wire	٩	L	٩	L
Terminal No. Color of Wire	21	22	28	29



AALIA3043GB

Revision: October 2014

I

۵

9

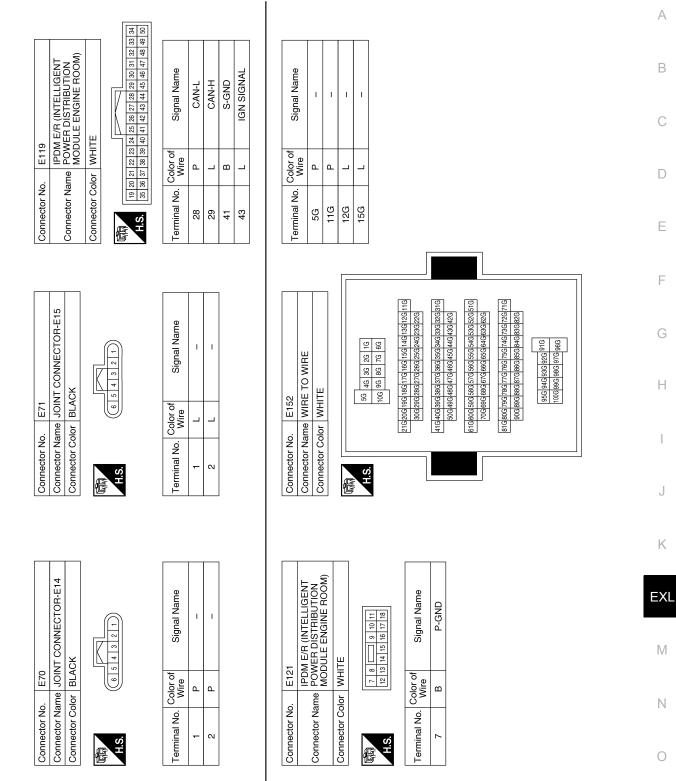
Signal Name

Terminal No.

FRONT FOG LAMP SYSTEM

< WIRING DIAGRAM >

[LED HEADLAMP]



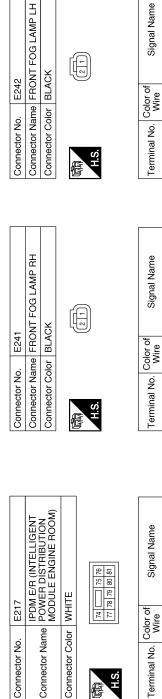
AALIA3044GB

Р

< WIRING DIAGRAM >

FRONT FOG LAMP SYSTEM

[LED HEADLAMP]



F

Signal Name	FR FOG LAMP RH	FR FOG LAMP LH	
Color of Wire	M	Γ	
Terminal No.	78	62	

I. I

_ В

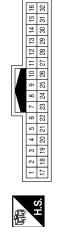
I. I

≥ ш

-N

N -

Connector No.	B101
Connector Name WIRE TO WIRE	WIRE TO WIRE
Connector Color WHITE	WHITE



Signal Name	Ι	-	-	I
Color of Wire	٩	_	٩	_
Terminal No. Color of Wire	21	22	28	29

AALIA3045GB

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM GRAM > [LED HEADLAMP]

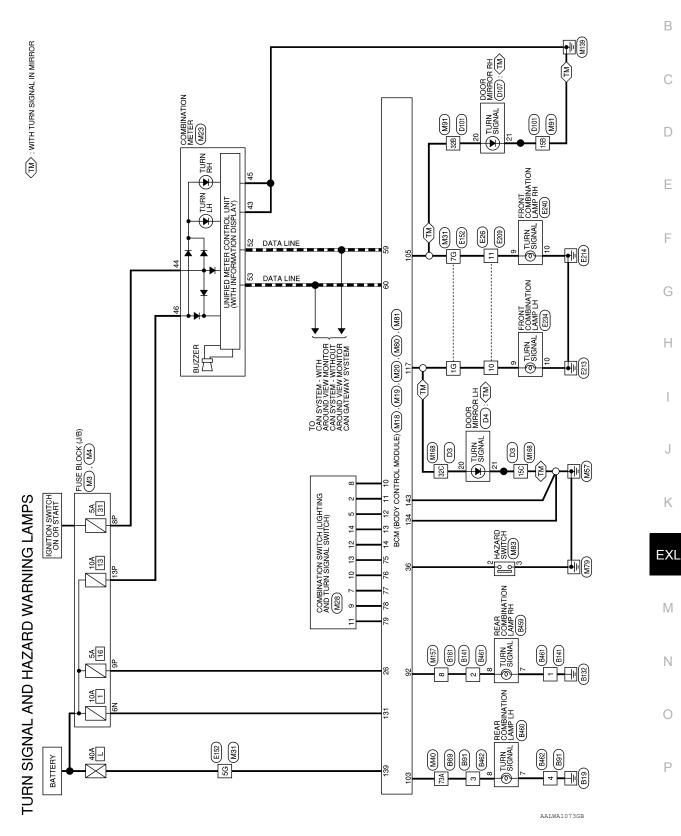
< WIRING DIAGRAM >

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

Wiring Diagram

INFOID:000000011564108

А



TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

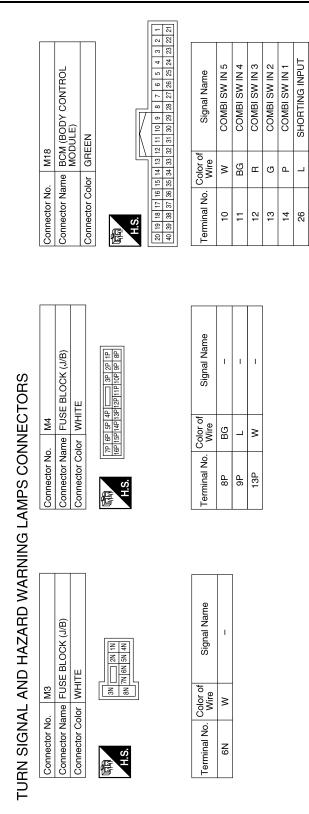
HAZARD SW

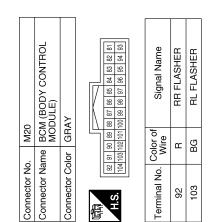
≥

36

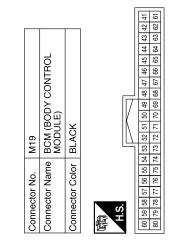
< WIRING DIAGRAM >

[LED HEADLAMP]





Signal Name	CAN-L	CAN-H	COMBI SW OUT 5	COMBI SW OUT 4	COMBI SW OUT 3	COMBI SW OUT 2	COMBI SW OUT 1	
Color of Wire	Ь	_	BG	Ь	щ	G	Μ	
Terminal No.	59	60	75	76	77	78	62	



AALIA3069GB

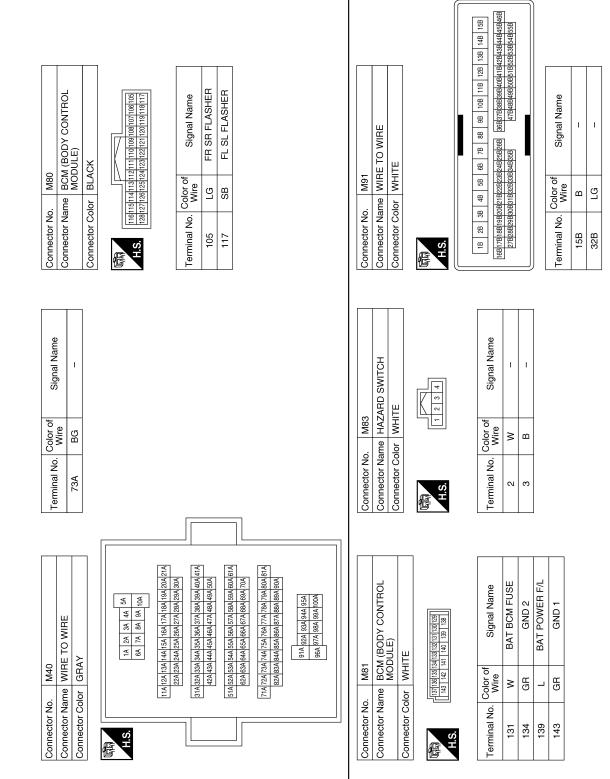
Signal Name	1	I	I	I																						
Color of Wire	N	Р	BG	J																						
Terminal No.	11	12	13	14																						
	<u>I</u>	L	<u> </u>																							
HOL	NA					me							me													
	(LIGHTING AND TURN			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	-	Signal Name	1	ı	I	ı	I	I	Signal Name	I	I	I										
						Color of Wire	BG	œ	٣	×	IJ	٩	Color of Wire	SB		LG										
Connector No.	Connector Name	-		H.S.		Terminal No.	2	5	7	ω	6	10	Terminal No.	16	5G	7G										
ŭ	ŏ	0	3	语 E		Te							Те													
[7					1	I	1	1	I		[]		7]
METER				56 48		Signal Name	GND1	POWER (IGN)	GND2	POWER (BAT)	CAN-L	CAN-H					4G 5G 9G 10G	3 18G 19G 20G 21G 3 28G 29G 30G	3 38G 39G 40G 41G	a 48G 49G 50G	3 58G 59G 60G 61G 5 68G 69G 70G	1 78G 79G 80G 81G 88G 89G 90G		4G 95G 9G 100G]	
M23 COMBINATION METER	WHITE		$\left[\right]$	41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56				POWE	Ū	POWE	Ċ	Ċ	M31 WIDE TO WIDE	WHITE WHITE			1G 2G 3G 4 6G 7G 8G 9	 11G 12G 13G 14G 15G 16G 17G 18G 19G 20G 21G 22G 23G 24G 25G 26G 27G 28G 29G 30G	316 326 336 346 356 366 376 386 396 406 416	42G 43G 44G 45G 46G 47G 48G 49G 50G	51G 52G 53G 54G 55G 56G 57G 58G 59G 60G 61G 82G 83G 84G 85G 85G 67G 68G 80G 70G	71G 72G 73G 74G 75G 76G 77G 78G 79G 80G 81G 82G 83G 84G 85G 86G 87G 88G 89G 90G	010	91G 92G 93G 94G 95G 96G 97G 98G 99G 100G		
No. M23		-		41 42 4		lo. Color of Wire	ш	BG	۵	3	٩.	_	No. M31	Color WF				11G 12G 15 22G 23	31G 32G 33	42G 45	51G 52G 53 62G 63	71G 72G 75 82G 83				
Connector No.	Connector Color		E	H.S.		Terminal No.	43	44	45	46	52	53	Connector No.	Connector Color			H.S.]

Ρ

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< WIRING DIAGRAM >

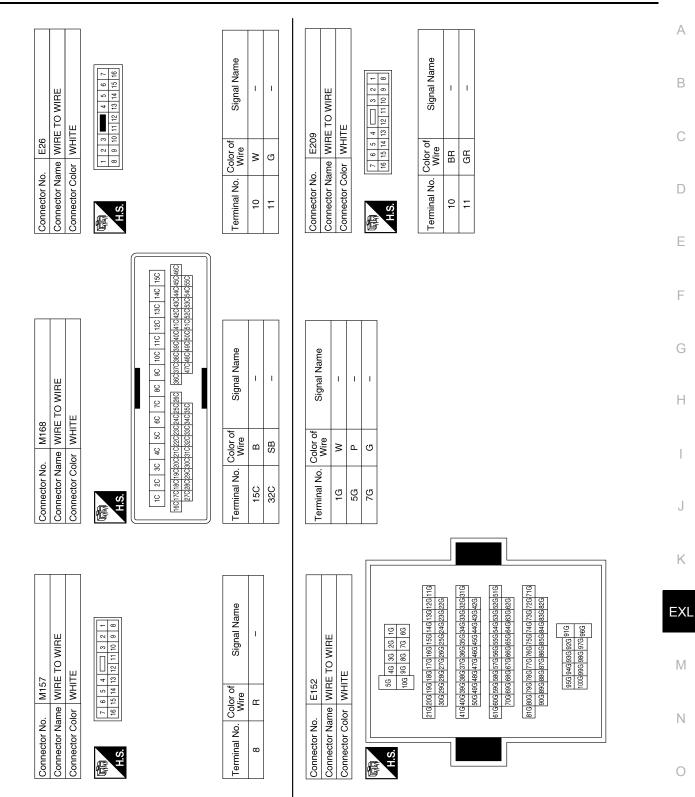
[LED HEADLAMP]



AALIA3071GB

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM GRAM > [LED HEADLAMP]

< WIRING DIAGRAM >

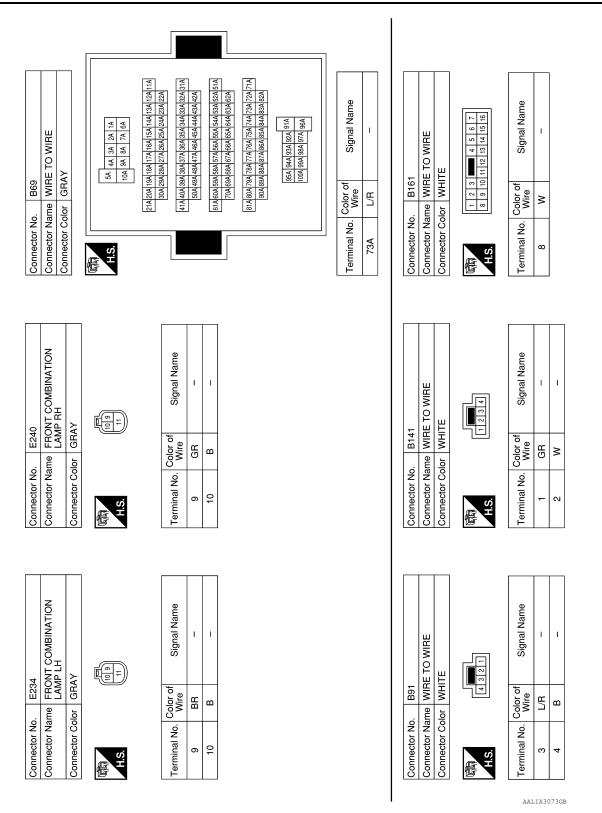


AALIA3072GB

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

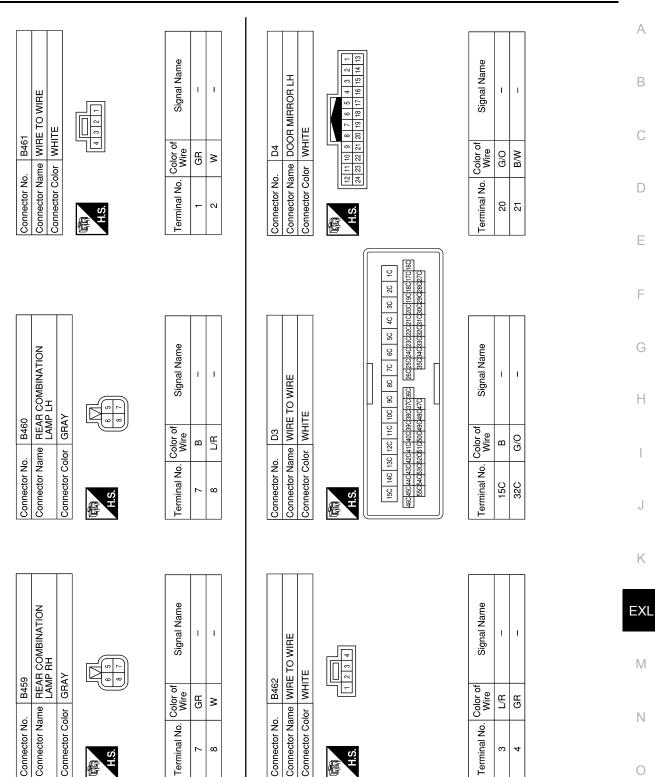
< WIRING DIAGRAM >

[LED HEADLAMP]



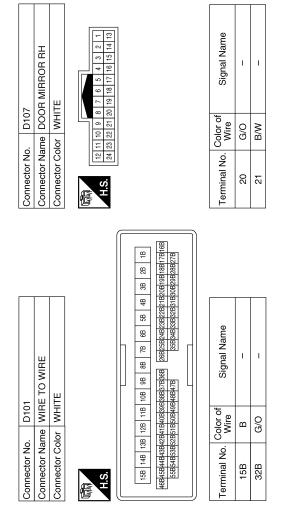
TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM GRAM > [LED HEADLAMP]

< WIRING DIAGRAM >



AALIA3074GB

Р



AALIA3075GB

< WIRING DIAGRAM >

[LED HEADLAMP]

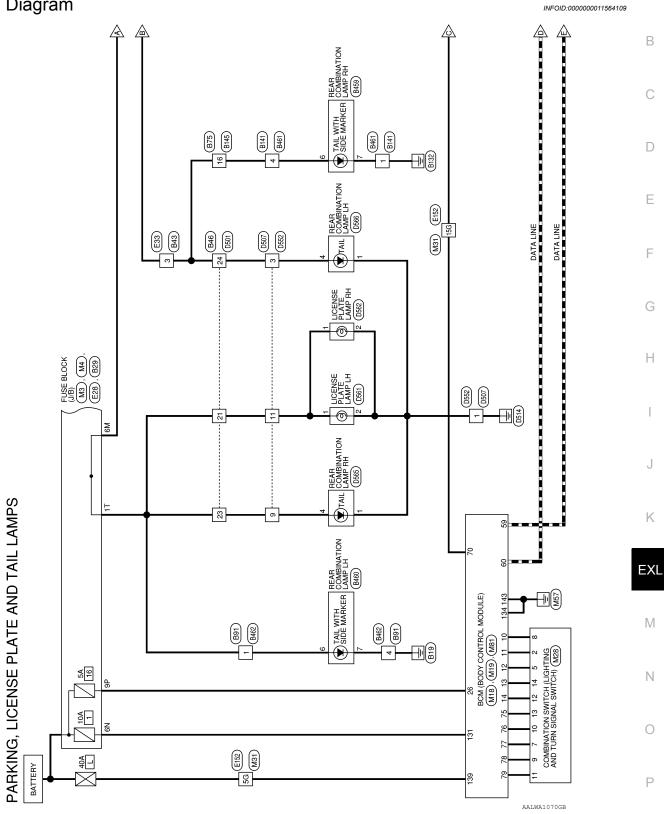
А

F

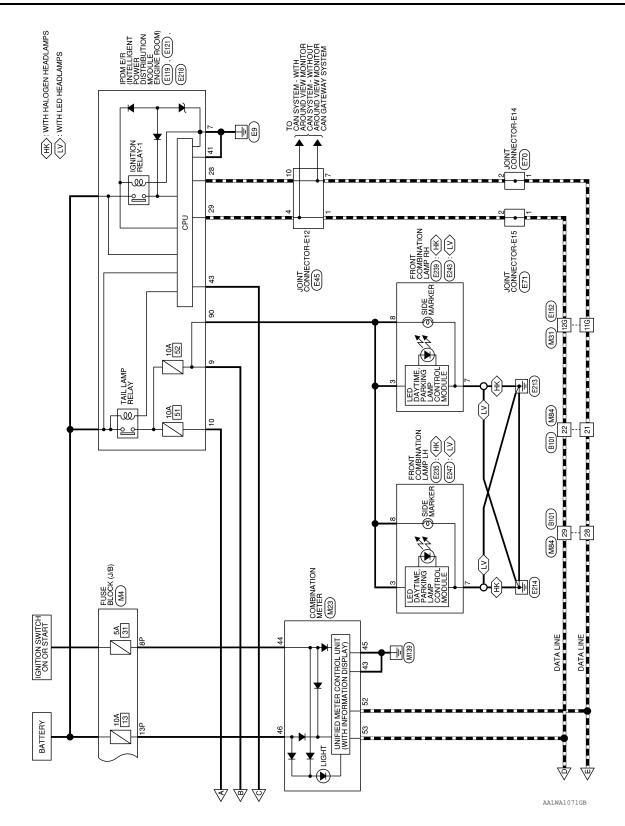
J

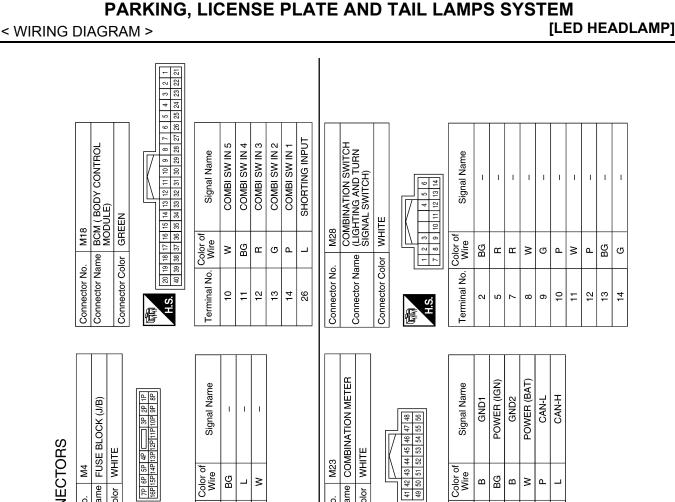
PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

Wiring Diagram



< WIRING DIAGRAM >







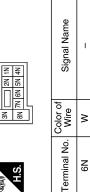
₹

Connector No.

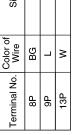
Connector Name Connector Color

H.S. 惛

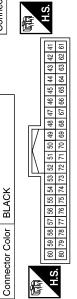
M3	Connector Name FUSE BLOCK (J/B)	WHITE	
Connector No.	Connector Name	Connector Color	







	M23	Connector Name COMBINATION METER	WHITE		
	Connector No. M23	Connector Name	Connector Color WHITE		E E
	M19			BLACK	R



Color of Wire

Terminal No.

BG

ш

43 44 45 46 52 53

≥

٩ _

ш

Signal Name	CAN-L	CAN-H	IGN USM OUT 1	COMBI SW OUT 5	COMBI SW OUT 4	COMBI SW OUT 3	COMBI SW OUT 2	COMBI SW OUT 1	
Color of Wire	٩	F	Ч	BG	Ч	Н	ŋ	M	
Terminal No.	59	09	02	22	76	<i>LL</i>	82	62	

AALIA3058GB

Ρ

0

А

В

С

D

Е

F

Н

J

Κ

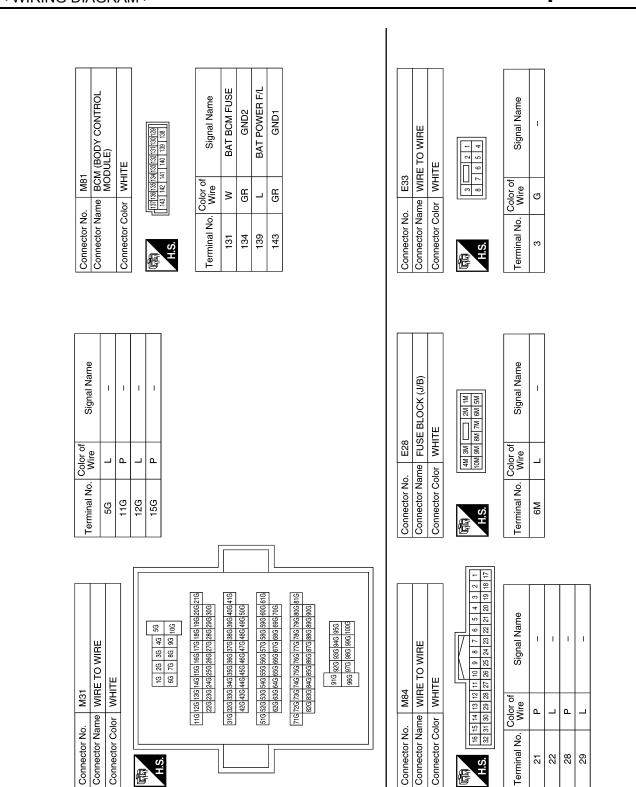
EXL

Μ

Ν

Connector No.

Connector Name

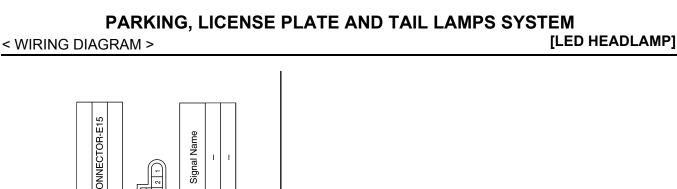


< WIRING DIAGRAM >

Revision: October 2014

佢

AALIA3059GB



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

E121

Connector No.

WHITE

Connector Color Connector Name

E71	JOINT CO	BLACK	2 4 3	of		
		lor B	9	Color (Wire	-	_
Connector No.	Connector Name	Connector Color	际日 H.S.	Terminal No. Wire	-	2
0	JOINT CONNECTOR-E14	BLACK	3 2 1	Signal Name	I	I
E70	9	ВГ	4	or of 'ire	0	0

321	Signal Name	-	I
6 2 4	Color of Wire	Р	Ρ
臣 H.S.	Terminal No.	Ļ	2

Connector No.	E45
Connector Name	Connector Name JOINT CONNECTOR-E12
Connector Color BLUE	BLUE
(項引) H.S.	987654321

Connector No.

Connector Name Connector Color

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

I	I		19	Connector Name POWER DISTRIBUTION
٩	٩		E119	PC PC
7	10		Connector No.	Connector Nai

			ъ,	50						
			33	6						
ŝ			32	8						
zzó			31	47						
H등8			8	46		l e				F
15			29	45		Aal	그	Ŧ	₽	Z S
			82	4		Signal Name	CAN-L	CAN-H	S-GND	IGN SIGNAL
÷Ë۵			27	\$		l ü	O	Q	ò	z
じいい		l lí	26	42		5				Q
524			25	4						
	巴		2	\$						
589	WHITE		n	8		<u>~</u>				
ΞĂŽ	≥		8	8		Color of Wire				
۵ ۵			5	5		8.	ፈ		В	
ĝ	ē		0	9		Ŭ,				
Ž	U U		19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34	35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50		ġ				
or	5	l l	Ŀ	<i>(</i> 7)]					
act	sc			d.		ina	28	29	41	43
ũ	Ĕ			ο Ε		Ē				
Connector Name	Connector Color	E				Terminal No.				
0						L ·				

19 25	20 21 22 23 24 25 26 27 28 29 30 31 32 33 36 37 38 30 40 41 42 43 44 45 46 47 48 40	24 25 2 40 41 4	26 27	7 8 4	29	8 8	31	8 8	88 88	8 3
	96 37 38 39	40 41 4	4	4	6	\$	7	₽	3	3
erminal No.	Color of Wire		Signal Name	al	Na	l e				
	٩			CAN-L	1 					
	Γ			CAN-H	Ŧ					
	В		0,	S-GND	g					
	Γ		IGN SIGNAL	S	GN	AL				

Signal Name

Color of Wire

Terminal No.

~ ი

H.S.

倨

TAIL RH TAIL LH

വ ш

10

P-GND

AALIA3060GB

Ρ

Ο

А

В

С

D

Е

F

G

Н

J

Κ

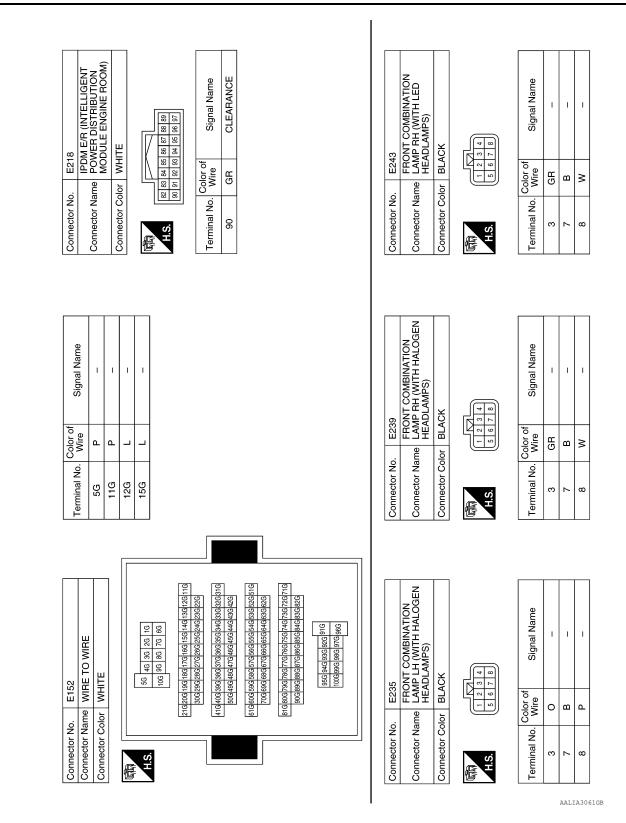
EXL

Μ

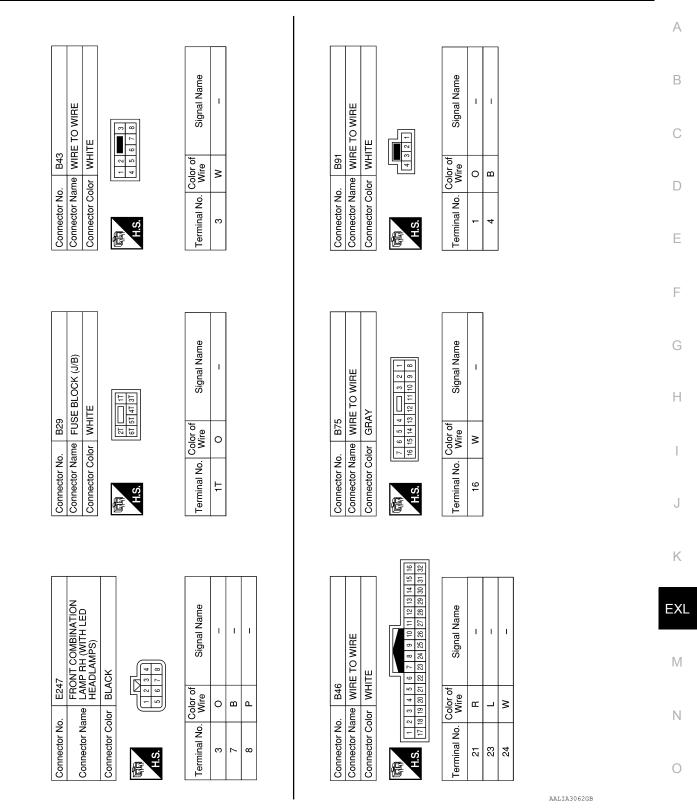
Ν



< WIRING DIAGRAM >



< WIRING DIAGRAM >



Ρ

< WIRING DIAGRAM >

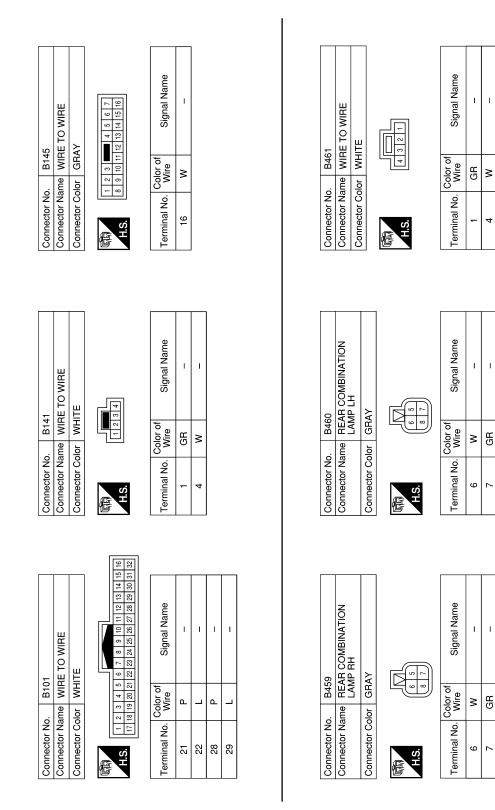
Т

4

Т

~

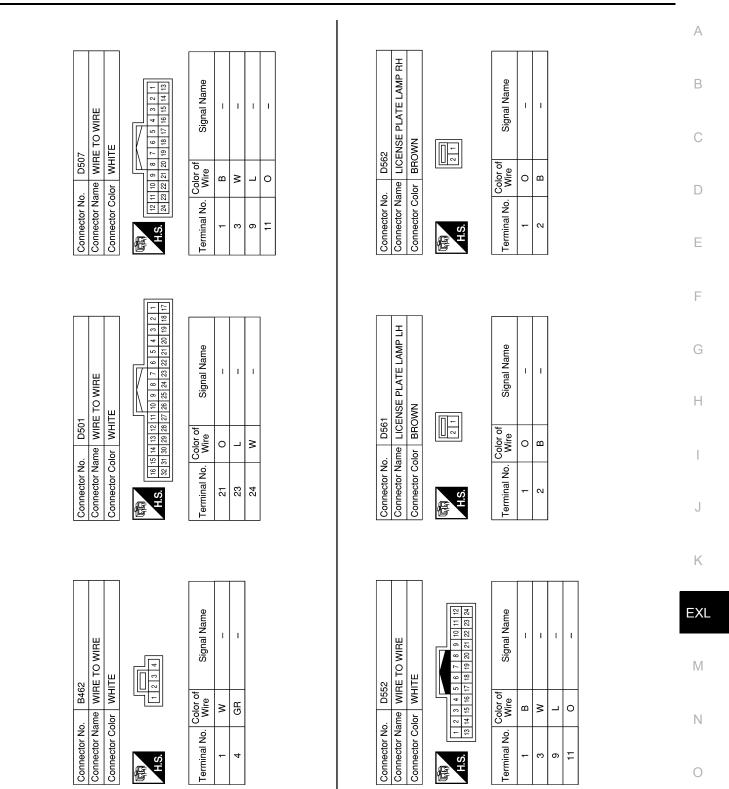
Т



AALIA3063GB

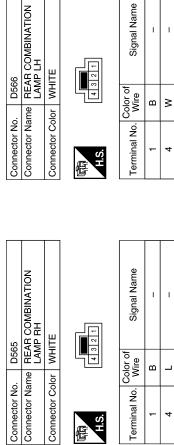
< WIRING DIAGRAM >

[LED HEADLAMP]



Ρ

AALIA3064GB



Т

4

T

_

Terminal No. -4

H.S. 惛

AALIA3065GB

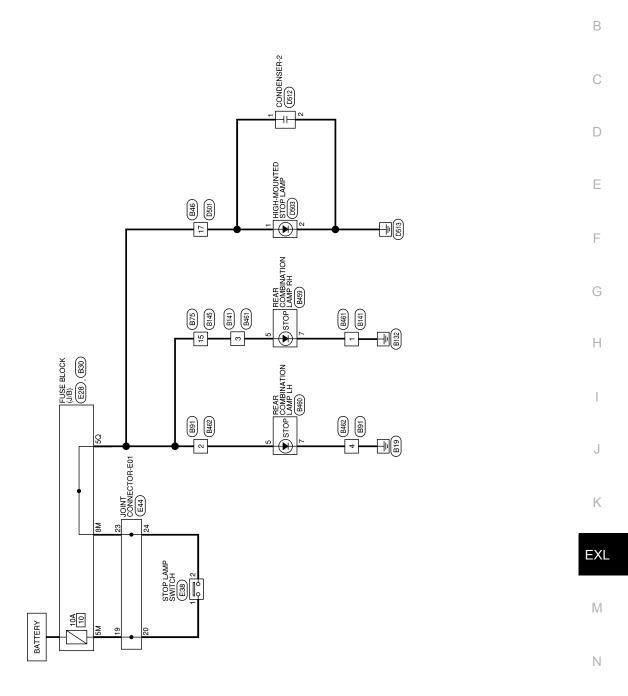
Connector No.

STOP LAMP

Wiring Diagram

INFOID:000000011564110

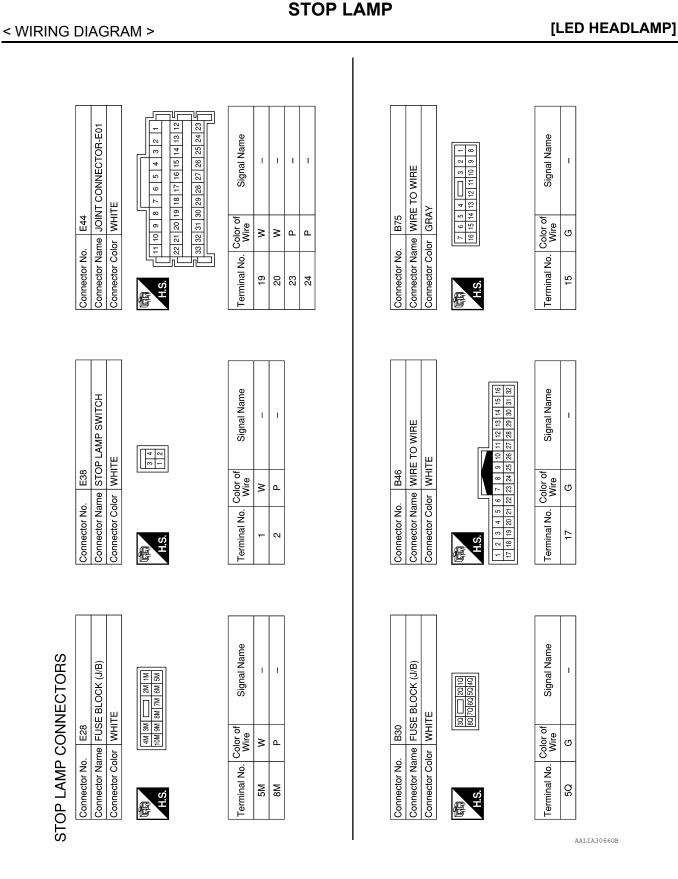
А



AALWA1072GB

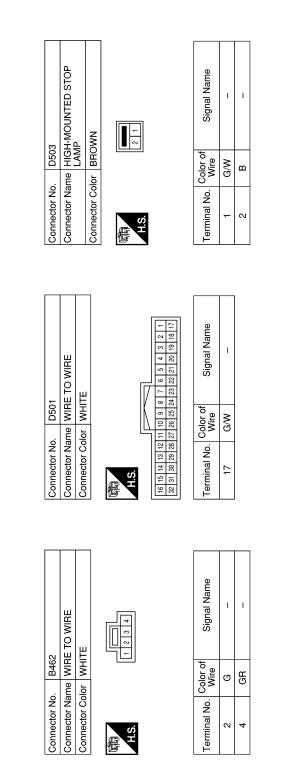
0

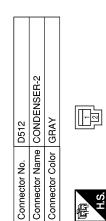
Ρ



	STUP LAWF	
< WIRING DIAGRAM >		[LED HEADLAMP]
or No. B145 or Name WIRE TO WIRE or Color GRAY 1 2 3 1 4 5 6 7 8 9 10 11 12 13 14 15 16 8 9 10 11 12 13 14 15 16 8 0 10 11 12 13 14 15 16 8 0 10 11 12 13 14 15 16	Connector No. B461 Connector Name WIRE TO WIRE Connector Color WHITE	Terminal No. Color of Signal Name <u>Nire</u> Signal Name <u>3</u> G <u>-</u> <u>-</u>
ermina		E a H
Terr Com		Φ
		F
Connector No. B141 Connector Name WIRE TO WIRE Connector Name WIRE TO WIRE Connector Color WHITE Terminal No. Color of Nire 1 GR 3 G	B460 EAMP LAMP LA GRAY GRAY	G Signal Name
Color of Color of Color of Color of GR		GP Color of Color of GR
	Color Name	
Connector No. Connector Name Connector Color H.S. Terminal No. Color 3 3	Connector No. Connector Name Connector Color	Terminal No. 5 7
Connee Connee H.S.	Connee Connee H.S.	J
		K
		EXL
Signal Name		L I I Signal Name
		N.
	B459 B459 GRAY GRAY	
Color of WHB		N Golor of Gan o
	Connector No. B459 Connector Name REAR COMBINATION Connector Name REAR COMBINATION Connector Color GRAY	
Connector Nc Connector Na Connector Co Lanal No.		Terminal No. 5 7
L Terr		
	I	AALIA3067GB
		Р

STOP LAMP





Signal Name	I	I	
Color of Wire	G/W	в	
Terminal No.	۰,	2	

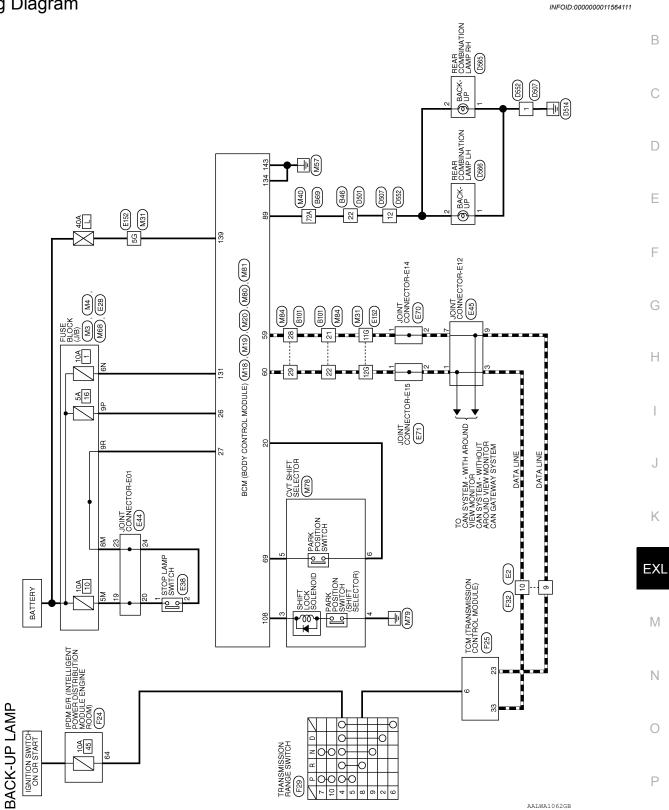
AALIA3068GB

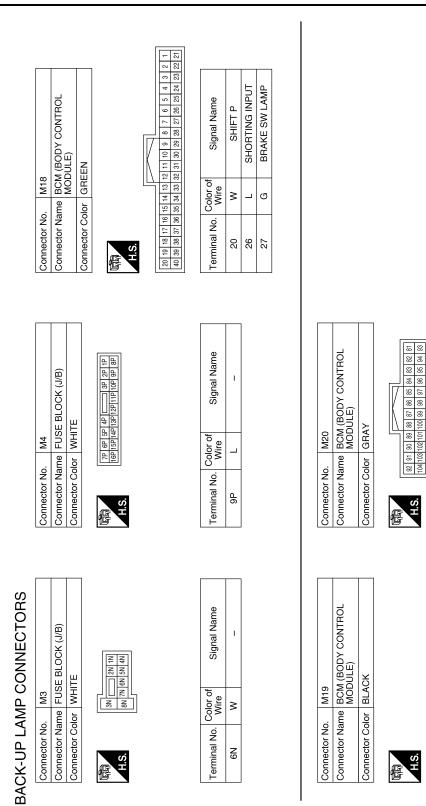
А

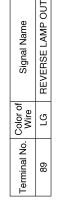
< WIRING DIAGRAM >

BACK-UP LAMP

Wiring Diagram



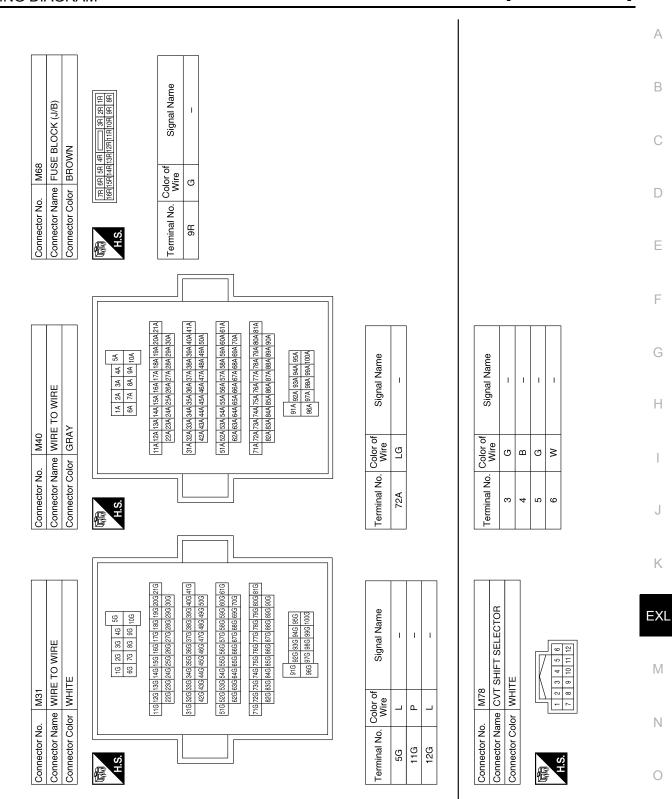






AALIA3036GB

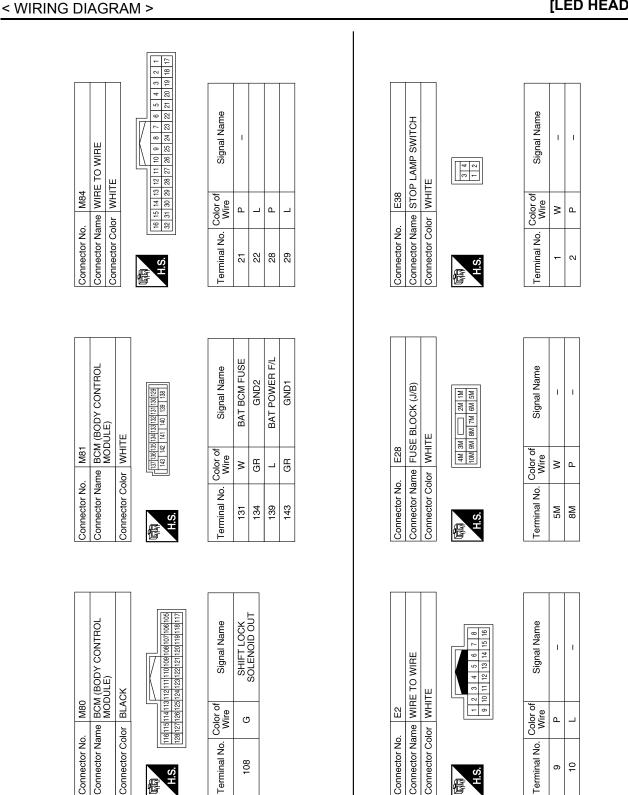
[LED HEADLAMP]



BACK-UP LAMP

Ρ

AALIA3037GB



BACK-UP LAMP

Revision: October 2014

108

H.S.

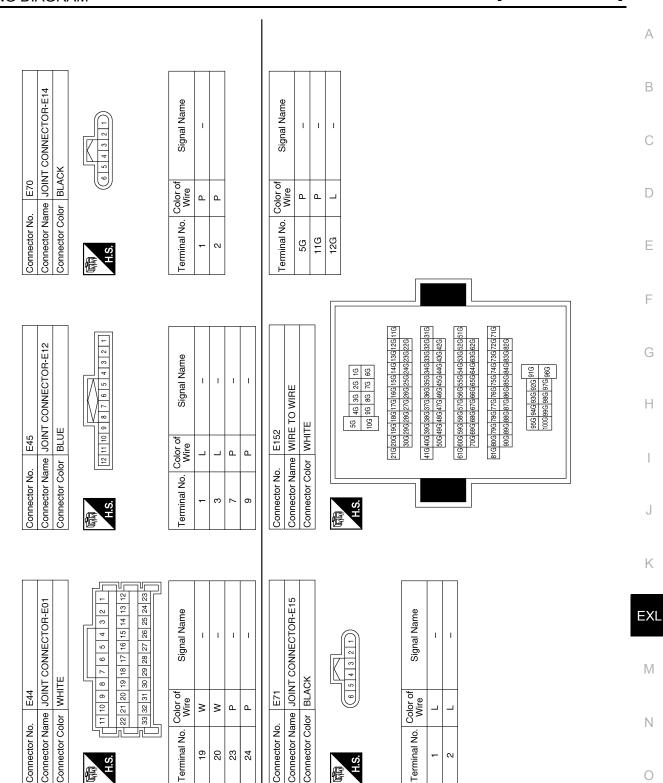
E

9 6

AALIA3038GB

H.S.

佢



AALIA3039GB

Ο

Ρ

BACK-UP LAMP

< WIRING DIAGRAM >

[LED HEADLAMP]

А

В

С

D

Ε

F

G

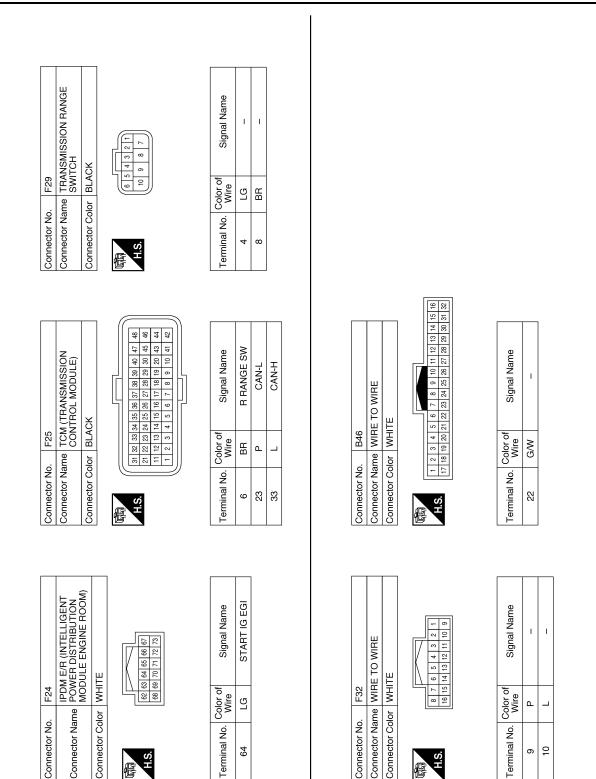
Н

J

Κ

Μ

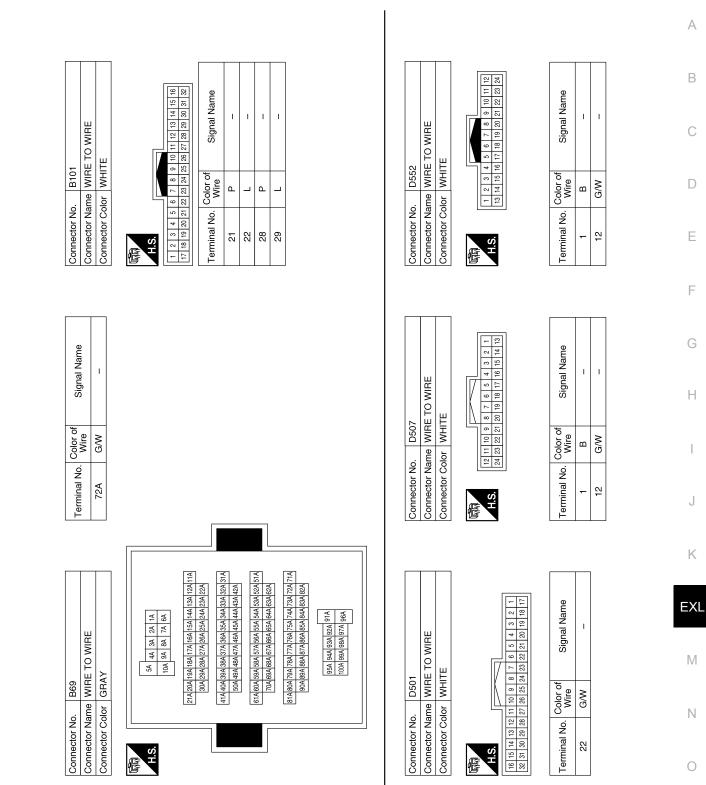
Ν



BACK-UP LAMP

< WIRING DIAGRAM >

[LED HEADLAMP]



< WIRING DIAGRAM >

Ρ

AALIA3041GB

Connector Name REAR COMBINATION LAMP RH

Connector No. D565

Connector Color WHITE

BACK-UP LAMP

[LED HEADLAMP]

Connector No. D566 Connector Name REAR COMBINATION Connector Color WHITE

旧S.H

< WIRING DIAGRAM >

	-	
Signal Name	I	I
Color of Wire	в	G/W
Terminal No. Color of Wire	-	2

Signal Name

Terminal No. Color of Wire

1 1

B G M B

-- ∾

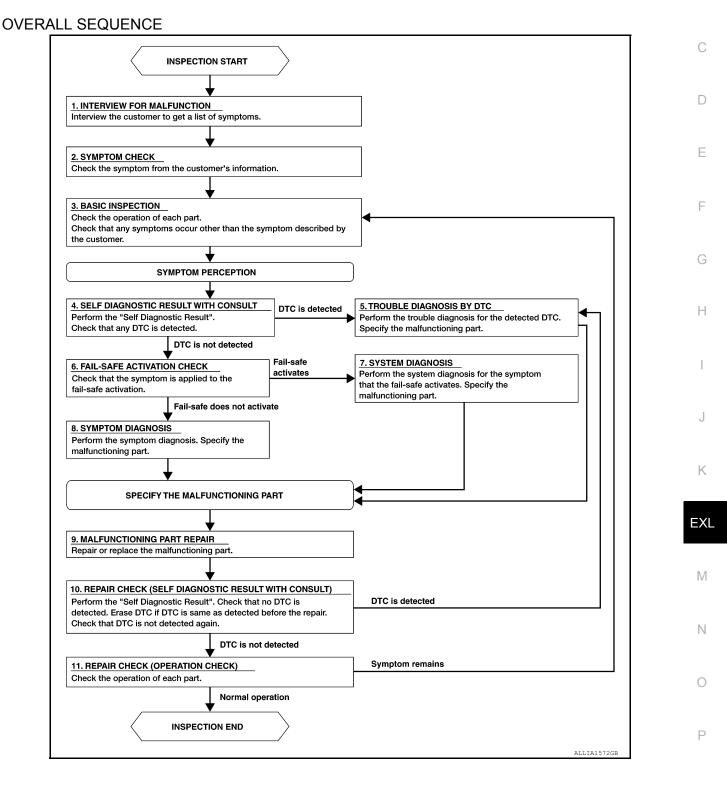
AALIA3108GB

BASIC INSPECTION DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

INFOID:000000011564144 B

А



DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

DETAILED FLOW

1.INTERVIEW FOR MALFUNCTION

Find out what the customer's concerns are.

>> GO TO 2.

2.SYMPTOM CHECK

Verify the symptom from the customer's information.

>> GO TO 3.

3.BASIC INSPECTION

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

>> GO TO 4.

4.SELF DIAGNOSTIC RESULT WITH CONSULT

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

Is any DTC detected?

YES >> GO TO 5.

NO >> GO TO 6.

5.TROUBLE DIAGNOSIS BY DTC

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

>> GO TO 9.

6.FAIL-SAFE ACTIVATION CHECK

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

Does the fail-safe activate? YES >> GO TO 7.

NO >> GO TO 8.

7.SYSTEM DIAGNOSIS

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

>> GO TO 9.

8.SYMPTOM DIAGNOSIS

Perform the symptom diagnosis. Specify the malfunctioning part.

>> GO TO 9.

9.MALFUNCTION PART REPAIR

Repair or replace the malfunctioning part.

>> GO TO 10.

10. REPAIR CHECK (SELF DIAGNOSTIC RESULT WITH CONSULT)

Perform the "Self Diagnostic Result". Verify that no DTCs are detected. Erase all DTCs detected prior to the repair. Verify that DTC is not detected again. Is any DTC detected?

DIAGNOSIS AND REPAIR WORK FLOW

YES >> GO TO 5. NO >> GO TO 1. 11.REPAIR CHECK (OPERATION CHECK) Check the operation of each part. Does it operate normally? YES >> Inspection End. NO >> GO TO 3.	< BASIC INSPECTION >	[LED HEADLAMP]
11. REPAIR CHECK (OPERATION CHECK) Check the operation of each part. <u>Does it operate normally?</u> YES >> Inspection End.	YES >> GO TO 5.	
Check the operation of each part. <u>Does it operate normally?</u> YES >> Inspection End.		
Does it operate normally? YES >> Inspection End.		
YES >> Inspection End.		
NΟ → GOTO3.	YES >> Inspection End.	
	NO >> GO TO 3.	

Ρ

LED HEADLAMP OPERATION INSPECTION

LED HEADLAMP OPERATION INSPECTION

Work Procedure

INFOID:0000000011517232

1.CHECK START

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

Is the inspection result normal?

YES >> Inspection End.

NO >> Refer to <u>EXL-115, "Symptom Table"</u>.

DTC/CIRCUIT			.AMP (HI) (ГІ	LED HEADLAMP
DTC/CIRC			S			
HEADLAMP						
	· · ·					
Component Fu						INFOID:00000001156519
.CHECK HEADL	_AMP (HI) OF	PERATION				
	RNAL LAMPS	6" in "Active Tes ms, check that t				
1	second eac		OFF is repeate	d		
Off :	Headlamp (H	II) OFF				
Without CONSU . Start IPDM E/F . Check that the	R auto active		<u>CS-9, "Diagno</u>	sis Description".		
<u>s the inspection re</u> YES >> Headla NO >> Refer	amp (HI) circu	uit is normal. Diagnosis Proce	dure".			
		_				
-		ISE				INFOID:00000001156519
. CHECK HEADL	_AMP (HI) FU witch OFF.	ISE ses are not blow	<i>ı</i> n:			INFOID:00000001156519
. CHECK HEADL	_AMP (HI) FU witch OFF.		/n:	Fuse No.		INFOID:00000001156519
CHECK HEADL . Turn ignition s . Check that the Unit Headlamp H	_AMP (HI) FU witch OFF. e following fus	ses are not blow	/n:	34		
CHECK HEADL . Turn ignition s . Check that the Unit Headlamp H Headlamp H	_AMP (HI) FU witch OFF. e following fus I (RH)	ses are not blow	/n:			Capacity
CHECK HEADL . Turn ignition s . Check that the Unit Headlamp H Headlamp H S the inspection re YES >> GO TO NO >> Replace	AMP (HI) FU witch OFF. e following fus I (RH) II (LH) esult normal? O 2. ce the blown t	Ees are not blow Location IPDM E/R	ring the affecte	34 35		Capacity
.CHECK HEADL . Turn ignition s . Check that the Unit Headlamp H Headlamp H Sthe inspection re YES >> GO TC NO >> Replac .CHECK HEADL With CONSULT . Disconnect ap . Turn ignition s . Select "EXTER	_AMP (HI) FU witch OFF. e following fus I (RH) II (LH) 22. ce the blown function _AMP (HI) OL oplicable front witch ON. RNAL LAMPS ing the test item	Ees are not blow Location IPDM E/R fuse after repair JTPUT VOLTAC combination lar	ring the affecte GE mp connector.	34 35 ed circuit. DM E/R".	bination lar	Capacity
CHECK HEADL	_AMP (HI) FU witch OFF. e following fus i (RH) i (LH) 22. ce the blown function _AMP (HI) OU oplicable front witch ON. RNAL LAMPS ing the test iter d.	Ees are not blow Location IPDM E/R fuse after repair JTPUT VOLTAC combination lan S" in "Active Tes ns, check voltag	ring the affecte GE mp connector.	34 35 ed circuit. DM E/R". plicable front com		Capacity 10A
CHECK HEADL Turn ignition s Check that the Unit Headlamp H Headlamp H Headlamp H CHECK HEADL With CONSULT Disconnect ap Turn ignition s Select "EXTEF While operatin tor and ground From	AMP (HI) FU witch OFF. e following fus I (RH) II (LH) esult normal? O 2. ce the blown f AMP (HI) OU oplicable front witch ON. RNAL LAMPS ing the test iter d. + nt combination la	Ees are not blow Location IPDM E/R fuse after repair JTPUT VOLTAC combination lan S" in "Active Tes ns, check voltag	ring the affecte GE mp connector.	34 35 ed circuit. DM E/R".		Capacity 10A
CHECK HEADL Turn ignition s Check that the Unit Headlamp H Headlamp H Headlamp H The inspection re YES >> GO TC NO >> Replac CHECK HEADL With CONSULT Disconnect ap Turn ignition s Select "EXTEF While operatin tor and ground	AMP (HI) FU witch OFF. e following fus I (RH) II (LH) esult normal? O 2. ce the blown f AMP (HI) OU oplicable front witch ON. RNAL LAMPS ing the test iter d. + nt combination la	Ees are not blow Location IPDM E/R fuse after repair JTPUT VOLTAC combination lan S" in "Active Tes ns, check voltag	ring the affecte GE mp connector.	34 35 ed circuit. DM E/R". plicable front com	em	Capacity 10A np harness connec
CHECK HEADL Turn ignition s Check that the Unit Headlamp H Headlamp H Headlamp H CHECK HEADL With CONSULT Disconnect ap Turn ignition s Select "EXTEF While operatin tor and ground From	AMP (HI) FU witch OFF. e following fus I (RH) II (LH) esult normal? O 2. ce the blown f AMP (HI) OU oplicable front witch ON. RNAL LAMPS ing the test iter d. + nt combination la	Ees are not blow Location IPDM E/R fuse after repair JTPUT VOLTAC combination lan S" in "Active Tes ns, check voltag amp Terminal	ring the affecte GE mp connector. at" mode of "IPI ge between ap	34 35 ed circuit. DM E/R". plicable front com		Capacity 10A
Check that the Unit Headlamp H Headlamp H Headlamp H S the inspection re YES >> GO TC NO >> Replace CHECK HEADL With CONSULT Disconnect ap Turn ignition s Select "EXTEF While operatin tor and ground From Conne	_AMP (HI) FU witch OFF. e following fus I (RH) II (LH) 22. ce the blown fus _AMP (HI) OU pplicable front witch ON. RNAL LAMPS ing the test iter d. + nt combination la	Ees are not blow Location IPDM E/R fuse after repair JTPUT VOLTAC combination lan S" in "Active Tes ns, check voltag	ring the affecte GE mp connector.	34 35 ed circuit. DM E/R". plicable front com	em Hi	Capacity 10A np harness connect Voltage Battery voltage

YES >> Perform the LED headlamp diagnosis. Refer to EXL-96, "Diagnosis Procedure".

NO >> GO TO 3.

3. CHECK HEADLAMP (HI) POWER SUPPLY CIRCUIT

HEADLAMP (HI) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

1. Turn ignition switch OFF.

2. Disconnect IPDM E/R connector.

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

Front comb	ination lamp		IPDM E/R		Continuity
Conr	nector	Terminal	Connector	Terminal	Continuity
RH	E243	2	E217	80	Yes
LH	E247		EZIT	81	ies

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-37. "Removal and Installation".

NO >> Repair or replace harness.

HEADLAMP (LO) CIRCUIT

	SIS >			[L	.ED HEADLAMP]
HEADLAMP (LO) C	IRCUIT				
Component Function (Check				INFOID:000000011565200
CHECK HEADLAMP (LO					
With CONSULT Select "EXTERNAL LAN While operating the test	/IPS" in "Active Test			1.	
Lo : Headlam					
Off : Headlam Without CONSULT 1. Start IPDM E/R auto act 2. Check that the headlam (s the inspection result norm) YES >> Headlamp (LO) NO >> Refer to EXL-91	p (LO) is turned ON <u>al?</u> circuit is normal.	١.	osis Description".		
Diagnosis Procedure		<u>ure</u> .			INFOID:000000011565201
1. check headlamp (lo					
 Turn ignition switch OFF Check that the following Unit 		n:	Fuse No.		Capacity
Headlamp LO (RH)	Location		36		Capacity
Headlamp LO (LH)	IPDM E/R		37		15A
YES >> GO TO 2. NO >> Replace the blow	•	•	ed circuit.		
With CONSULT Disconnect applicable fr Turn ignition switch ON. Select "EXTERNAL LAN	ont combination lar	mp connector t" mode of "IF	PDM E/R".	nbination lan	np harness connec-
With CONSULT Disconnect applicable fr Turn ignition switch ON. Select "EXTERNAL LAN While operating the test	ont combination lar	mp connector t" mode of "IF	PDM E/R".	nbination lan	np harness connec-
 Turn ignition switch ON. Select "EXTERNAL LAN While operating the test tor and ground. 	ont combination lar /IPS" in "Active Test items, check voltag	mp connector t" mode of "IF	PDM E/R".		np harness connec-
 With CONSULT Disconnect applicable fr Turn ignition switch ON. Select "EXTERNAL LAN While operating the test tor and ground. 	ont combination lar /IPS" in "Active Test items, check voltag	mp connector t" mode of "IF	PDM E/R". pplicable front con	item	Voltage
 With CONSULT Disconnect applicable fr Turn ignition switch ON. Select "EXTERNAL LAN While operating the test tor and ground. 	ont combination lar /IPS" in "Active Test items, check voltag	mp connector t" mode of "IF	PDM E/R". pplicable front con	item Lo	Voltage Battery voltage
 With CONSULT Disconnect applicable fr Turn ignition switch ON. Select "EXTERNAL LAN While operating the test tor and ground. 	ont combination lar /IPS" in "Active Test items, check voltag	mp connector t" mode of "IF	PDM E/R". pplicable front con Test	item Lo Off	Voltage Battery voltage
 With CONSULT Disconnect applicable fr Turn ignition switch ON. Select "EXTERNAL LAN While operating the test tor and ground. 	ont combination lar /IPS" in "Active Test items, check voltag on lamp Terminal	mp connector t" mode of "IF ge between ap	PDM E/R". pplicable front con	item Lo	Voltage Battery voltage

Turn ignition switch OFF. 1.

2. Disconnect IPDM E/R connector.

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

Revision: October 2014

HEADLAMP (LO) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

I	Front combination lam	р	IPDM E/R		Continuity
Conr	nector	Terminal	Connector	Terminal	Continuity
RH	E243	1	E217	75	Yes
LH	E247	I		76	165

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-37, "Removal and Installation".

NO >> Repair or replace harness.

<pre>DATINE < DTC/CIRCUIT DIAGNOSIS ></pre>	RUNNING LIGHT REL	AY CIRCUI	T [LED HEADLAMP]
DAYTIME RUNNING LIGH	T RELAY CIRCUIT		
Component Function Check			INFOID:000000011564118
1.CHECK DAYTIME RUNNING LIGH			
 CONSULT Select "EXTERNAL LAMPS" in "A While operating the test items, choose the set items items. 	ctive Test" mode of "IPDM E/		
On : EXTERNAL LAMP Off : EXTERNAL LAMP			
Is the inspection result normal?YES>> Daytime running light relaNO>> Refer to EXL-93, "Diagnosition"	y circuit is normal. sis Procedure".		
Diagnosis Procedure			INFOID:000000011564119
 CHECK DAYTIME RUNNING LIGH Turn ignition switch OFF. Check that the following fuse is not 			
Unit	Fuse No.		Capacity
Daytime running light relay	50		10A
YES >> GO TO 2. NO >> Replace the blown fuse at 2.CHECK DAYTIME RUNNING LIGH 1. Remove daytime running light rela 2. Check voltage between daytime running light relation (+)	IT RELAY POWER SUPPLY		
Daytime running light rel	ау	(-)	Voltage (Approx.)
E4	Terminal 2 7 Gr 5	ound	Battery voltage

DAYTIME RUNNING LIGHT RELAY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

2. Turn ignition switch ON.

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

(+) M E/R	(-)	Test item		Voltage (Approx.)
Connector	Terminal				(- , , , , , , , , , , , , , , , , , , ,
E218	85	Ground	EXTERNAL	On	0 V
EZIO	00	Ground	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-37. "Removal and Installation".

${f 5.}$ CHECK DAYTIME RUNNING LIGHT RELAY CONTROL SIGNAL (OPEN) CIRCUIT

- 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	M E/R	Daytime runr	ning light relay	Continuity
Connector	Terminal	Connector	Terminal	Continuity
E218	85	E4	1	Yes

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

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

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

	IPDI	M E/R		Continuity
Conn	ector	Terminal	Ground	Continuity
E2	18	85		No

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-37, "Removal and Installation".

NO >> Repair or replace harness.

Component Inspection

INFOID:000000011564120

1.CHECK DAYTIME RUNNING LIGHT RELAY

- 1. Turn ignition switch OFF.
- 2. Remove daytime running light relay.

3. Apply battery voltage to daytime running light relay between terminals 1 and 2.

4. Check continuity between daytime running light relay terminals.

Daytime runr	Daytime running light relay Terminal		dition	Continuity
Terr				Continuity
7	6		Apply	Yes
I I	0	Voltage	Not Apply	No
5	2	vollage	Apply	Yes
5	5		Not Apply	No

Is the inspection result normal?

Revision: October 2014

DAYTIME RUNNING LIGHT RELAY CIRCUIT

< DTC	CIRCUIT DIAGNOSIS >	[LED HEADLAMP]	
YES NO	 >> Daytime running light relay is normal. >> Replace daytime running light relay. 		A
			В
			С

EXL

M

Ν

Ο

Ρ

D

Ε

F

G

Н

J

Κ

< DTC/CIRCUIT DIAGNOSIS >

LED HEADLAMP

Diagnosis Procedure

INFOID:000000011564121

Regarding Wiring Diagram information. Refer to EXL-30, "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
Con	nector	Terminal	Ground	Continuity
RH	E243	5	Ground	Yes
LH	E247	5		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-10</u>, "LED Headlamp Control Module".

Is the headlamp turned ON?

YES >> Replace LED headlamp control module. Refer to EXL-128, "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-</u><u>96, "Diagnosis Procedure"</u>.

Is the headlamp turned ON?

- YES >> Replace headlamp. Refer to <u>EXL-128</u>, "Removal and Installation".
- NO >> LED headlamp is normal. Check headlamp control system.

PARKING LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOS	IS >		[LED HEADLAMP]
PARKING LAMP CI	RCUIT		A
Component Function (Check		INFOID:000000011564124
1. CHECK PARKING LAMP	OPERATION		E
	IPS" in "Active Test" mode items, check that the park		C
TAIL: Parking IOff: Parking IIs the inspection result normal	amp OFF		C
YES >> Parking lamp cir NO >> Refer to EXL-97	cuit is normal. "Diagnosis Procedure".		E
Diagnosis Procedure			INFOID:000000011564125
Regarding Wiring Diagram ir	formation. Refer to <u>EXL-6</u>	3. "Wiring Diagram".	F
1.CHECK PARKING LAMP	FUSE		G
 Turn ignition switch OFF Check that the following 			ŀ
Unit	Location	Fuse No.	Capacity
Parking lampsFront side marker lamps	IPDM E/R	52	10A
Is the inspection result normal YES >> GO TO 3. NO >> GO TO 2. 2.CHECK PARKING LAMP 1. Disconnect the following - IPDM E/R	CIRCUIT		k
 Front combination lamps Rear combination lamps 		nector and ground.	EX
IPDN	1 E/R		Continuity
Connector E218	Terminal 90	Ground	No
Is the inspection result normal YES >> Replace fuse. (F			C
Check applicable LED lamp. Is the inspection result normal YES >> GO TO 4. NO >> Replace applica 4.CHECK PARKING LAMP CONSULT	ole LED lamp. OUTPUT VOLTAGE		F
CONSULT Disconnect front combin 	ation lamp connector.		

Revision: October 2014

PARKING LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

2. Turn ignition switch ON.

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

	+) M E/R	(-)	Test	t item	Voltage (Approx.)
Connector	Terminal				V F F - 7
E218	90	Ground	EXTERNAL	TAIL	Battery voltage
E210	90	Ground	LAMPS	Off	0 V

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace IPDM E/R. Refer to <u>PCS-37, "Removal and Installation"</u>.

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.

I	Front combination lar	ıp	IPDN	/I E/R	Continuity
Conr	nector	Terminal	Connector	Terminal	Continuity
RH	E243	3	E218	90	Yes
LH	E247	- 3	LZIO	30	Tes

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

Ó.CHECK PARKING LAMP GROUND CIRCUIT

Check continuity between front combination lamp harness connector and ground.

	Front combination lamp			Continuity
Coni	nector	Terminal	Ground	Continuity
RH	E243	7	Ground	Yes
LH	E247			165

Is the inspection result normal?

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

NO >> Repair or replace harness.

		AMP CIRCL	ЛТ			
RONT SIDE	MARKER LA					
Component Fun	ction Check					INFCID:000000011564126
1.CHECK PARKING	G LAMP OPERAT	ΓΙΟΝ				
Check that the parkir	ng lamp is turned	ON.				
s the inspection resu						
YES >> GO TO 2		it Defende EVI. (ant Exaction	Check	
NO >> Check pa 2.CHECK FRONT S	arking lamp circui			ient Function	Cneck".	
		AMP OPERATIO	νiN			
	IAL LAMPS" in "A the test items, ch				ed ON.	
TAIL : Fr	ront side marker	r lamp ON				
Off : Fr	ront side marker	r lamp OFF				
s the inspection resu	<u>ult normal?</u>					
	le marker lamp ci					
	EXL-99, "Diagno	isis Procedure.				
Diagnosis Proce	aure					INFOID:000000011564127
Regarding Wiring Dia	agram informatior	n. Refer to <u>EXL-6</u>	<u>3, "Wiring D</u>	liagram".		
Regarding Wiring Dia	agram informatior	n. Refer to <u>EXL-6</u>	<u>63, "Wiring D</u>	<u>iagram"</u> .		
Regarding Wiring Dia 1.CHECK FRONT S			63, "Wiring D	<u>iagram"</u> .		
	SIDE MARKER L		63, "Wiring D	iagram".		
1.CHECK FRONT S Check applicable lan	SIDE MARKER Linnp bulb.		63, "Wiring D	iagram".		
1.CHECK FRONT S Check applicable lan s the inspection resu YES >> GO TO 2	SIDE MARKER L/ np bulb. <u>ult normal?</u> 2.		53, "Wiring D	iagram".		
1.CHECK FRONT S Check applicable lan s the inspection resu YES >> GO TO 2 NO >> Replace	SIDE MARKER L/ np bulb. <u>ult normal?</u> 2. bulb.	AMP BULB				
1.CHECK FRONT S Check applicable lan s the inspection resu YES >> GO TO 2 NO >> Replace 2.CHECK FRONT S	SIDE MARKER La np bulb. <u>ult normal?</u> 2. bulb. SIDE MARKER La	AMP BULB				
1.CHECK FRONT S Check applicable land Is the inspection results YES >> GO TO 2 NO >> Replace 2.CHECK FRONT S 1. Turn ignition swif 2. Disconnect IPDN	SIDE MARKER L/ np bulb. <u>ult normal?</u> 2. bulb. SIDE MARKER L/ tch OFF. M E/R connector a	AMP BULB AMP POWER SI and front side ma	JPPLY CIRC	CUIT	ker lamp f	narness connector.
1.CHECK FRONT S Check applicable lan s the inspection results YES >> GO TO 2 NO >> Replace 2.CHECK FRONT S 1. Turn ignition swit 2. Disconnect IPDM 3. Check continuity	SIDE MARKER L/ np bulb. <u>ult normal?</u> 2. bulb. SIDE MARKER L/ tch OFF. M E/R connector a	AMP BULB AMP POWER SI and front side ma E/R harness conr	JPPLY CIRC	CUIT	ker lamp ł	
1.CHECK FRONT S Check applicable lan s the inspection results YES >> GO TO 2 NO >> Replace 2.CHECK FRONT S 1. Turn ignition swit 2. Disconnect IPDM 3. Check continuity	SIDE MARKER LA np bulb. <u>ult normal?</u> 2. bulb. SIDE MARKER LA tch OFF. M E/R connector a between IPDM E	AMP BULB AMP POWER SI and front side ma E/R harness conr	JPPLY CIRC	CUIT onnector. ont side mark	ker lamp f	narness connector.
1.CHECK FRONT S Check applicable land is the inspection result YES $>>$ GO TO 2 NO $>>$ Replace 2.CHECK FRONT S 1. Turn ignition swit 2. Disconnect IPDN 3. Check continuity From Connerse RH	SIDE MARKER La np bulb. <u>ult normal?</u> 2. bulb. SIDE MARKER La tch OFF. M E/R connector a between IPDM E ront combination lamp ector E243	AMP BULB AMP POWER SI and front side ma E/R harness conr	JPPLY CIRC arker lamp connector and fro	CUIT onnector. ont side mark		
1.CHECK FRONT S Check applicable lan s the inspection results YES $>>$ GO TO 2 NO $>>$ Replace 2.CHECK FRONT S 1. Turn ignition swite 2. Disconnect IPDN 3. Check continuity $\frac{Friend Connect}{Connect}$	SIDE MARKER LA np bulb. <u>ult normal?</u> 2. bulb. SIDE MARKER LA tch OFF. M E/R connector a between IPDM E ront combination lamp ector E243 E247	AMP BULB AMP POWER SI and front side ma E/R harness conr p Terminal	JPPLY CIRC arker lamp co nector and fro Connector	CUIT onnector. ont side mark	erminal	- Continuity
1.CHECK FRONT S Check applicable land s the inspection result YES $>>$ GO TO 2 NO $>>$ Replace 2.CHECK FRONT S 1. Turn ignition swit 2. Disconnect IPDN 3. Check continuity $\frac{Frite Connet RH}{LH}$ Is the inspection result	SIDE MARKER LA np bulb. <u>ult normal?</u> 2. bulb. SIDE MARKER LA tch OFF. M E/R connector a between IPDM E ront combination lamp ector E243 E247 <u>ult normal?</u>	AMP BULB AMP POWER SI and front side ma E/R harness conr p Terminal	JPPLY CIRC arker lamp co nector and fro Connector	CUIT onnector. ont side mark	erminal	- Continuity
1.CHECK FRONT S Check applicable land s the inspection result YES >> GO TO 2 NO >> Replace 2.CHECK FRONT S 1. Turn ignition swit 2. Disconnect IPDM 3. Check continuity $\frac{Frite Connet RH}{Connet}$ RH LH Is the inspection result YES >> GO TO 3	SIDE MARKER LA np bulb. <u>ult normal?</u> 2. bulb. SIDE MARKER LA tch OFF. M E/R connector a between IPDM E ront combination lamp ector E243 E247 <u>ult normal?</u> 3.	AMP BULB AMP POWER SI and front side ma E/R harness conr p Terminal 8	JPPLY CIRC arker lamp co nector and fro Connector	CUIT onnector. ont side mark	erminal	- Continuity
1.CHECK FRONT S Check applicable lan s the inspection result YES $>>$ GO TO 2 NO $>>$ Replace 2.CHECK FRONT S 1. Turn ignition swit 2. Disconnect IPDM 3. Check continuity $\frac{Frite Connect RH}{LH}$ Is the inspection result YES $>>$ GO TO 3 NO $>>$ Repair o	SIDE MARKER LA np bulb. <u>alt normal?</u> 2. bulb. SIDE MARKER LA tch OFF. M E/R connector a between IPDM E ront combination lamp ector E243 E247 <u>alt normal?</u> 3. r replace harness	AMP BULB AMP POWER SI and front side ma Z/R harness conr p Terminal 8	JPPLY CIRC arker lamp co nector and fro Connecto E218	CUIT onnector. ont side mark	erminal	- Continuity
1.CHECK FRONT S Check applicable lan s the inspection result YES >> GO TO 2 NO >> Replace 2.CHECK FRONT S 1. Turn ignition swit 2. Disconnect IPDM 3. Check continuity $\frac{FI}{Connet}$ RH LH s the inspection result YES >> GO TO 3 NO >> Repair o 3.CHECK FRONT S	SIDE MARKER LA np bulb. <u>alt normal?</u> 2. bulb. SIDE MARKER LA tch OFF. M E/R connector a between IPDM E ront combination lamp ector E243 E247 <u>alt normal?</u> 3. r replace harness SIDE MARKER LA	AMP BULB AMP POWER SI and front side ma Z/R harness conr p Terminal 8 s. AMP GROUND (UPPLY CIRC arker lamp co nector and fro Connecto E218	CUIT onnector. ont side mark IPDM E/R or Te	erminal 90	- Continuity
1.CHECK FRONT S Check applicable land s the inspection result YES >> GO TO 2 NO >> Replace 2.CHECK FRONT S 1. Turn ignition swit 2. Disconnect IPDM 3. Check continuity $\frac{Frite Connet RH}{Connet}$ RH LH Is the inspection result YES >> GO TO 3	SIDE MARKER LA np bulb. <u>alt normal?</u> 2. bulb. SIDE MARKER LA tch OFF. M E/R connector a between IPDM E ront combination lamp ector E243 E247 <u>alt normal?</u> 3. r replace harness SIDE MARKER LA	AMP BULB AMP POWER SI and front side ma E/R harness conr p Terminal 8 s. AMP GROUND (harker lamp harn	UPPLY CIRC arker lamp co nector and fro Connecto E218	CUIT onnector. ont side mark IPDM E/R or Te	erminal 90	- Continuity Yes
1.CHECK FRONT S Check applicable lan s the inspection result YES $>>$ GO TO 2 NO $>>$ Replace 2.CHECK FRONT S 1. Turn ignition swit 2. Disconnect IPDM 3. Check continuity Find RH LH S the inspection result YES $>>$ GO TO 3 NO $>>$ Repair of 3. CHECK FRONT S Check continuity between	SIDE MARKER LA np bulb. <u>ult normal?</u> 2. bulb. SIDE MARKER LA tch OFF. M E/R connector a between IPDM E ront combination lamp ector E243 E247 <u>ult normal?</u> 3. r replace harness SIDE MARKER LA ween front side m	AMP BULB AMP POWER SI and front side ma Z/R harness conr p Terminal 8 s. AMP GROUND (harker lamp harn on lamp	UPPLY CIRC arker lamp co nector and fro Connecto E218	CUIT onnector. ont side mark IPDM E/R or Te	erminal 90	- Continuity
1.CHECK FRONT S Check applicable lan s the inspection result YES $>>$ GO TO 2 NO $>>$ Replace 2.CHECK FRONT S 1. Turn ignition swit 2. Disconnect IPDM 3. Check continuity Find RH LH S the inspection result YES $>>$ GO TO 3 NO $>>$ Repair of 3. CHECK FRONT S Check continuity between	SIDE MARKER LA np bulb. <u>alt normal?</u> 2. bulb. SIDE MARKER LA tch OFF. M E/R connector a between IPDM E ront combination lamp ector E243 E247 <u>alt normal?</u> 3. r replace harness SIDE MARKER LA ween front side m Front combination	AMP BULB AMP POWER SI and front side ma Z/R harness conr Terminal 8 S. AMP GROUND (harker lamp harn- on lamp Ter	UPPLY CIRC arker lamp connector and fro Connector E218 CIRCUIT ess connector	CUIT onnector. ont side mark IPDM E/R or Te	erminal 90	- Continuity Yes

Is the inspection result normal?

< DTC/CIRCUIT DIAGNOSIS >

FRONT SIDE MARKER LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

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

TAIL LAMP CIRCUIT

DTC/CIRCUIT	DIAGNOSIS	; >			נבי	ED HEADLAMP]
TAIL LAMP	CIRCUIT					
Component F	-unction Ch	ıeck				INFOID:000000011564128
.CHECK TAIL	LAMP OPER/	ATION				
		PS" in "Active Tes ems, check that t				
TAIL Off	: Tail Lamp C : Tail lamp O					
the inspection /ES >> Tail I		<u>?</u>				
IO >> Refe	er to <u>EXL-101,</u>	"Diagnosis Proc	<u>edure"</u> .			
agnosis Pro	ocedure					INFOID:000000011564129
egarding Wiring	g Diagram info	ormation. Refer to	o <u>EXL-63, "Wiri</u>	ng Diagram".		
.CHECK PARK	KING LAMP O	PERATION				
neck that the pa	arking lamp is					
the inspection		_		`		
the inspection ES [When tail IO >> Cheo CHECK TAIL Turn ignition	lamp RH or Ll ck parking lam LAMP (LH) Ft switch OFF.	H does not turn (p circuit. Refer t	o <u>EXL-97, "Cor</u>		n Check".	
the inspection ES [When tail IO >> Cheo .CHECK TAIL Turn ignition	lamp RH or Ll ck parking lam LAMP (LH) FL switch OFF. he following fu	H does not turn (np circuit. Refer t USE uses are not blow	o <u>EXL-97, "Cor</u>	nponent Functio		Capacity
the inspection ES [When tail O >> Chec CHECK TAIL Turn ignition Check that th	lamp RH or Ll ck parking lam LAMP (LH) FL switch OFF. he following fu	H does not turn (np circuit. Refer t USE uses are not blow Location	o <u>EXL-97, "Cor</u>			Capacity
the inspection (ES [When tail NO >> Check .CHECK TAIL Turn ignition Check that th Uni Tail lam Tail lam	lamp RH or Ll ck parking lam LAMP (LH) FL switch OFF. he following fu it np RH	H does not turn (op circuit. Refer t USE uses are not blow Location IPDM E/R	o <u>EXL-97, "Cor</u>	nponent Functio Fuse No.		Capacity 10A
the inspection (ES [When tail NO >> Check .CHECK TAIL Turn ignition Check that th Uni Tail Iam Tail Iam the inspection (ES >> GO NO >> Repl .CHECK TAIL)CONSULT Disconnect r Turn ignition Select "EXTI	lamp RH or Ll ck parking lam LAMP (LH) FU switch OFF. he following fu it np RH np LH result normal? TO 3. lace the blown LAMP OUTPU rear combination switch ON. ERNAL LAMP ting the test ite	H does not turn (p circuit. Refer t USE uses are not blow Location IPDM E/R ? n fuse after repair UT VOLTAGE on lamp RH or L ?S" in "Active Tes	o <u>EXL-97, "Cor</u> vn: ring the affected H connector. st" mode of "IPE	Fuse No. 52 51 d circuit.		
the inspection (ES [When tail IO >> Check CHECK TAIL Turn ignition Check that th Uni Tail Iam Tail Iam the inspection (ES >> GO IO >> Repl CHECK TAIL CONSULT Disconnect r Turn ignition Select "EXTI While operat	lamp RH or Ll ck parking lam LAMP (LH) FU switch OFF. he following fu it np RH np LH result normal? TO 3. lace the blown LAMP OUTPU rear combination switch ON. ERNAL LAMP ting the test ite	H does not turn (p circuit. Refer t USE uses are not blow Location IPDM E/R ? n fuse after repair UT VOLTAGE on lamp RH or L ?S" in "Active Tes	o <u>EXL-97, "Cor</u> vn: ring the affected H connector. st" mode of "IPE	Fuse No. 52 51 d circuit.		10A
the inspection (ES [When tail IO >> Check CHECK TAIL Turn ignition Check that th Uni Tail lam Tail lam the inspection (ES >> GO IO >> Repl CHECK TAIL CONSULT Disconnect r Turn ignition Select "EXTH While operat tor and grout Re	lamp RH or Ll ck parking lam LAMP (LH) FL switch OFF. he following fu it np RH np LH result normal? TO 3. lace the blown LAMP OUTPL rear combination switch ON. ERNAL LAMP ting the test ite ind. (+) ear combination la	H does not turn (p circuit. Refer t USE uses are not blow Location IPDM E/R ? n fuse after repair JT VOLTAGE on lamp RH or L PS" in "Active Tes ems, check voltage	o <u>EXL-97, "Cor</u> vn: ring the affected H connector. st" mode of "IPE	Fuse No. 52 51 d circuit.		10A
the inspection (ES [When tail IO >> Check CHECK TAIL Turn ignition Check that th Uni Tail lam Tail lam the inspection (ES >> GO IO >> Repl CHECK TAIL CONSULT Disconnect r Turn ignition Select "EXTI While operat tor and grout	lamp RH or Ll ck parking lam LAMP (LH) FL switch OFF. he following fu it np RH np LH result normal? TO 3. lace the blown LAMP OUTPL rear combination switch ON. ERNAL LAMP ting the test ite ind. (+) ear combination la	H does not turn (p circuit. Refer t USE uses are not blow Location IPDM E/R ? n fuse after repair JT VOLTAGE on lamp RH or L PS" in "Active Tes ems, check voltag	ring the affected H connector.	Fuse No. 52 51 d circuit.	nbination lam	10A 10A voltage (Approx.)
the inspection (ES [When tail IO >> Check CHECK TAIL Turn ignition Check that th Uni Tail lam Tail lam the inspection (ES >> GO IO >> Repl CHECK TAIL CONSULT Disconnect r Turn ignition Select "EXTH While operat tor and grout Re	lamp RH or Ll ck parking lam LAMP (LH) FL switch OFF. he following fu it np RH np LH result normal? TO 3. lace the blown LAMP OUTPL rear combination switch ON. ERNAL LAMP ting the test ite ind. (+) ear combination la	H does not turn (p circuit. Refer t USE uses are not blow Location IPDM E/R ? n fuse after repain JT VOLTAGE on lamp RH or L ?S" in "Active Tes ems, check voltag	o EXL-97, "Cor vn: ring the affected H connector. st" mode of "IPE ge between app (-)	Fuse No. 52 51 d circuit. OM E/R". Dlicable rear con	nbination lam	10A 10A b harness connec-
the inspection YES [When tail NO >> Check CHECK TAIL Turn ignition Check that th Uni Tail Iam Tail Iam the inspection YES >> GO NO >> Repl CHECK TAIL CONSULT Disconnect r Turn ignition Select "EXTI While operat tor and grout Re Conse	lamp RH or Ll ck parking lam LAMP (LH) FU switch OFF. he following fu it np RH np LH result normal? TO 3. lace the blown LAMP OUTPU rear combination switch ON. ERNAL LAMP ting the test ite ind. (+) ear combination la ector	H does not turn (p circuit. Refer t USE uses are not blow Location IPDM E/R ? n fuse after repair JT VOLTAGE on lamp RH or L PS" in "Active Tes ems, check voltage	ring the affected H connector.	Fuse No. 52 51 d circuit.	nbination lam	10A 10A voltage (Approx.) Battery voltage

TAIL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

Is the inspection result normal?

YES >> GO TO 6.

NO >> GO TO 4.

4.CHECK TAIL LAMP POWER SUPPLY (SHORT) CIRCUIT

1. Disconnect IPDM E/R connector and rear combination lamp RH or LH connector.

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

(+)			
IPDI	M E/R	(-)	Continuity	
Connector	Terminal			
E121	9	Ground	No	
	10	Ground	NO	

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

5. CHECK TAIL LAMP POWER SUPPLY (OPEN) CIRCUIT

1. Turn ignition switch OFF.

- 2. Disconnect IPDM E/R connector and rear combination lamp connector.
- 3. Check continuity between IPDM E/R harness connector and rear combination lamp harness connector.

Rear combination lamp			IPDN	Continuity	
Con	nector	Terminal	Connector	Terminal	Continuity
RH	B459	6	E121	9	Yes
LH	B460	0	EIZI	10	Tes

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to <u>PCS-37. "Removal and Installation"</u>

NO >> Repair or replace harness.

6.CHECK TAIL LAMP GROUND CIRCUIT

Check continuity between rear combination lamp harness connector and ground.

	Rear combination lamp		Continuity		
Con	Connector		Ground	Continuity	
RH	B459	7	Giouna	Yes	
LH	B460	1		res	

Is the inspection result normal?

YES >> Replace rear combination lamp. Refer to <u>EXL-136, "Removal and Installation"</u>.

NO >> Repair or replace harness.

LICENSE PLATE LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >					
LICENSE PLATE LAMP	CIRCUIT				
Component Function Chec	k				INFOID:000000011564130
1. CHECK TAIL LAMP LH OPERA	TION				
Check that the tail lamp LH is turne					
is the inspection result normal?					
YES >> GO TO 2.					
NO >> Check tail lamp circuit.		I, "Compone	ent Function	Check".	
2.CHECK LICENSE PLATE LAM	P OPERATION				
 CONSULT Select "EXTERNAL LAMPS" ir While operating the lighting sw 				urned ON.	
TAIL : License plate la	amp ON				
Off : License plate la	amp OFF				
Is the inspection result normal?					
YES >> License plate lamp circ NO >> Refer to <u>EXL-103</u> , "Dia		<u>.</u> "			
Diagnosis Procedure		<u> </u>			
					INFOID:000000011564131
Regarding Wiring Diagram informa	tion. Refer to <u>EXL</u>	<u>63, "Wiring</u>	Diagram".		
1. CHECK LICENSE PLATE LAMF	PBULB				
Check the applicable lamp bulb.					
Is the inspection result normal? YES >> GO TO 2.					
NO >> Replace bulb.					
2. CHECK LICENSE PLATE LAM	P POWER SUPPL	Y CIRCUIT			
1. Turn ignition switch OFF.					
 Disconnect IPDM E/R connect Check continuity between IPDI 				lamn har	noss connector
			·		
License plate lam	-	IPDM E/R		Continuity	
Connector	Terminal	Connec	tor	Terminal	
RH D562 LH D561	1	E121		10	Yes
Is the inspection result normal?					
YES >> GO TO 3.					
NO >> Repair or replace harn					
3.CHECK LICENSE PLATE LAMF	P GROUND CIRC	UIT			
Check continuity between license p	plate lamp harness	s connector	and ground		
License plate	e lamp				
Connector	Termina	al			Continuity
RH D562			Ground		
LH D561	2				Yes

Is the inspection result normal?

< DTC/CIRCUIT DIAGNOSIS >

LICENSE PLATE LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

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

FRONT FOG LAMP CIRCUIT

[LED H	HEADLAMP]
--------	-----------

< DTC/CIRCUIT DIAGNOSIS	\$>		[L]	ED HEADLAMP]
FRONT FOG LAMP	CIRCUIT			
Component Function Cl	neck			INFOID:000000011564132
1. CHECK FRONT FOG LAM	P OPERATION			
CONSULT 1. Select "EXTERNAL LAMF 2. While operating the test ite				
Fog : Front fog Is Off : Front fog Is s the inspection result normal YES >> Front fog lamp circle	amp OFF ?			
NO $>>$ Refer to <u>EXL-105</u> ,		edure".		
Diagnosis Procedure				INFOID:000000011564133
Regarding Wiring Diagram info 1. CHECK FRONT FOG LAM 1. Turn ignition switch OFF. 2. Check that the following fu	P FUSE	<u>EXE-30. Will</u>	<u>ing Diagrann</u> .	
Unit	Location		Fuse No.	Capacity
Front fog lamp	IPDM E/R		49	15A
Is the inspection result normal YES >> GO TO 3. NO >> GO TO 2. 2.CHECK FRONT FOG LAM		TAGE		
 Disconnect front fog lamp Turn ignition switch ON. Select "EXTERNAL LAMF 	PS" in "Active Test		M E/R". IPDM E/R harness connecto	r and ground.
(+)				Voltage
Front fog lam		(–)	Test item	(Approx.)
Connector	Terminal			

			1	Ground		
	LH	E242		Ground	LAMPS	
	LII					
Is the ir	nspection i	result normal?				
YES	>> GO T	TO 5.				
NO	>> GO T	TO 3.				

1

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

E241

1. Disconnect applicable front fog lamp connector and IPDM E/R connector.

Check continuity between IPDM E/R harness connector and ground. 2.

RH

Ground

Battery voltage

0 V

Battery voltage

0 V

Fog

Off

Fog

Off

EXTERNAL

Ν

Ο

Ρ

FRONT FOG LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

IPDN	/I E/R		Continuity
Connector	Terminal	Ground	Continuity
E217	78	Ground	No
	79		110

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

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

1. Turn ignition switch OFF.

2. Disconnect IPDM E/R connector.

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

Front fo	Front fog lamp		IPDM E/R		Continuity
Conr	nector Terminal		Connector	Connector Terminal	
RH	E241	1	E217	78	Yes
LH	E242		EZIT	79	res

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-37. "Removal and Installation".

NO >> Repair or replace harness.

5.CHECK FRONT FOG LAMP GROUND CIRCUIT

Check continuity between front fog lamp harness connector and ground.

	Front fog lamp		Continuity	
Conr	nector	Terminal		Continuity
RH	E241	0	Ground	Yes
LH	E242	2		165

Is the inspection result normal?

YES >> Replace bulb. Refer to EXL-146, "Bulb Specifications".

NO >> Repair or replace harness.

TURN SIGNAL LAMP CIRCUIT

			GNAL LAWP			
				[LED HEADLAMP]		
		MP CIRCUIT				
Compone	INFCID:0000000115652					
1.снеск	.CHECK TURN SIGNAL LAMP					
	FLASHER" in	"Active Test" mode st items, check that				
LH	: Turn si	gnal lamp LH blink	king			
RH	: Turn si	gnal lamp RH blinl	king			
OFF	: The tur	n signal lamp OFF				
	ction result nor					
		mp circuit is normal. 107, "Diagnosis Pro				
	s Procedure	-		INFOID:0000000115652		
- J						
	pplicable lamp	LAMP BULB	proper bulb standa	ard is in use and the bulb is not open.		
	<u>JK ?</u> GO TO 2.					
NO >>	Replace the b					
2. CHECK ⁻	TURN SIGNAL	LAMP OUTPUT V	OLTAGE			
	nition switch O					
connect				or connector and the rear combination lam		
	nition switch O		ne voltage between	the front combination lamp harness connec		
tor and		Toperating, check ti	le voltage between	The none combination ramp namess connect		
Cor	Front combinat	tion lamp Terminal	- (-)	Voltage		
LH	E234	Terminar				
		9	Ground			
RH	E240			T S PKID0926E		
5. With tu	rn signal swite	ch operating, check	the voltage between	een the door mirror harness connector and		
ground.			-			
	Door mir	ror				

Door mir	Door mirror		Voltage
Connector	Terminal	(-)	Voltage

TURN SIGNAL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

LH	D4			
RH	D107	20	Ground	

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

Connecto	tor	Terminal			
	Connector		(-)	Voltage	
LH	B460				
RH	B459	4	Ground		

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 3.

3.CHECK TURN SIGNAL LAMP POWER SUPPLY CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect BCM connector.

3. Check continuity between the BCM harness connector and the front combination lamp connector.

Front combination lamp			BCM		Continuity
	Connector		Connector	Terminal	Continuity
LH	E234	9	M80	117	Yes
RH	E240			105	

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

Door mirror lamp			BCM		Continuity
	Connector		Connector	Terminal	Continuity
LH	D4	20	M80 -	117	Yes
RH	D107			105	

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

Rear combination lamp			BCM		Continuity
	Connector		Connector	Terminal	Continuity
LH	B460	8	M20	103	Yes
RH	B459		WZ0	92	165

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair the harness or connector.

4.CHECK TURN SIGNAL LAMP GROUND CIRCUIT

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

TURN SIGNAL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

$\begin{array}{c c c c c } \hline \mbox{Terminal} & Termin$	ConnectorTerminalLHE23410GroundYesRHE24010GroundYesCheck continuity between the door mirror harness connector and ground. Yes Yes $Door mirror lamp—ContinuityConnectorTerminal—LHD4RH21GroundRear combination lampYesConnectorTerminal—ConnectorTerminalYesCheck continuity between the rear combination lamp harness connector and ground.YesConnectorTerminal—ConnectorTerminal—LHB460RH7GroundHB4597GroundYesYesYesYesYesYes$		Front combination	on lamp		Continuity
RHE24010GroundYesCheck continuity between the door mirror harness connector and ground.Door mirror lamp Connector—ContinuityLHD421GroundYesRHD10721GroundYesContinuity between the rear combination lamp harness connector and ground.Rear combination lampContinuity between the rear combination lamp harness connector and ground.Rear combination lampContinuityContinuityRear combination lampContinuityPresentation lampContinuityContinuityPresentation lampContinuityContinuityPresentation lampContinuityContinuityPresentation lampContinuityContinuityPresentation lampPresentation lamp <t< th=""><th>RHE24010GroundYesCheck continuity between the door mirror harness connector and ground.$\hline Door mirror lamp$—Continuity$Connector$Terminal—ContinuityLHD421GroundYesRHD10721GroundYesCheck continuity between the rear combination lamp harness connector and ground.YesYes$Rear combination lamp$—ContinuityLHB4607GroundYesLHB4597GroundYes$Rei nspection result normal?S>> Replace the malfunctioning lamp.Image: State State$</th><th></th><th></th><th>Terminal</th><th></th><th>Continuity</th></t<>	RHE24010GroundYesCheck continuity between the door mirror harness connector and ground. $\hline Door mirror lamp$ —Continuity $Connector$ Terminal—Continuity LH D421GroundYesRHD10721GroundYesCheck continuity between the rear combination lamp harness connector and ground.YesYes $Rear combination lamp$ —Continuity LH B4607GroundYes LH B4597GroundYes $Rei nspection result normal?S>> Replace the malfunctioning lamp.Image: State State$			Terminal		Continuity
RH E240 Check continuity between the door mirror harness connector and ground. Door mirror lamp	RH E240 Check continuity between the door mirror harness connector and ground. Door mirror lamp			10	Ground	Yes
$\begin{tabular}{ c c c c c } \hline \hline Door mirror lamp & & & & & & & & & & & & & & & & & & &$	$\begin{tabular}{ c c c c c } \hline \hline Door mirror lamp & & & & & & & \\ \hline \hline Connector & Terminal & & & & & & \\ \hline Continuity & D4 & & & & & & \\ \hline \hline LH & D4 & & & & & & \\ \hline RH & D107 & & & & & & & \\ \hline Check continuity between the rear combination lamp harness connector and ground. & & & & \\ \hline \hline Check continuity between the rear combination lamp harness connector and ground. & & & & \\ \hline \hline \hline Connector & Terminal & & & & & \\ \hline \hline \hline Connector & Terminal & & & & & \\ \hline \hline LH & B460 & & & & & & \\ \hline RH & B459 & 7 & & & & & & \\ \hline respection result normal? & & & & \\ \hline \hline S & >> Replace the malfunctioning lamp. & & & & \\ \hline \end{tabular}$					
$\begin{tabular}{ c c c c c } \hline Continuity & Terminal & - & Continuity & Continuity & Continuity & Pes & Pe$	$\begin{tabular}{ c c c c c } \hline Continuity & Terminal & - & Continuity \\ \hline Continuity & Terminal & & & & & & & & & & & & & & & & & & &$	Check con	tinuity between t	he door mirror harness c	onnector and ground.	
Connector Terminal LH D4 21 Ground Yes RH D107 Person Yes Check continuity between the rear combination lamp harness connector and ground. Rear combination lamp	ConnectorTerminalLHD421GroundYesRHD10721GroundYesCheck continuity between the rear combination lamp harness connector and ground.Rear combination lampContinuityContinuityTerminalContinuityContinuityContinuityPrevious (Continuity)ContinuityContinuityContinuityContinuityPrevious (Continuity)ContinuityContinuityContinuityContinuityContinuityPrevious (Continuity)ContinuityPrevious (Continuity)ContinuityContinuityContinuityPrevious (Continuity)Previous (Continuity)ContinuityPrevious (Continuity)ContinuityPrevious (Continuity)ContinuityPrevious (Continuity)Previous (Continuity)Previous (Continuity)Previous (Continuity)Previous (Continuity)Previous (Continuity)Previous (Continuity)Previous (Continuity) <td></td> <td>Door mirror l</td> <td>amp</td> <td></td> <td>Orationity</td>		Door mirror l	amp		Orationity
RHD10721GroundYesCheck continuity between the rear combination lamp harness connector and ground.Rear combination lampConnectorTerminal	RHD10721GroundYesCheck continuity between the rear combination lamp harness connector and ground.Rear combination lamp Connector	Conn	ector	Terminal		Continuity
RH D107 Check continuity between the rear combination lamp harness connector and ground. Rear combination lamp	RH D107 Check continuity between the rear combination lamp harness connector and ground. Rear combination lamp			21	Ground	Yes
Rear combination lamp Continuity Connector Terminal Continuity LH B460 7 Ground Yes RH B459 7 Ground Yes the inspection result normal? Yes Yes Yes	Rear combination lampContinuityConnectorTerminal–ContinuityLHB4607GroundYesRHB4597GroundYesthe inspection result normal?ES>> Replace the malfunctioning lamp.Image: Source of the second sec	RH	D107	21	Cround	100
Connector Terminal Continuity LH B460 7 Ground Yes RH B459 7 Ground Yes the inspection result normal? Yes Yes Yes	Connector Terminal Continuity LH B460 7 Ground Yes RH B459 7 Ground Yes ine inspection result normal? S >> Replace the malfunctioning lamp.	Check con	tinuity between tl	he rear combination lamp	p harness connector and gr	ound.
Connector Terminal Continuity LH B460 7 Ground Yes RH B459 7 Ground Yes he inspection result normal? ES >> Replace the malfunctioning lamp.	Connector Terminal Continuity LH B460 7 Ground Yes RH B459 7 Ground Yes ine inspection result normal? S >> Replace the malfunctioning lamp.		Door combinatio			
LH B460 7 Ground Yes RH B459 7 Ground Yes the inspection result normal? Yes Yes	LH B460 7 Ground Yes RH B459 7 Ground Yes te inspection result normal? S >> Replace the malfunctioning lamp.	Corr			—	Continuity
RH B459 7 Ground Yes the inspection result normal? 'ES >> Replace the malfunctioning lamp.	RH B459 7 Ground Yes ne inspection result normal? IS >> Replace the malfunctioning lamp.			i e i i i i i di		
the inspection result normal? ES >> Replace the malfunctioning lamp.	ne inspection result normal? S >> Replace the malfunctioning lamp.			7	Ground	Yes
ES >> Replace the malfunctioning lamp. O >> Repair the harness or connector.	 S >> Replace the malfunctioning lamp. >> Repair the harness or connector. 		n result normal?			
		S >> Re	place the malfun	ctioning lamp.		
		S >> Re	place the malfun	ctioning lamp.		
		S >> Re	place the malfun	ctioning lamp.		
		S >> Re	place the malfun	ctioning lamp.		

< DTC/CIRCUIT DIAGNOSIS >

OPTICAL SENSOR

Component Function Check

1. CHECK OPTICAL SENSOR SIGNAL BY CONSULT

CONSULT

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

Monitor item	Condition		Voltage (Approx.)
OPTISEN (DTCT)	Optical sensor	When illuminating	3.1 V or more *
	Optical sensor	When shutting off light	0.6 V or less

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

Is the inspection result normal?

YES >> Optical sensor is normal.

NO >> Refer to EXL-110, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:000000011564137

Regarding Wiring Diagram information. Refer to EXL-43. "Wiring Diagram".

1. CHECK OPTICAL SENSOR POWER SUPPLY INPUT

1. Turn ignition switch ON.

2. Turn lighting switch AUTO.

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

	(+)		Valtaga
Optica	al sensor	(-)	Voltage (Approx.)
Connector	Terminal		
M15	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.

(+)			Mallana
Optic	al sensor	(-)	Voltage (Approx.)
Connector	Terminal		
M15	3	Ground	0 V

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 6.

 ${f 3}.$ CHECK OPTICAL SENSOR SIGNAL OUTPUT

While illuminating the optical sensor, check voltage between optical sensor harness connector and ground.

INFOID:000000011564136

OPTICAL SENSOR

< DTC/CIRCUIT DIAGNOSIS >

					Valtara
Optical s	ensor	(-)		Condition	Voltage (Approx.)
Connector	Terminal				(FF - 7
M15	2	Ground	Optical sensor	When illuminating	3.1 V or more *
inito	-	Croana	optiodi concor	When shutting off light	0.6 V or less
e inspection re S >> GO TO >> Repla HECK OPTIC Furn ignition s Disconnect op	esult normal? O 7. ce the optical se AL SENSOR (C witch OFF. otical sensor cor	ensor. Refer DPEN) CIRC Inector and I	to <u>EXL-133, "Re</u> UIT BCM connector.	e standard if brightness moval and Installation" or and BCM harness co	
0.0	ical concer				
Connector	ical sensor Termina	al	Connector	CM Terminal	Continuity
M15	1	ai	M18	3	Yes
he inspection re	-		IVIIO	5	165
Connector	Optical sensor	Terminal		Ground	Continuity
M15		1			No
>> Repai CHECK OPTIC Turn ignition s Disconnect op	ce BCM. Refer t r or replace harr AL SENSOR G witch OFF. otical sensor cor	ness. ROUND CIF	3CM connector.	stallation". or and BCM harness co	onnector.
Ор	tical sensor		E	BCM	
Connector	Termin	al	Connector	Terminal	Continuity
M15	3		M18	17	Yes
	sult normal?				
e inspection re	Joan Horman.				

OPTICAL SENSOR

< DTC/CIRCUIT DIAGNOSIS >

Optica	l sensor	B	СМ	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M15	2	M18	4	Yes

Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair or replace harness.

8. CHECK OPTICAL SENSOR (SHORT) CIRCUIT

Check continuity between optical sensor harness connector and ground.

Optical sensor			Continuity
Connector	Terminal	Ground	Continuity
M15	2		No

Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-82, "Removal and Installation"</u>.

NO >> Repair or replace harness.

HAZARD SWITCH

[LED HEADLAMP]

HAZARD SWITCH					
Component Function	Check				A INFOID:000000011564138
1.CHECK HAZARD SWIT	CH SIGNAL BY (CONSULT			В
 CONSULT 1. Turn ignition switch ON 2. Select "FLASHER" in "I 3. While operating the haz 	Data Monitor" mo				C
Monitor item		Cor	ndition		Monitor status
HAZARD SW	Hazard sv	vitch		ON OFF	On Off
Is the inspection result normYES>> Hazard switch onNO>> Refer to EXL-1Diagnosis Procedure	circuit is normal.	ocedure".			E INFOID:000000011564139
Regarding Wiring Diagram 1. CHECK HAZARD SWITT 1. Turn ignition switch OF 2. Disconnect hazard switt 3. Check voltage between	CH SIGNAL INPI F. ch connector.	TL			G H I
	(+)		-		
	rd switch		_	(-)	Voltage (Approx.)
Connector M83	Termina 2	al		Ground	Battery voltage K
Is the inspection result normYES>> GO TO 4.NO>> GO TO 2. 2. CHECK HAZARD SWIT1.Disconnect BCM connect2.Check continuity between	CH SIGNAL (OP			ind BCM harness	Connector.
Hazard swit				CM	Continuity
Connector M83	Terminal 2		nector /18	Terminal 36	Yes
Is the inspection result norm YES >> GO TO 3. NO >> Repair or replace 3. CHECK HAZARD SWITE Check continuity between h	nal? ce harness. CH SIGNAL (SH	ORT) CIR	CUIT		P
	l switch				Continuity
Connector M83	Terminal 2			Ground	No

< DTC/CIRCUIT DIAGNOSIS >

HAZARD SWITCH

[LED HEADLAMP]

< DTC/CIRCUIT DIAGNOSIS >

Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-82, "Removal and Installation"</u>.

NO >> Repair or replace harness.

4. CHECK HAZARD SWITCH GROUND CIRCUIT

Check continuity between hazard switch harness connector and ground.

Hazard	Hazard switch		Continuity
Connector	Terminal	Ground	Continuity
M83	3		Yes

Is the inspection result normal?

YES >> Replace hazard switch. Refer to EXL-135, "Removal and Installation".

NO >> Repair or replace harness.

EXTERIOR LIGHTING SYSTEM SYMPTOMS

<u>SYMPTOM DIAGNOSIS</u> SYMPTOM DIAGNOSIS EXTERIOR LIGHTING SYSTEM SYMPTOMS

Symptom Table

С

INFOID:000000011517317 B

[LED HEADLAMP]

NOTE:

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

Sym	ptom	Possible cause	Inspection item
Headlamp (HI) is not turned ON	One side	 Fuse Headlamp (HI) power supply circuit Front combination lamp internal circuit LED (headlamp high) LED headlamp control module Harness IPDM E/R 	Headlamp (HI) circuit Refer to <u>EXL-89, "Component</u> <u>Function Check"</u> .
	Both sides	Symptom diagnosis "BOTH SIDE HEADLAMPS (HI) AF Refer to <u>EXL-119, "Diagnosis Proc</u>	
High beam indicator lamp [Headlamp (HI) is turned (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 <u>EXL-91, "Component</u> <u>Function Check"</u> .
	Both sides	Symptom diagnosis "BOTH SIDE HEADLAMPS (LO) A Refer to <u>EXL-120, "Diagnosis Proc</u>	
Headlamp (HI) and (LO) is	s not turned ON	 LED headlamp ground circuit Front combination lamp internal circuit LED headlamp control module Harness 	LED headlamp Refer to <u>EXL-96, "Diagnosis Proce-</u> <u>dure"</u> .
Headlamp warning remair [Headlamp (LO) is turned		 LED headlamp warning signal circuit Front combination lamp internal circuit LED headlamp control module Harness Combination meter 	Headlamp warning Refer to <u>MWI-15, "INFORMATION</u> <u>DISPLAY : System Description"</u> .
Each lamp is not turned OI	N/OFF with lighting switch	 Combination switch input/out- put signal circuit Combination switch BCM 	Combination switch Refer to <u>BCS-80, "Symptom Table"</u>
AUTO		 Optical sensor power supply/ ground/signal circuit Optical sensor BCM 	Optical sensor Refer to <u>EXL-110. "Component</u> <u>Function Check"</u> .

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 <u>EXL-97, "Component</u> <u>Function Check"</u> .
Side marker lamp is not turned ON [Parking lamp is turned ON]	Front combination lamp internal circuit • Side marker lamp • Control circuit • Harness	Replace front combination lamp Refer to <u>EXL-128, "Removal and In-</u> stallation".
Tail lamp is not turned ON	 Fuse Tail lamp power supply/ground circuit Rear combination lamp internal circuit LED (tail lamp) Harness IPDM E/R 	Tail lamp circuit Refer to <u>EXL-101, "Component</u> <u>Function Check"</u> .
License plate lamp is not turned ON [Tail lamp is turned ON]	 License plate lamp power sup- ply/ground circuit License plate lamp bulb License plate lamp bulb socket IPDM E/R 	License plate lamp circuit Refer to <u>EXL-103, "Component</u> <u>Function Check"</u> .
Parking lamp, license plate lamp, side marker lamp and tail lamp are not turned ON	Symptom diagnosis "PARKING, LICENSE PLATE, SID NOT TURNED ON" Refer to <u>EXL-121, "Diagnosis Proc</u>	E MARKER AND TAIL LAMPS ARE
Position lamp indicator is not turned ON (Parking lamp, license plate lamp, side marker lamp and tail lamp are turned ON)	Combination meter	 Combination meter "Data Monitor""LIGHT IND" BCM (HEAD LAMP) "Active Test""TAIL LAMP"
Daytime running light is not turned ON	 Fuse Daytime running light relay Daytime running light relay power supply/control signal cir- cuit 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 <u>EXL-93</u>, "Component. <u>Function Check"</u>. BCM (HEAD LAMP) "Data Monitor""ENGINE STATE" Combination meter "Data Monitor""PKB SW"

EXTERIOR LIGHTING SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[LED HEADLAMP]

Symp	otom	Possible cause	Inspection item
Back-up lamp is not turned ON		 Fuse Back-up lamp relay Back-up lamp relay power sup- ply/control signal circuit Back-up lamp power supply/ ground circuit Rear combination lamp internal circuit Back-up lamp Harness Joint connector TCM 	Back-up lamp circuit Refer to <u>EXL-101, "Component</u> <u>Function Check"</u> .
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 power supply/ground circuit Bulb (rear turn signal lamp) Rear turn signal lamp) Rear turn signal lamp) Rear turn signal lamp) Rear turn signal lamp bulb socket/harness 	Turn signal lamp circuit Refer to <u>EXL-107, "Component</u> <u>Function Check"</u> .
	Indicator lamp is includ- ed	 Combination switch input/out- put signal circuit Combination switch BCM 	Combination switch Refer to <u>BCS-80, "Symptom Table"</u> .
	One side	Combination meter	_
Turn signal indicator lamp does not blink	Both sides (Always)	Turn indicator signalBCMCombination 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 supply/ground circuit Combination meter 	Combination meter Power supply and ground circuit Refer to <u>BCS-75. "Diagnosis Proce-</u> <u>dure"</u> .
 Hazard warning lamp do (Turn signal is normal) Hazard warning lamp co 		 Hazard switch signal/ground circuit Integral switch (hazard switch) BCM 	Hazard switch Refer to <u>EXL-113. "Component</u> 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 <u>EXL-105, "Component</u> <u>Function Check"</u> .
	Both sides	Symptom diagnosis "BOTH SIDE FRONT FOG LAMPS Refer to <u>EXL-122, "Diagnosis Proc</u>	
Front fog lamp indicator la (Front fog lamp is turned C	•	Combination meter	 Combination meter "Data Monitor""FR FOG IND" BCM (HEAD LAMP) "Active Test""FR FOG LAMP"

NORMAL OPERATING CONDITION

Description

INFOID:000000011517318

[LED HEADLAMP]

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 aged 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 [LED HEADLAMP] < SYMPTOM DIAGNOSIS > BOTH SIDE HEADLAMPS (HI) ARE NOT TURNED ON А Description INFOID:000000011517319 Both side headlamps (HI) are not turned ON when setting to the lighting switch HI or PASS. В **Diagnosis** Procedure INFOID:000000011517320 1. COMBINATION SWITCH INSPECTION С Check combination switch. Refer to BCS-80, "Symptom Table". Is the inspection result normal? D YES >> GO TO 2. NO >> Repair or replace the malfunctioning part. 2.CHECK HEADLAMP (HI) REQUEST SIGNAL INPUT Е ()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	Conc	dition	Monitor status	
	Lighting switch	HI or PASS	On	(
HL HI REQ	(2ND)	LO	Off	

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-37, "Removal and Installation".

NO >> Replace BCM. Refer to <u>BCS-82. "Removal and Installation"</u>.

EXL

Μ

Ν

Ο

Ρ

Κ

F

Н

BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

Description

Both side headlamps (LO) are not turned ON in any condition.

Diagnosis Procedure

1.CHECK COMBINATION SWITCH

Check combination switch. Refer to <u>BCS-80, "Symptom Table"</u>.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

2.CHECK HEADLAMP (LO) REQUEST SIGNAL INPUT

With CONSULT 1. Select "HL LO

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

2. While operating the lighting switch, check the monitor status.

Monitor item	Con	dition	Monitor status
HL LO REQ	Lighting switch	2ND	On
HE LO REQ		OFF	Off

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-37. "Removal and Installation".

NO >> Replace BCM. Refer to <u>BCS-82, "Removal and Installation"</u>.

INFOID:000000011517321

INFOID:000000011517322

PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMPS ARE NOT TURNED ON

[LED HEADLAMP] < SYMPTOM DIAGNOSIS > PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMPS ARE NOT А TURNED ON Description INFOID:000000011517323 В The parking, license plate, side marker and tail lamps are not turned ON in any condition. **Diagnosis** Procedure INFOID:000000011517324 1. COMBINATION SWITCH INSPECTION Check combination switch. Refer to BCS-80, "Symptom Table". D Is the combination switch normal? YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

2.CHECK TAIL LAMP RELAY REQUEST SIGNAL INPUT

(
)With CONSULT

- 1. Select "TAIL & CLR REQ" in "Data Monitor" mode of "IPDM E/R".
- 2. While operating the lighting switch, check the monitor status.

Monitor item	Con	dition	Monitor status	G
TAIL & CLR REQ	Lighting switch	1ST	On	_
		OFF	Off	н

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-37. "Removal and Installation".

NO >> Replace BCM. Refer to <u>BCS-82, "Removal and Installation"</u>.

EXL

Μ

Ν

Ο

Ρ

Κ

Е

F

BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

Description

Both side front fog lamps are not turned ON in any condition.

Diagnosis Procedure

1.COMBINATION SWITCH INSPECTION

Check combination switch. Refer to <u>BCS-80, "Symptom Table"</u>.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

2.CHECK FRONT FOG LAMP REQUEST SIGNAL INPUT

() With CONSULT

1. Select "FR FOG REQ" in "Data Monitor" mode of "IPDM E/R".

2. While operating the front fog lamp switch, check the monitor status.

Monitor item	Con	dition	Monitor status
FR FOG REQ	Front fog lamp switch	ON	On
FK FUG KEQ	(With lighting switch 1ST)	OFF	Off

Is the item status normal?

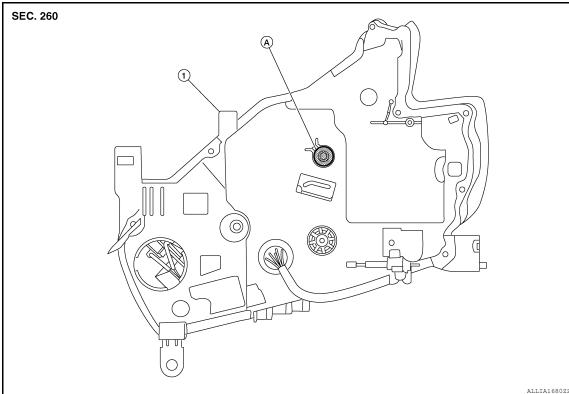
YES >> Perform the front fog lamp diagnosis. Refer to EXL-105, "Diagnosis Procedure".

NO >> Replace BCM. Refer to <u>BCS-82, "Removal and Installation"</u>.

INFOID:000000011517325

[LED HEADLAMP]

Inspection	³²⁰ B
PREPARATION BEFORE ADJUSTING Before performing aiming adjustment, check the following: • Make sure all tires are inflated to correct pressure. • Place vehicle and screen on level surface.	С
 Make sure 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. 	D
 Confirm spare tire, jack and tools are properly stowed. Carefully wipe off any dirt from headlamp lens. CAUTION: 	Е
 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. 	F
 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. 	G
 By regulation, no means for horizontal aim adjustment is provided from the factory; only vertical aim i adjustable. Use adjusting screw to perform aiming adjustment. Perform headlamp aiming if: 	is H
 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. 	I
AIMING ADJUSTMENT SCREW	J



[LED HEADLAMP]

А

Κ

EXL

Μ

Ν

Ο

Ρ

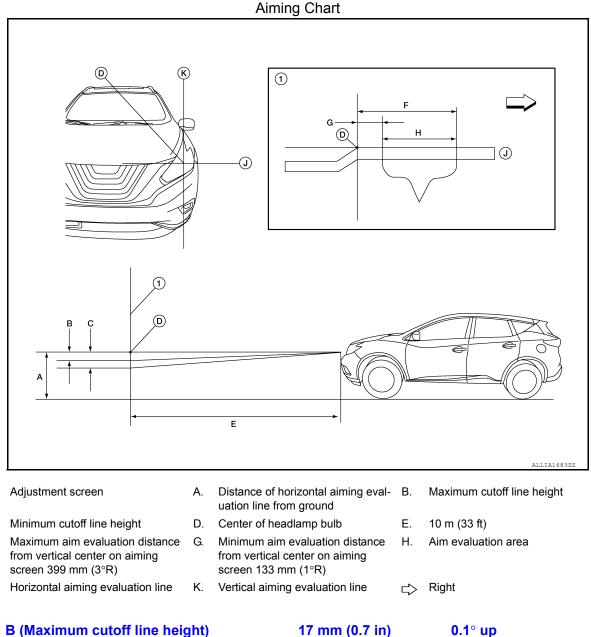
HEADLAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

- 1. Front combination lamp (view from rear)
- A. Headlamp HI/LO (UP/DOWN) adjustment screw

INEQID:000000011568821

Aiming Adjustment Procedure



B (Maximum cutoff line height)

C (Minimum cutoff line height)

LOW BEAM AND HIGH BEAM

NOTE:

1.

C.

F.

J.

- Basic illuminating area for evaluation and/or adjustment should be within range shown on aiming chart.
- 1. Use adjustment screw to perform aiming adjustment.
 - Ensure fog lamps are turned off.
- Block the opposite headlamp from projecting a beam pattern onto the adjustment screen, using a suitable object. Aim each headlamp individually.
 CAUTION:

44 mm (1.7 in)

0.25° down

Do not cover the lens surface with tape, etc.

3. Place the screen on the same level and flat surface as the vehicle. **NOTE:**

Revision: October 2014

EXL-124

2015 Murano

HEADLAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

[LED HEADLAMP]

Surface should be free of any debris that would cause a difference between the headlamp center and the adjustment screen. А Face the front of the vehicle to the screen and measure distance between the headlamp center and the screen surface. В Distance between the headlamp center and the screen (D) : 10 m (33 ft) 5. Start the engine. Turn the headlamp on. С 6. Determine the preferred vertical aim range dimensions, using the aiming chart. Measure the projected beam within the aim evaluation segment on the screen. 7. 8. Adjust the beam pattern of each headlamp until the aim evaluation segment (the area relative to both the D highest and lowest cutoff line height) is positioned within the vertical aim range dimensions shown on the aiming chart. Е F Н

K

EXL

Μ

Ν

Ο

Ρ

FRONT FOG LAMP AIMING ADJUSTMENT

Aiming Adjustment

INFOID:0000000011569150

[LED HEADLAMP]

PREPARATION BEFORE ADJUSTING

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

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

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

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

NOTE:

- For fog lamp aiming details, refer to regulations in your area.
- By regulation, no means for horizontal aim adjustment is provided from the factory; only vertical aim is adjustable.
- Use adjusting screw to perform aiming adjustment.
- Perform fog lamp aiming if:
- The vehicle front body has been repaired.
- The front fog lamp has been removed or replaced.
- Any outfitting has been installed.
- The vehicle's standard load condition has been substantially increased.

Aiming Adjustment Procedure

1. Place the screen.

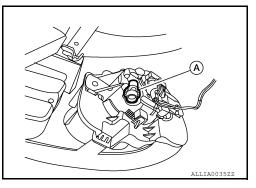
NOTE:

- Stop the vehicle facing the wall.
- Place the board on a plain road vertically.
- 2. Face the vehicle with the screen. Maintain 7.62 m (25.0 ft) between the front fog lamp center and the screen.
- 3. Start the engine. Turn the front fog lamp ON.
- NOTE:

Shut off the headlamp light with the board to prevent from illuminating the adjustment screen. **CAUTION:**

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

4. Adjust aiming by turning the adjusting screw (A).

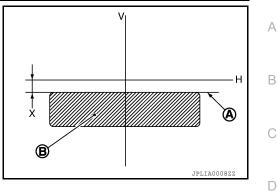


FRONT FOG LAMP AIMING ADJUSTMENT

< 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 lamp
 - V : Vertical center line of front fog lamp
 - X : Cutoff line height



EXL

Μ

Ν

Ο

Ρ

Е

F

Н

J

Κ

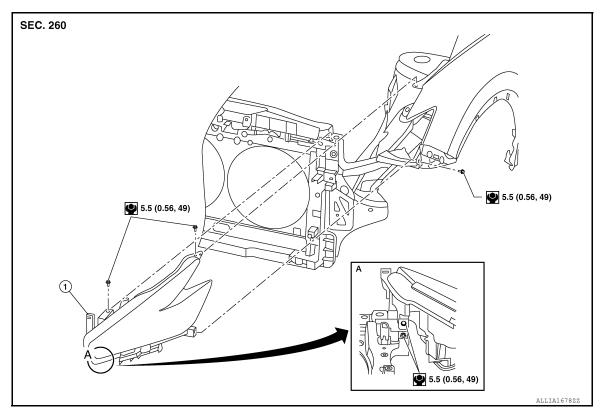
Revision: October 2014

REMOVAL AND INSTALLATION FRONT COMBINATION LAMP

Exploded View

INFOID:000000011568823

[LED HEADLAMP]



1. Front combination lamp

Removal and Installation

REMOVAL

- 1. Remove front bumper fascia. Refer to EXT-25, "Removal and Installation".
- 2. Remove front combination lamp bolts.
- 3. Pull front combination lamp forward.
- 4. Disconnect harness connectors from front combination lamp and remove.

INSTALLATION

Installation is in the reverse order of removal.

NOTE:

After installation, perform headlamp aiming adjustment. Refer to EXL-123, "Inspection".

Bulb Replacement

HEADLAMP BULB

The headlamp bulb is LED and not serviced separately. Refer to EXL-128, "Removal and Installation".

SIDE MARKER LAMP BULB

Removal

- 1. Rotate bulb socket counterclockwise and remove from front combination lamp.
- 2. Remove bulb from bulb socket.

Installation

Revision: October 2014



INFOID:000000011568824

INFOID:000000011568825

FRONT COMBINATION LAMP

< REMOVAL AND INSTALLATION >	[LED HEADLAMP]	
Installation is in the reverse order of removal. CAUTION: After installing bulb, install bulb socket securely for watertightness.		А
TURN SIGNAL LAMP BULB		_
Removal		В
 Remove front combination lamp. Refer to <u>EXL-128</u>, "Removal and Installation". Rotate bulb socket counterclockwise and remove from front combination lamp. Remove bulb from bulb socket. 		С
Installation Installation is in the reverse order of removal. CAUTION:		D
After installing bulb, install bulb socket securely for watertightness.		E
		F
		G

EXL

M

Ν

Ο

Ρ

Н

J

Κ

FRONT FOG LAMP

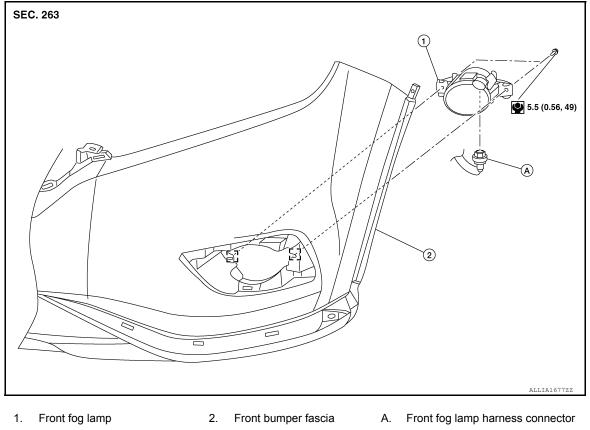
< REMOVAL AND INSTALLATION >

FRONT FOG LAMP

Exploded View

INFOID:000000011568831

[LED HEADLAMP]



Metal clip

Removal and Installation

INFOID:000000011568832

REMOVAL

- 1. Partially remove front fender protector. Refer to EXT-36, "FENDER PROTECTOR : Exploded View".
- 2. Disconnect harness connector from front fog lamp.
- 3. Remove front fog lamp bolts and front fog lamp.

INSTALLATION

Installation in the reverse order of removal.

NOTE:

After installation, perform front fog lamp aiming adjustment. Refer to EXL-126, "Aiming Adjustment".

Bulb Replacement

INFOID:000000011568833

WARNING:

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

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

REMOVAL

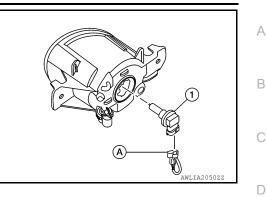
1. Partially remove front fender protector. Refer to <u>EXT-38</u>, <u>"FRONT OVER FENDER : Removal and Installa-</u> tion".

FRONT FOG LAMP

< REMOVAL AND INSTALLATION >

[LED HEADLAMP]

- 2. Disconnect harness connector from front fog lamp (A).
- 3. Rotate bulb (1) counterclockwise and remove.



INSTALLATION Installation is in the reverse order of removal. CAUTION: Install bulb securely for watertightness.



Μ

Ν

Ο

Ρ

Е

F

G

Н

J

Κ

DOOR MIRROR TURN SIGNAL LAMP

Removal and Installation

< REMOVAL AND INSTALLATION >

The door mirror turn signal lamp is serviced as part of the door mirror. Refer to <u>MIR-21, "Removal and Installa-</u>tion".

INFOID:000000011568842

OPTICAL SENSOR

< REMOVAL AND INSTALLATION >

OPTICAL SENSOR

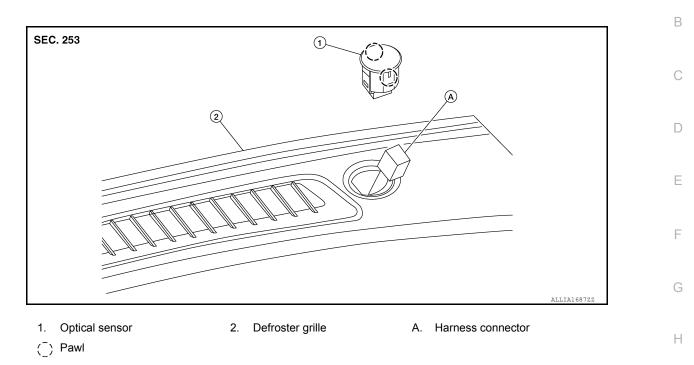
Exploded View

INFOID:000000011568844

INFOID:000000011568845

А

[LED HEADLAMP]

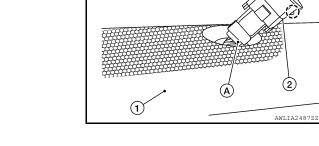


Removal and Installation

REMOVAL

Release pawls and remove optical sensor (2) from defroster grille (1) using a suitable tool.

(_): Pawl



INSTALLATION Installation is in the reverse order of removal.

J

Κ

EXL

Μ

LIGHTING & TURN SIGNAL SWITCH

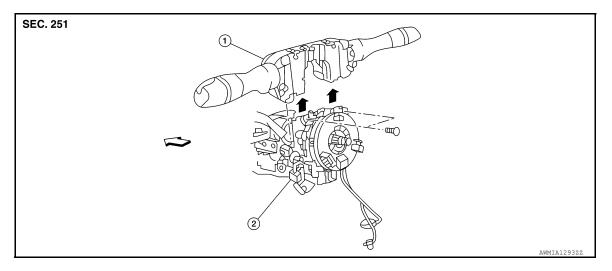
< REMOVAL AND INSTALLATION >

LIGHTING & TURN SIGNAL SWITCH

Exploded View

INFOID:000000011569096

[LED HEADLAMP]



- 1. Combination switch
- 2. Combination switch harness connector <>> Front

Removal and Installation

INFOID:000000011569097

REMOVAL

- 1. Disconnect both the negative and positive battery terminals, then wait at least three minutes. Refer to <u>PG-</u> <u>86, "Exploded View"</u>.
- 2. Remove the steering column covers. Refer to IP-18, "Removal and Installation".
- 3. Remove the combination switch screws.
- 4. 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 <u>SRC-17, "SRS Final Check"</u>.

HAZARD SWITCH

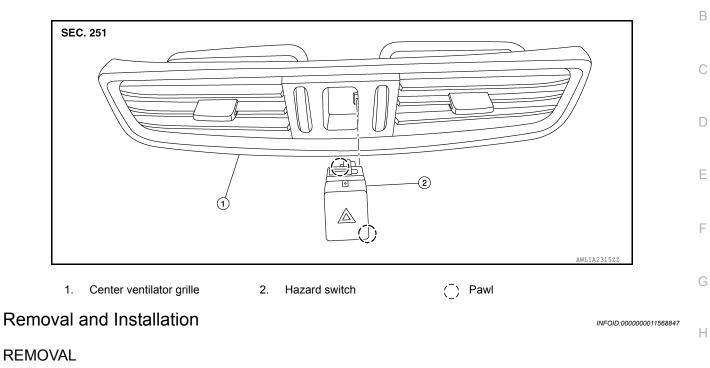
< REMOVAL AND INSTALLATION >

HAZARD SWITCH

Exploded View

INFOID:000000011568846

А



- 1. Remove center ventilator grille. Refer to <u>VTL-10</u>, <u>"CENTER VENTILATOR DUCT : Removal and Installa-</u> tion".
- 2. Release pawls and remove hazard switch.

INSTALLATION

Installation is in the reverse order of removal.

Μ

Ν

Ο

Ρ

1

J

Κ

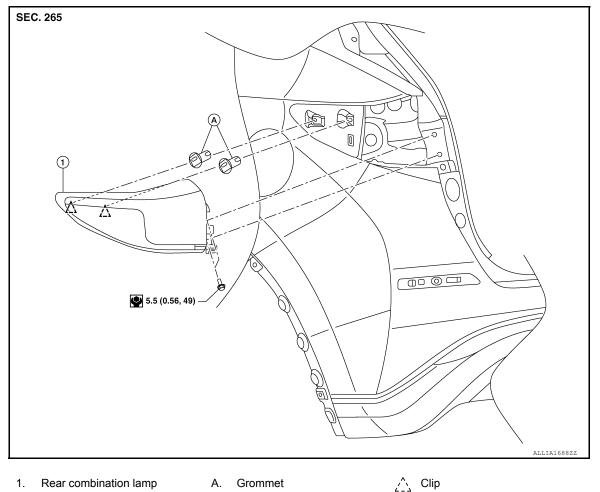
REAR COMBINATION LAMP

< REMOVAL AND INSTALLATION >

REAR COMBINATION LAMP

Exploded View

INFOID:000000011568854



1. Rear combination lamp Grommet A

Removal and Installation

REMOVAL

- 1. Remove rear combination lamp side cover.
- Remove rear combination lamp bolts.
- 3. Pull rear combination lamp sideward to release clip and locators.
- 4. Disconnect harness connector from rear combination lamp and remove.

INSTALLATION

Installation is in the reverse order of removal.

Bulb Replacement

INFOID:000000011568856

INFOID:000000011568855

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.

STOP LAMP BULB

The stop lamp bulb is LED and not serviced separately. Refer to EXL-136, "Removal and Installation".

Revision: October 2014

EXL-136

2015 Murano

REAR COMBINATION LAMP

[LED HEADLAMP]

< REMOVAL AND INSTALLATION > SIDE MARKER LAMP BULB

Rem	oval
1.	Remove rear combination lamp. Refer to EXL-136. "Removal and Installation".
2.	Rotate side marker bulb socket counterclockwise and remove.
3.	Remove side marker bulb from bulb socket.
Insta CAL	Illation allation is in the reverse order of removal. JTION: r installing bulb, install bulb socket securely for watertightness.
TUF	RN SIGNAL LAMP BULB
Rem	oval
2.	Remove rear combination lamp. Refer to <u>EXL-136, "Removal and Installation"</u> . Rotate turn signal lamp bulb socket counterclockwise and remove. Remove turn signal lamp bulb from bulb socket.
Insta CAL	illation allation is in the reverse order of removal. JTION: r installing bulb, install bulb socket securely for watertightness.

Η

J

Κ

А

В

С

D

Ε

F

G

EXL

Μ

Ν

0

Р

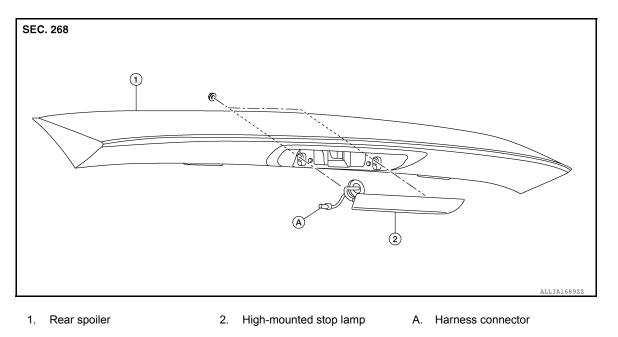
HIGH-MOUNTED STOP LAMP

< REMOVAL AND INSTALLATION >

HIGH-MOUNTED STOP LAMP

Exploded View

INFOID:000000011568857



Removal and Installation

REMOVAL

- 1. Remove rear spoiler. Refer to EXT-51, "Removal and Installation".
- 2. Remove nuts and remove high-mounted stop lamp.

INSTALLATION

Installation is in the reverse order of removal.

Bulb Replacement

HIGH-MOUNTED STOP LAMP BULB

The high-mounted stop lamp bulb is LED and not serviced separately. Refer to <u>EXL-138</u>, "Removal and Installation".

INFOID:0000000011568859

INFOID:000000011568858

LICENSE PLATE LAMP

< REMOVAL AND INSTALLATION >

LICENSE PLATE LAMP

Exploded View

INFOID:000000011568860

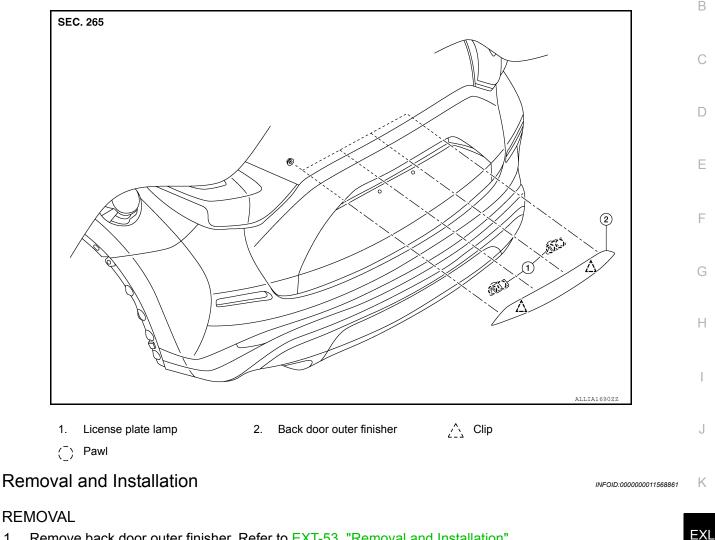
А

Μ

Ν

Ο

Ρ



- Remove back door outer finisher. Refer to <u>EXT-53, "Removal and Installation"</u>.
- 2. Disconnect harness connector from license plate lamp.
- 3. Release pawls and push license plate lamp forward.

INSTALLATION

Installation is in the reverse order of removal.

Bulb Replacement

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. Remove back door lower finisher. Refer to <u>INT-34</u>, "BACK DOOR LOWER FINISHER : Removal and <u>Installation"</u>.
- 2. Rotate license plate lamp bulb socket counterclockwise and remove.

EXL-139

INEOID:000000011568862

3. Remove license plate lamp bulb from bulb socket.

INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

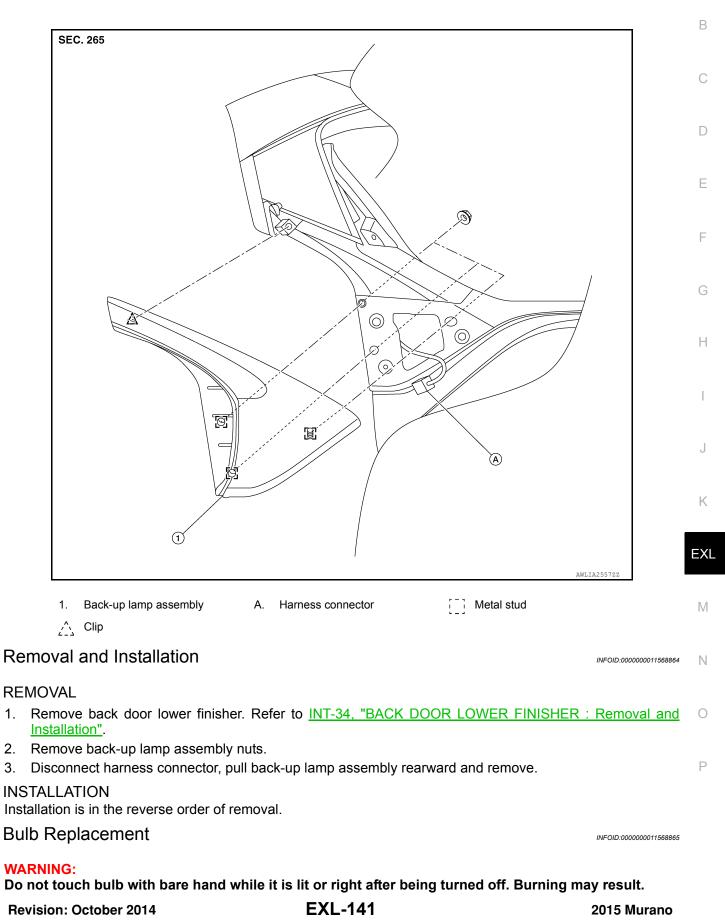
After installing bulb, install bulb socket securely for watertightness.

BACK-UP LAMP ASSEMBLY

Exploded View

INFOID:000000011568863

А



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. Remove back-up lamp assembly. Refer to EXL-141, "Removal and Installation".
- 2. Rotate back-up lamp bulb socket counterclockwise and remove.
- 3. Remove back-up lamp bulb from bulb socket.

INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

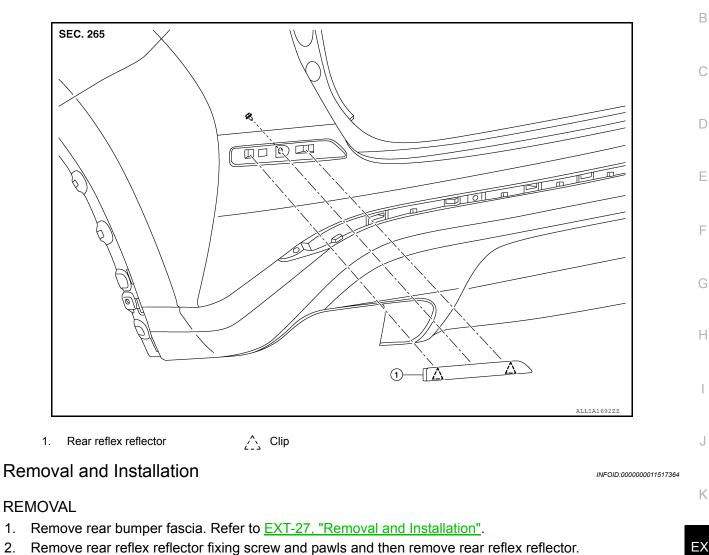
After installing bulb, install bulb socket securely for watertightness.

REAR REFLEX REFLECTOR

Exploded View

INFOID:000000011517363

[LED HEADLAMP]



INSTALLATION

2.

Install in the reverse order of removal.

Μ

Ν

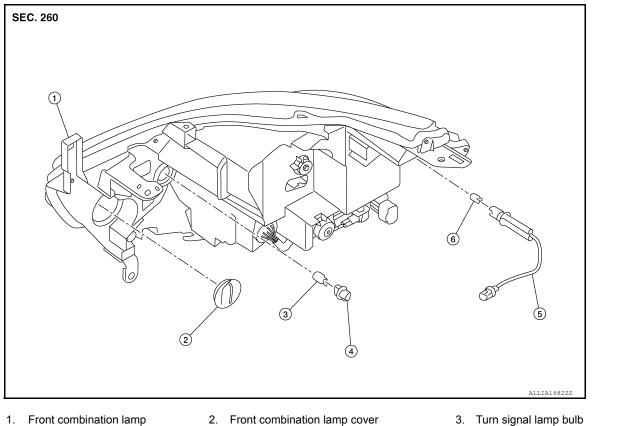
Ο

Ρ

INFOID:000000011568848

UNIT DISASSEMBLY AND ASSEMBLY FRONT COMBINATION LAMP

Exploded View



- 4. Turn signal lamp bulb socket
- 5. Side marker lamp bulb harness
- 6. Side marker lamp bulb

INFOID:000000011568849

Disassembly and Assembly

DISASSEMBLY

- Remove front combination lamp. Refer to EXL-128, "Removal and Installation". 1.
- 2. Rotate turn signal lamp bulb socket counterclockwise and remove.
- 3. Remove turn signal lamp bulb from bulb socket.
- 4. Rotate side marker lamp bulb socket counterclockwise and remove.
- 5. Remove side marker lamp bulb from bulb socket.

ASSEMBLY

Assembly is in the reverse order of disassembly.

CAUTION:

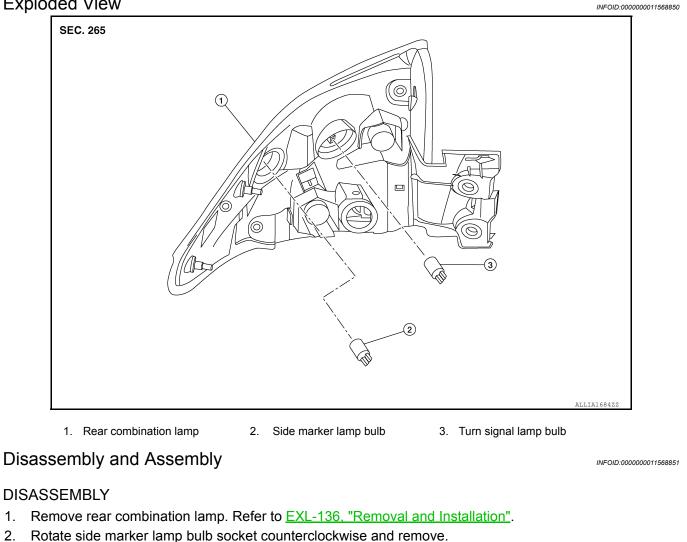
During assembly, be sure to install bulb sockets securely to ensure watertightness.

REAR COMBINATION LAMP

< UNIT DISASSEMBLY AND ASSEMBLY >

REAR COMBINATION LAMP

Exploded View



- 3. Remove side marker bulb from bulb socket.
- 4. Rotate turn signal lamp bulb socket counterclockwise and remove.
- Remove turn signal lamp bulb from bulb socket. 5.

ASSEMBLY

Assembly is in the reverse order of disassembly.

CAUTION:

During assembly, be sure to install bulb sockets securely to ensure watertightness.

EXL

Μ

Ν

Ο

Ρ

Κ

А

В

D

Е

Н

SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS) SERVICE DATA AND SPECIFICATIONS (SDS)

Bulb Specifications

INFOID:000000011568866

[LED HEADLAMP]

Item		Туре	Wattage (W)
	High beam		23
	Low beam	LED	23
Front combination lamp	Turn signal lamp	7444NA	28/8
	Side marker lamp	W5W	5
	Daytime running lamp	LED	1.5/10.7
Front fog lamp (if equipped)		H8	35
Door mirror turn signal lamp		LED	—
	Stop lamp	LED	0.6/1.6
Rear combination lamp	Side marker lamp	W5W	5
	Turn signal lamp	WY21W	21
Back-up lamp		921	16
License plate lamp		W5W	5
High-mounted stop lamp		LED	0.85

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

А

В

Ε

EXL

Μ

Ν

Ο

Ρ

< PRECAUTION > 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, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag Module, see the SR section.
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

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

WARNING:

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

Precaution for Work

- 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.

INFOID-000000011573899

< PREPARATION > PREPARATION

PREPARATION

Special Service Tool

INFOID:000000011573900

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

Tool number (TechMate No.) Tool name		Description
 (J-46534) Trim Tool Set	AWJIA0463ZZ	Removing trim components

COMPONENT PARTS

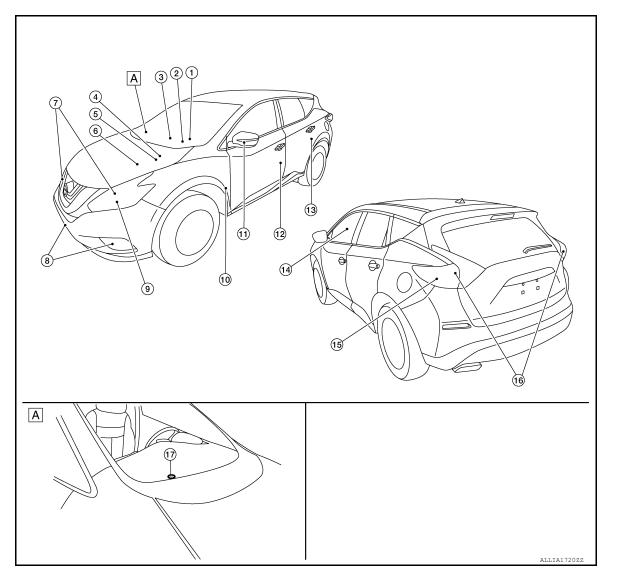
[HALOGEN HEADLAMP]

< SYSTEM DESCRIPTION > SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location

INFOID:000000011564283



A. Right hand side of instrument panel

No.	Part	Function
1. (Combination meter	Refer to MWI-7, "METER SYSTEM : Combination Meter".
2. E	BCM	 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 <u>BCS-4. "BODY CONTROL SYSTEM : Component Parts Location"</u> for detailed installation location.

А

С

D

Е

F

G

Н

J

Κ

EXL

Μ

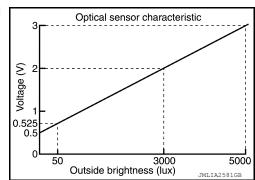
COMPONENT PARTS

[HALOGEN HEADLAMP]

No.	Part	Function
3.	Combination switch (Lighting and turn signal switch)	Refer to <u>MWI-5, "METER SYSTEM : Component Parts Location"</u> for detailed instal- lation location.
4.	IPDM E/R	 Supplies voltage to the load according to the request from BCM (via CAN communication). Refer to <u>PCS-5</u>, "Component Parts Location" for detailed installation location.
5.	Front fog lamp relay	Supplies voltage to front fog lamps when operated by IPDM E/R.
6.	Daytime running lamp relay	Supplies voltage to the daytime running lamps according to request from IPDM E/R. Refer to EXL-150. "Daytime Running Light Relay".
7.	Front combination lamps	Refer to EXL-279, "Bulb Specifications".
8.	Front fog lamps	Refer to EXL-279, "Bulb Specifications".
9.	Front turn signal lamp LH	Refer to EXL-279. "Bulb Specifications".
10.	Parking brake switch	Transmits the parking brake switch signal to the combination meter to operate the daytime light system.
11.	Door mirror turn signal LH	Refer to EXL-279, "Bulb Specifications".
12.	Front door switch LH	Transmits the door open signal to the BCM to operate the autolight system.
13.	Rear door switch LH	Refer to <u>DLK-22, "Front Door Switch"</u> for front door switch or <u>DLK-22, "Rear Door</u> <u>Switch"</u> for rear door switch.
14.	Hazard switch	Refer to EXL-150, "Hazard Switch".
15.	Rear turn signal lamp LH	Refer to EXL-279, "Bulb Specifications".
16.	Rear combination lamps	Refer to EXL-279, "Bulb Specifications".
17.	Optical sensor	Refer to EXL-150, "Optical Sensor".

Optical Sensor

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



Hazard Switch

Inputs the hazard switch ON/OFF signal to BCM.

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

Daytime Running Light Relay

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

INFOID:000000011564286

INFOID:000000011564284

INFOID:000000011564285

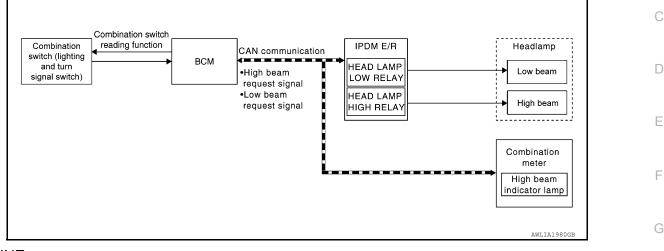
Revision: October 2014

SYSTEM HEADLAMP SYSTEM

HEADLAMP SYSTEM : System Description

INFOID 000000011517059

SYSTEM DIAGRAM



OUTLINE

Headlamp is controlled by combination switch reading function and headlamp control function of BCM, and Н relay control function of IPDM E/R.

HEADLAMP (LO) OPERATION

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

Headlamp (LO) ON condition

- Lighting switch 2ND
- Lighting switch AUTO (auto light function ON judgment)
- Lighting switch PASS
- Κ IPDM E/R turns the integrated headlamp low relay ON, and turns the headlamp ON according to the low beam request signal.

HEADLAMP (HI) OPERATION

EXL 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 or AUTO (auto light function ON judgment)
- Lighting switch PASS
- Combination meter turns the high beam indicator lamp ON, according to the high beam request signal.
- Ν IPDM E/R turns the integrated headlamp high relay ON, and turns the headlamp ON according to the high beam request signal.

HEADLAMP SYSTEM : Fail-safe

CAN COMMUNICATION CONTROL

When CAN communication with ECM and BCM is impossible, IPDM E/R performs fail-safe control. After CAN P 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 	

INFOID:000000011517061

А

В

Μ

Ο

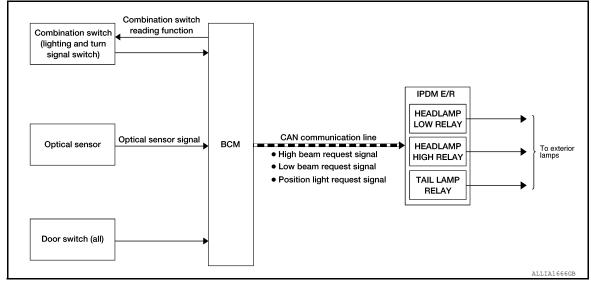
< SYSTEM DESCRIPTION >

AUTO LIGHT SYSTEM

AUTO LIGHT SYSTEM : System Description

INFOID:0000000011569129

SYSTEM DIAGRAM



OUTLINE

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

Control by BCM

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

Control by IPDM E/R

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

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

AUTO LIGHT FUNCTION

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

NOTE:

ON/OFF timing differs based on the sensitivity from the setting. The setting can be set by CONSULT. Refer to <u>BCS-19, "HEADLAMP : CONSULT Function (BCM - HEADLAMP)"</u>.

AUTO LIGHT ADJUSTMENT SYSTEM

The auto light adjustment system automatically, dims/brightens the display, according to brightness outside the vehicle, when lighting switch 1ST, lighting switch 2ND or lighting switch AUTO is operated. Refer to <u>INL-8</u>. "ILLUMINATION CONTROL SYSTEM : System Description".

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

NOTE:

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

DAYTIME RUNNING LIGHT SYSTEM

DAYTIME RUNNING LIGHT SYSTEM : System Description

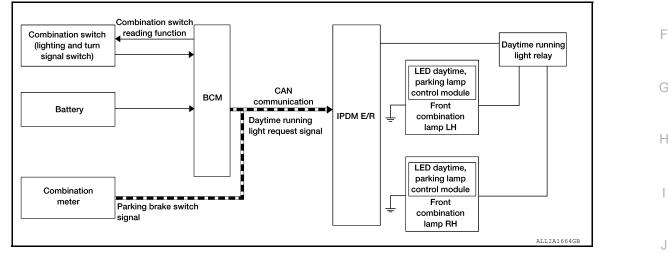
INFOID:0000000011569130

В

D

Ε

SYSTEM DIAGRAM



OUTLINE

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

DAYTIME RUNNING LIGHT OPERATION

- BCM detects the combination switch (lighting and turn signal switch) condition by the combination switch (lighting and turn signal switch) reading function.
- BCM detects the vehicle condition according to ignition switch
- BCM detects the parking brake condition by the parking brake switch signal received from combination meter using CAN communication.
- BCM transmits the daytime running light request signal to IPDM E/R using CAN communication according to the daytime running light ON condition.

Daytime running light ON condition:

- Vehicle condition READY
- Lighting switch OFF or 1ST
- Lighting switch AUTO, and the auto light function OFF judgment
- Parking brake switch OFF
- IPDM E/R controls the daytime running light relay (ground-side) to turn ON according to the daytime running
 Ight 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

Μ

Ν

Ο

Κ

EXL-153

2015 Murano

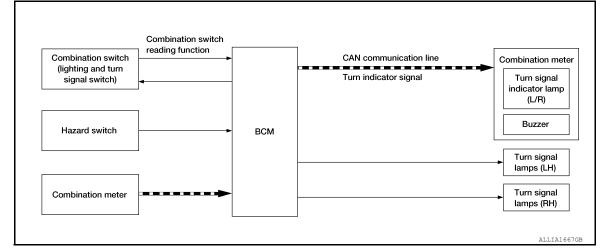
SYSTEM

< SYSTEM DESCRIPTION >

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM : System Description

INFOID:000000011569131

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 circuit 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 when short touch of the turn signal lever in the reverse direction during the 3-time flasher function operation.

HIGH FLASHER OPERATION

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

NOTE:

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

PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMP SYSTEM

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

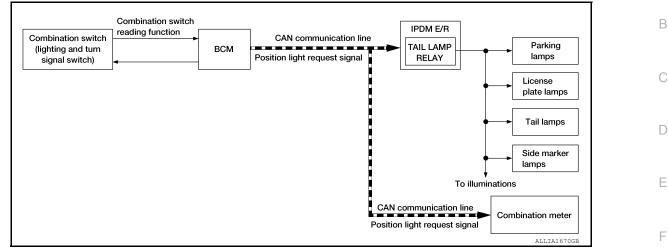
< SYSTEM DESCRIPTION >

scription

INFOID:000000011569132

[HALOGEN HEADLAMP]

SYSTEM DIAGRAM



OUTLINE

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

PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMPS OPERATION

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

Parking, license plate, side marker and tail lamps ON condition:

- Lighting switch 1ST
- Lighting switch 2ND
- Lighting switch AUTO, and the auto light function ON judgment
- Lighting switch AUTO, with the front fog lamp switch ON and the ignition switch ON
- IPDM E/R turns the integrated tail lamp relay ON and turns the parking, license plate, side marker and tail lamps ON according to the position light request signal.
- Combination meter turns the tail lamp indicator lamp ON according to the position light request signal.

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

EXL INFOID:000000011569133

Κ

Ν

CAN COMMUNICATION CONTROL

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

If No CAN Communication Is Available With BCM

Control part	Fail-safe operation	—
 Parking lamps License plate lamps Illumination Tail lamps 	 Turns ON the tail lamp relay when the ignition switch is turned ON Turns OFF the tail lamp relay when the ignition switch is turned OFF 	0
Side marker lamps		P
BACKLIDIAMD	SYSTEM	

BACK-UP LAMP SYSIEW

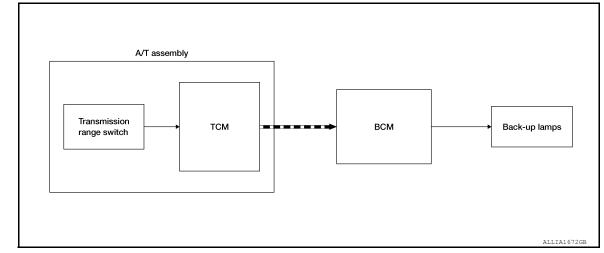
SYSTEM

< SYSTEM DESCRIPTION >

BACK-UP LAMP SYSTEM : System Description

INFOID:000000011569134

SYSTEM DIAGRAM



OUTLINE

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

BACK-UP LAMP OPERATION

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

Back-up lamp ON condition:

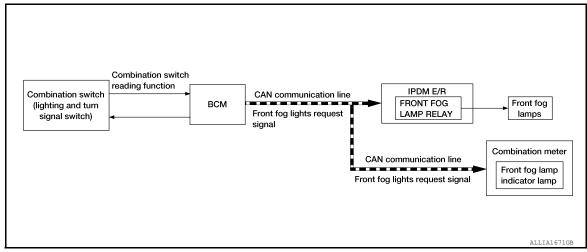
Ignition switch ON

- Shift selector lever position R FRONT FOG LAMP SYSTEM

FRONT FOG LAMP SYSTEM : System Description

INFOID:000000011569135

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.

Revision: October 2014

- Front fog lamp switch ON, and any of the following condition is satisfied (except for the high beam ON): А 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 В fog lights request signal. Combination meter turns the front fog lamp indicator lamp ON according to the front fog lights request signal. FRONT FOG LAMP SYSTEM : Fail-Safe INFOID:000000011569136 CAN COMMUNICATION CONTROL When CAN communication with BCM is impossible, IPDM E/R performs fail-safe control. After CAN communi-D cation recovers normally, it also returns to normal control. If No CAN Communication Is Available With BCM Ε Control part Fail-safe operation Front fog lamp relay OFF Front fog lamp EXTERIOR LAMP BATTERY SAVER SYSTEM F EXTERIOR LAMP BATTERY SAVER SYSTEM : System Description INFOID:000000011569137 SYSTEM DIAGRAM Н IPDM E/R CAN communication line High beam request signal Low beam request signal HEADLAMP HIGH RELAY To exterior Combination switch Combination switch reading function lamps HEADLAMP (lighting and turn BCM LOW RELAY signal switch) Κ Combination meter ALLIA1673GE EXL OUTLINE Exterior lamp battery saver system is controlled by each function of BCM and IPDM E/R. M Control by BCM Combination switch (lighting and turn signal switch) reading function Exterior lamp battery saver function Ν 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, for preventing battery discharge. *: Headlamp (HI/LO). EXTERIOR LAMP BATTERY SAVER ACTIVATION P · BCM activates the timer and turns the exterior lamp OFF 45 seconds after the ignition switch is turned from $ON \rightarrow OFF$ 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

< SYSTEM DESCRIPTION > Front fog lamp ON condition: [HALOGEN HEADLAMP]

DIAGNOSIS SYSTEM (BCM) COMMON ITEM

COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)

INFOID:000000011566413

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 D	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	HEADLAMP			×	×	×		
Wiper and washer	WIPER			×	×	×		
Turn signal and hazard warning lamps	FLASHER			×	×	×		
Air conditioner	AIR CONDITIONER			×				
Intelligent Key system	INTELLIGENT KEY		×	×	×	×		
Combination switch	COMB SW			×				
BCM	BCM	×	×			×	×	×
Immobilizer	IMMU		×	×	×			
Interior room lamp battery saver	BATTERY SAVER			×	×			
Back door open	TRUNK			×				
Vehicle security system	THEFT ALM			×	×	×		
RAP system	RETAINED PWR			×				
Signal buffer system	SIGNAL BUFFER			×	×			
TPMS	AIR PRESSURE MONITOR		×	×	×			

FREEZE FRAME DATA (FFD)

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

А

The BCM records the following vehicle condition at the time a particular DTC is detected, and displays it on CONSULT.

CONSULT screen item	Indication/Unit	Description			
Vehicle Speed	km/h	Vehicle speed at the moment a particular DTC is detected			
Odo/Trip Meter	km	Total mileage (Odometer value) at the moment a particular DTC is detected			
	SLEEP>LOCK	-	While turning BCM status from low power consumption mode to normal mode (Power supply position is "LOCK"*).		
	SLEEP>OFF			While turning BCM status from low power consumption mode to normal mode (Power supply position is "OFF".)	
	LOCK>ACC		While turning power supply position from "LOCK"*to "ACC"		
	ACC>ON		While turning power supply position from "ACC" to "IGN"		
	RUN>ACC		While turning power supply position from "RUN" to "ACC" (Vehicle is stopped and selector lever is in P position.)		
	CRANK>RUN		While turning power supply position from "CRANKING" to "RUN" (From cranking up the engine to run it)		
	RUN>URGENT	Power position status at the moment a particular DTC is detected*	While turning power supply position from "RUN" to "ACC" (Emer- gency stop operation)		
	ACC>OFF		While turning power supply position from "ACC" to "OFF"		
	OFF>LOCK		While turning power supply position from "OFF" to "LOCK"*		
Vehicle Condition	OFF>ACC		While turning power supply position from "OFF" to "ACC"		
	ON>CRANK		While turning power supply position from "IGN" to "CRANKING"		
	OFF>SLEEP		While turning BCM status from normal mode (Power supply position is "OFF".) to low power consumption mode		
	LOCK>SLEEP		While turning BCM status from normal mode (Power supply position is "LOCK"*.) to low power consumption mode		
	LOCK		Power supply position is "LOCK" (Ignition switch OFF)*		
	OFF		Power supply position is "OFF" (Ignition switch OFF)		
	ACC		Power supply position is "ACC" (Ignition switch ACC)		
	ON		Power supply position is "IGN" (Ignition switch ON with engine stopped)		
	ENGINE RUN		Power supply position is "RUN" (Ignition switch ON with engine running)		
	CRANKING		Power supply position is "CRANKING" (At engine cranking)		
IGN Counter	0 - 39	 The number of times that ignition switch is turned ON after DTC is detected The number is 0 when a malfunction is detected now. The number increases like 1 → 2 → 338 → 39 after returning to the normal condition whenever ignition is switched OFF → ON. The number is fixed to 39 until the self-diagnosis results are erased if it is over 39. 			

NOTE:

*: Power supply position shifts to "LOCK" from "OFF", when ignition switch is in the OFF position, selector lever is in the P position, and any of the following conditions are met:

- · Closing door
- · Opening door
- Door is locked using door request switch
- Door is locked using Intelligent Key

Ρ The power supply position shifts to "ACC" when the push-button ignition switch (push switch) is pushed at "LOCK".

HEADLAMP

HEADLAMP : CONSULT Function (BCM - HEADLAMP)

DATA MONITOR

Revision: October 2014

EXL-159

2015 Murano

INFOID:000000011566414

Ο

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

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 back door switch.
OPTI SEN (DTCT) [V]	Indicates outside brightness voltage signal from optical sensor.
OPTI SEN (FILT) [V]	Indicates outside brightness voltage signal from optical sensor filtered by BCM.

ACTIVE TEST

Test Item	Description
FR FOG LAMP	This test is able to check front fog lamp operation [On/Off].
DAYTIME RUNNING LIGHT	This test is able to check daytime running lamp operation [On/Off].
ILL DIM SIGNAL	This test is able to check head lamp illumination dimming operation [On/Off].

WORK SUPPORT

Support Item	Setting	Description
TWILIGHT ON	MODE2*	Auto lamp function ON.
	MODE1	Auto lamp function OFF.
	MODE4	This mode is not used.
	MODE3*	Wiper link function operates in INT, LOW and HI.
WIPERLINK	MODE2	Wiper link function operates in LOW and HI.
	MODE1	Wiper link function OFF.
	MODE4	Less sensitive than normal setting (turns ON later).
CUSTOM A/LIGHT SETTING	MODE3	More sensitive than MODE2.
COSTOM A/LIGHT SETTING	MODE2	More sensitive than normal setting (turns ON earlier).
	MODE1*	Normal setting.

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

Setting	Description	
MODE 8	Auto lamp delay timer.	A
MODE 7		
MODE 6		В
MODE 4		
MODE 5		
MODE 3		С
MODE 2		
MODE 1*		D
	MODE 8 MODE 7 MODE 6 MODE 4 MODE 5 MODE 3 MODE 2	MODE 8 MODE 7 MODE 6 MODE 4 MODE 5 MODE 3 MODE 2

FLASHER

FLASHER : CONSULT Function (BCM - FLASHER)

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 quitch	
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].	FXI

WORK SUPPORT

Support item	Setting	Description	M
3-TIME FLASHER SETTING	ON*	3-Time flasher setting ON.	
5-TIME I EASHER SETTING	OFF	3-Time flasher setting OFF.	
* . lattic a attice a	·		N

* : Initial setting

0

Ρ

Κ

Е

F

INFOID:000000011566415

Diagnosis Description

AUTO ACTIVE TEST

Description

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

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

Operation Procedure

CAUTION:

Do not start the engine. NOTE:

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

- If auto active test mode cannot be actuated, check door switch system. Refer to <u>DLK-179,</u> <u>"Component Function Check"</u>.
- When auto active test mode has to be cancelled halfway through test, turn ignition switch OFF.
- 1. Close the hood and lift the wiper arms from the windshield. (Prevent windshield damage due to wiper operation)
- 2. Turn ignition switch OFF.
- 3. Turn the ignition switch ON, and within 20 seconds, press the front door switch LH 10 times. Then turn the ignition switch OFF.
- 4. Turn the ignition switch ON within 10 seconds. After that the horn sounds once, and the auto active test starts.
- 5. After a series of the following operations is repeated 3 times, auto active test is completed.

Inspection in Auto Active Test Mode

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

Operation se- quence	Inspection Location	Operation
1	Front wiper	LO for 3 seconds \rightarrow HI for 3 seconds
2	 Front fog lamps Parking lamps Side marker lamps Tail lamps License plate lamps 	10 seconds
3	Daytime running lamps	10 seconds
4	Headlamps	$LO \Leftrightarrow HI 5 times$
5	A/C compressor	ON ⇔ OFF 5 times
6*	Cooling fans	LO for 5 seconds \rightarrow HI for 5 seconds

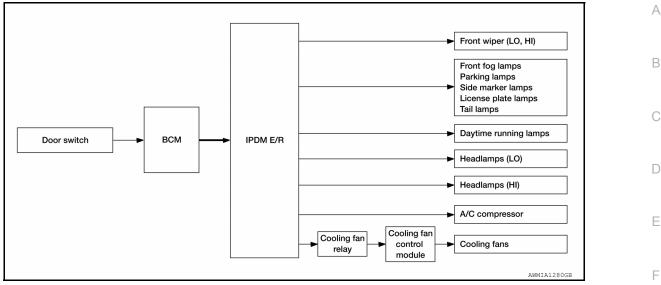
*: Outputs duty ratio of 50% for 5 seconds \rightarrow duty ratio of 100% for 5 seconds on the cooling fan control module.

INFOID:000000011566518

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

Concept of auto active test



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

Diagnosis chart in auto active test mode

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

CONSULT Function (IPDM E/R)

INFOID:000000011566519

Н

CAUTION:

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

< SYSTEM DESCRIPTION >

APPLICATION ITEM

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

Direct Diagnostic Mode	Description
ECU Identification	The IPDM E/R part number is displayed.
Self Diagnostic Result	The IPDM E/R self diagnostic results are displayed.
Data Monitor	The IPDM E/R input/output data is displayed in real time.
Active Test	The IPDM E/R activates outputs to test components.

ECU IDENTIFICATION

The IPDM E/R part number is displayed.

SELF DIAGNOSTIC RESULT

Refer to PCS-21, "DTC Index".

DATA MONITOR

Monitor Item [Unit]	Main Signals	Description
MOTOR FAN REQ [%]	×	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 commu- nication line.
TAIL&CLR REQ [On/Off]	×	Indicates position light request signal received from BCM on CAN communica- tion 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 communica- tion line.
FR WIP REQ [Stop/1LOW/Low/Hi]	×	Indicates front wiper request signal received from BCM on CAN communication line.
WIP AUTO STOP [STOP P/ACT P]	×	Indicates condition of front wiper auto stop signal.
WIP PROT [Off/BLOCK]	×	Indicates condition of front wiper fail-safe operation.
IGN RLY1 -REQ [On/Off]		Indicates ignition switch ON signal received from BCM on CAN communication line.
IGN RLY [On/Off]	×	Indicates condition of ignition relay.
PUSH SW [On/Off]		Indicates condition of push-button ignition switch.
INTER/NP SW [On/Off]		Indicates condition of CVT shift position.
ST RLY CONT [On/Off]		Indicates starter relay status signal received from BCM on CAN communication line.
IHBT RLY -REQ [On/Off]		Indicates starter control relay signal received from BCM on CAN communication line.
ST/INHI RLY [Off/ ST /INHI]		Indicates condition of starter relay and starter control relay.
DETENT SW [On/Off]		Indicates condition of CVT shift selector (park position switch).
DTRL REQ [Off]		Indicates daytime light request signal received from BCM on CAN communica- tion line.
HOOD SW [On/Off]		Indicates condition of hood switch.
THFT HRN REQ [On/Off]		Indicates theft warning horn request signal received from BCM on CAN commu- nication line.
HORN CHIRP [On/Off]		Indicates horn reminder signal received from BCM on CAN communication line.
HOOD SW 2 [On/Off]		Indicates condition of hood switch 2.

Revision: October 2014

< SYSTEM DESCRIPTION >

ACTIVE TEST

[HALOGEN HEADLAMP]

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

D

Ε

F

G

Η

J

Κ

EXL

Μ

Ν

Ο

Ρ

ECU DIAGNOSIS INFORMATION

BCM, IPDM E/R

List of ECU Reference

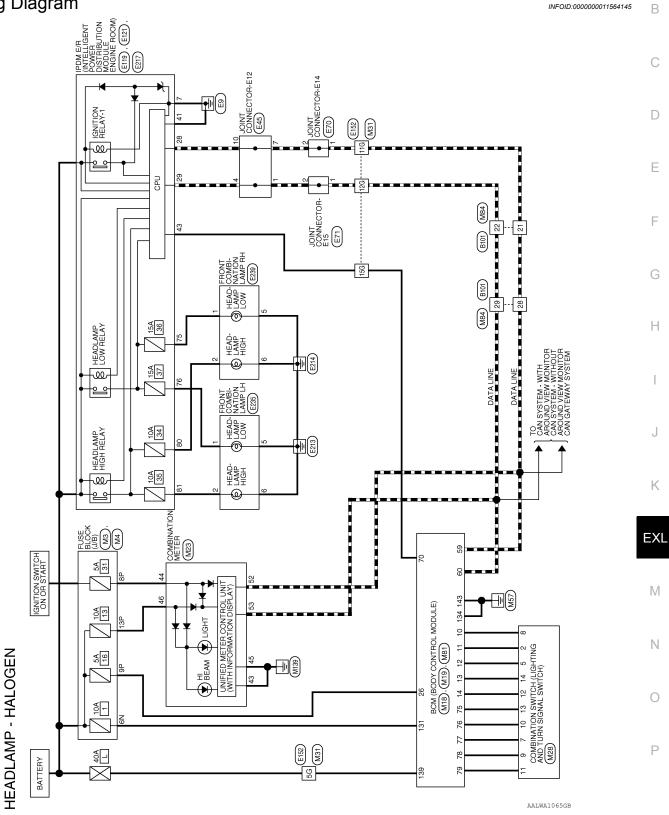
INFOID:000000011517083

ECU	Reference		
	BCS-30, "Reference Value"		
всм	BCS-50, "Fail Safe"		
	BCS-51, "DTC Inspection Priority Chart"		
	BCS-52, "DTC Index"		
	PCS-13, "Reference Value"		
IPDM E/R	PCS-20, "Fail Safe"		
	PCS-21, "DTC Index"		

< WIRING DIAGRAM > WIRING DIAGRAM

HEADLAMP

Wiring Diagram



В

С

D

Ε

F

Н

J

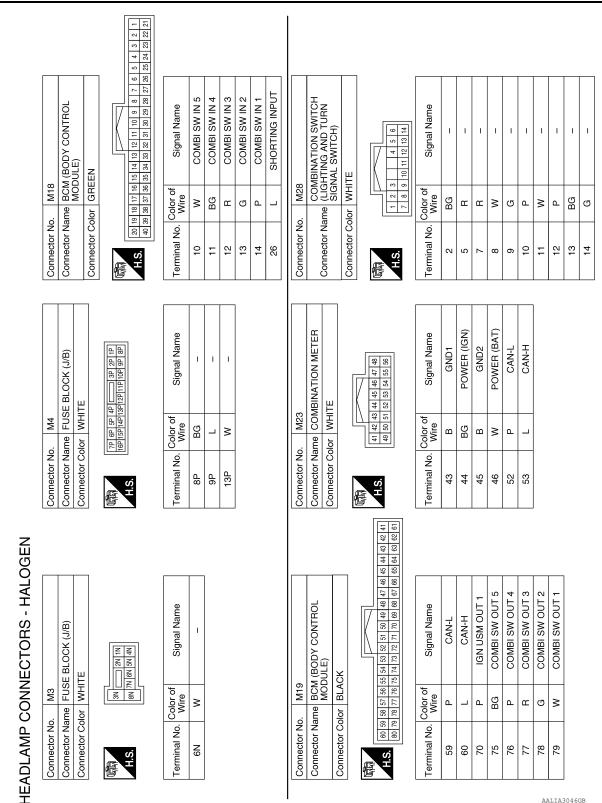
Κ

Μ

Ν

Ο

Ρ



AALIA3046GB

HEADLAMP

< WIRING DIAGRAM >

Connector No. M81 Connector Name BCM (BODY CONTROL MODULE) Connector Color WHITE	Signal Name BAT BCM FUSE GND2 BAT POWER F/L GND1	Connector No. E70 Connector Name JOINT CONNECTOR-E14 Connector Color BLACK	Signal Name	B
M81 ame BCM (B) ame BCM (IIIE) olor WHITE	Color of Wire GR M	0. E70 ame JOINT CC blor BLACK	Color of Wire P P	D
Connector No. Connector Name Connector Color	Terminal No. 131 134 139 143	Connector No. Connector Name Connector Color	Terminal No.	E
				F
Signal Name		Connector No. E45 Connector Name JOINT CONNECTOR-E12 Connector Color BLUE	Signal Name	G
Color of Wire		40. E45 Vame JOINT C. Zolor BLUE	Color of Mire	11
Terminal No. C 5G 11G 12G 15G		Connector No. Connector Name Connector Color	Terminal No. C	l J
Connector No. M31 Connector Name WIRE TO WIRE Connector Color WHITE	116 1:26 1:86 1:46 1:86 1:86 1:80 2:80	Connector No. M84 Connector Name WIRE TO WIRE Connector Color WHITE Connector Color WHITE Image: State of the state of th	Signal Name	K EXI
Connector No. M31 Connector Name WIRE T Connector Color WHITE	111612612 2206122 510526122 510526952 510526952 71062655555555555555555555555555555555555	Connector No. M84 Connector Name WIRE T Connector Color WHITE MH MH Connector Color WHITE MH MH MH Connector Color WH MH MH MH Connector Color WH MH MH Connector Color WH Connector Color WH MH MH	Color of Wife Color of L	Ν
		Connector Nan Connector Nan Connector Cold	Terminal No. 21 28 29 29	

Ρ

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

Connector No. E71	Conr	Connector No.	E119			Connector No.	Vo. E121	-	
Connector Name JOINT CONNECTOR-E15 Connector Color BLACK	Conr	Connector Name		IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)	t võ	Connector Name		IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)	
	Conr	Connector Color				Connector Color		ITE	
HIS (654321)							7 8 [9 10 11	
	H.S.	19 20 35 36	21 22 37 38	25 26 27 28 29 30 41 42 43 44 45 46	31 32 33 34 47 48 49 50	H.S.	12 13 14 15	16 17	
Terminal No. Color of Signal Name	Term	Terminal No.	Color of Wire	Signal Name		Terminal No.	Color of Wire	Signal Name	
1 -		28	٩	CAN-L		7	в	P-GND	
2 L –		29	_	CAN-H					
		41	В	S-GND					
		43	_	IGN SIGNAL					
Connector No. E152	Term	Terminal No.	Color of	Signal Name		Connector No.		7	
		5G	e d	1		Connector Name		IPDM E/R (INTELLIGENT POWER DISTRIBUTION	
	 	11G	٩	1			-	DULE ENGINE ROOM	
đ		12G		1		Connector Color	Color WHITE	ITE	
		15G		ı			Ľ		
100 96 86 76 66			-]	HIS.	77	78 79 80 81	
216200913901761661501409130710									
306/296/286/276/266/256/236/226						Terminal No.	Wire	Signal Name	
4164063996386370586356356356356356356 50049048064706460456440643564326326						75	ΓM	HEADLAMP LO RH (WITH HALOGEN)	
						76	_	HEADLAMP LO LH	
610,600,399,498,457,456,455,544,550,542,516 700,690,488,457,466,455,464,453,562,516						80	G/W	HEADLAMP HI RH (WITH HALOGEN)	
81G80G79G78G77G76G75G74G73G72G77G 90G89G88G685G84G85G85G85G82G						81	υ	HEADLAMP HI LH	
95G1 94G1 84G1 84G1 84G 91G 1000 996G1 94G 84G 97G 94G									

< WIRING DIAGRAM >

		_	15 16 31 32					
	TO WIRE		22 23 24 25 26 27 28 29 30 31 22	Signal Name	1	1	I	-
B101	ne WIRE		1 2 3 4 5 6 7 8 17 18 19 20 21 22 23 24	Color of Wire	٩		٩	_
Connector No.	Connector Name WIRE TO WIRE		H.S.	Terminal No.	21	22	28	29
	Connector Name FRONT COMBINATION LAMP RH	Ý		Signal Name	1	1	I	I
E239	ne FRON LAMP	or BLACK	0 10	Color of Wire	۲ ۲	G/W	в	В
Connector No.	Connector Nar	Connector Color	H.S.	Terminal No.	-	N	£	9
	FRONT COMBINATION LAMP LH			Signal Name	1	1	1	1
E235	ERONT LAMP L	BLACK	5 6 7 3	Color of Wire		σ	в	В
	Connector Name	Connector Color	H.S.	Terminal No. Co	-	2	5	9
Connector No.	Conne	5	臣王	eri				

2015 Murano

[HALOGEN HEADLAMP]

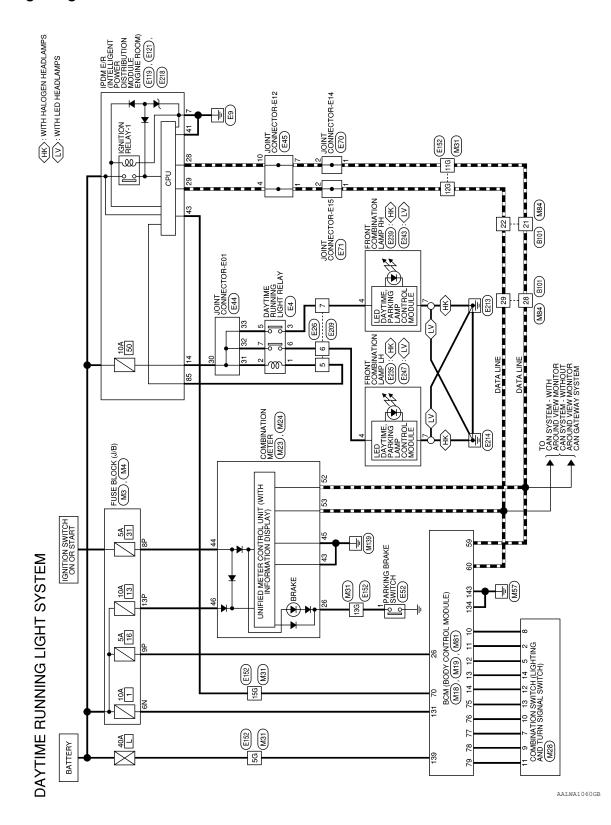
< WIRING DIAGRAM >

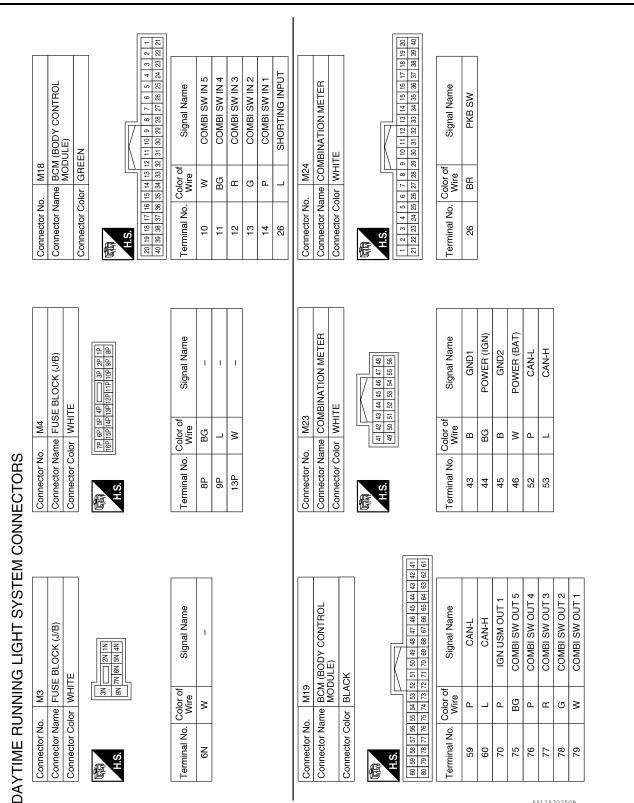
[HALOGEN HEADLAMP]

DAYTIME RUNNING LIGHT SYSTEM

Wiring Diagram

INFOID:000000011564146





AALIA3025GB

Р

0

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

А

В

С

D

Ε

F

Н

J

Κ

EXL

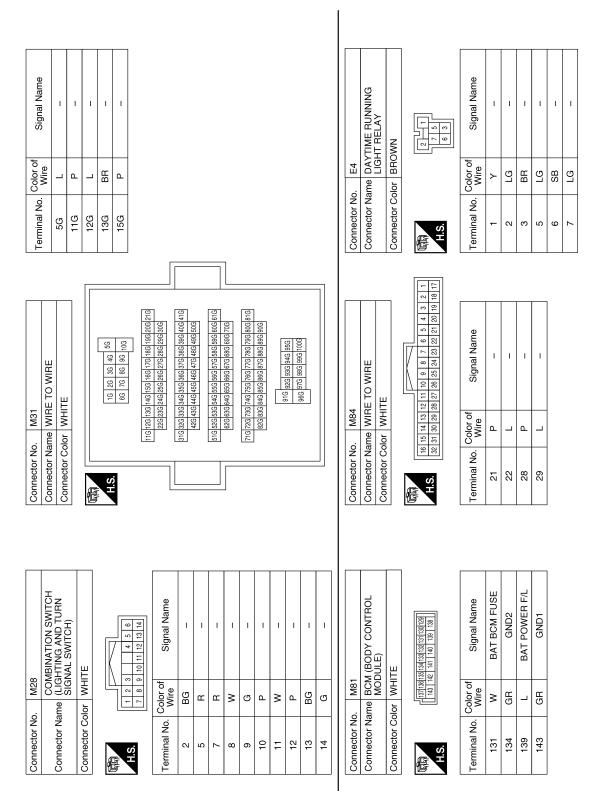
Μ

Ν

DAYTIME RUNNING LIGHT SYSTEM

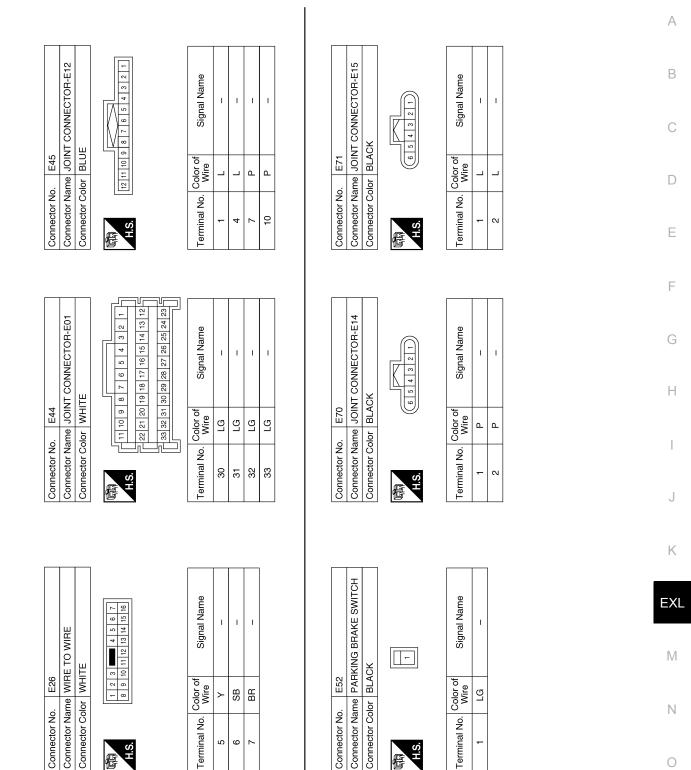
< WIRING DIAGRAM >

[HALOGEN HEADLAMP]



AALIA3026GB

	DAYTIME RUNNING LIGHT SYSTEM	
< WIRING DIAGRAM >		[HALOGEN HEADLAMP]



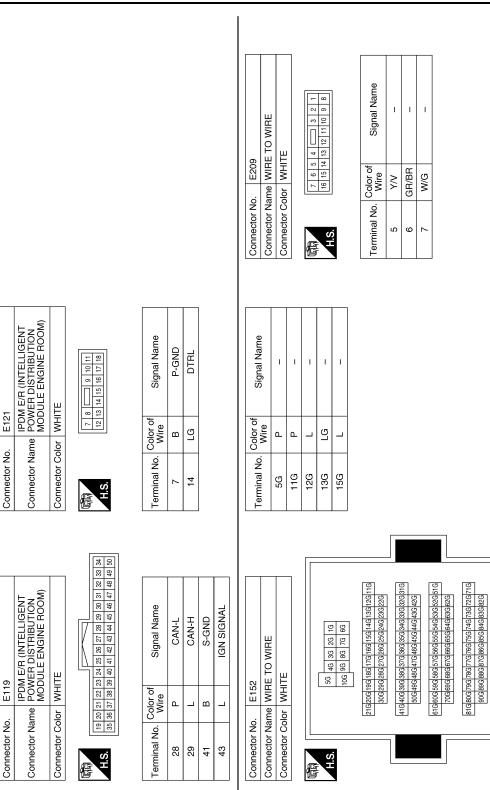
AALIA3027GB

Ρ

< WIRING DIAGRAM >

DAYTIME RUNNING LIGHT SYSTEM

[HALOGEN HEADLAMP]



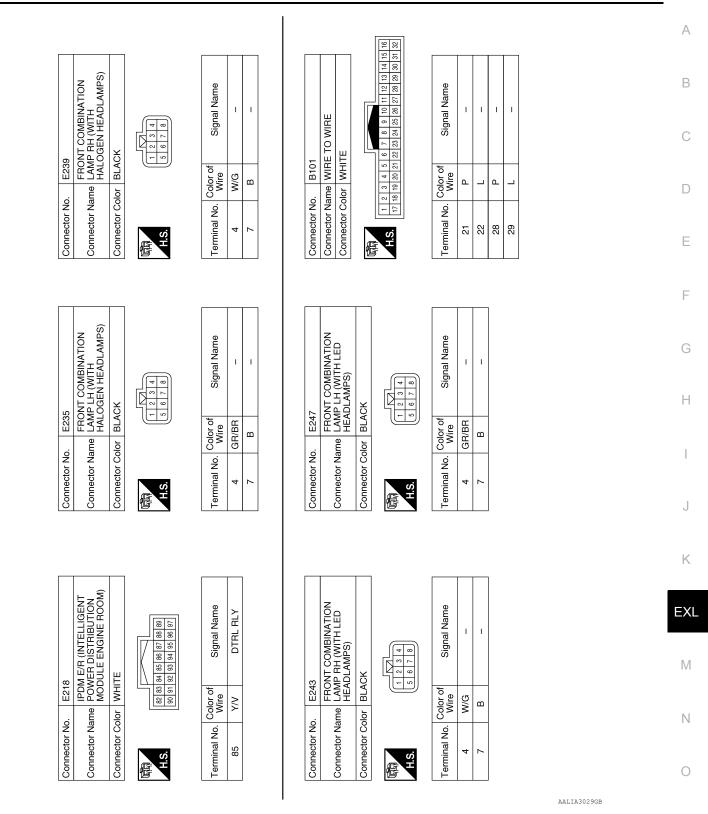
AALIA3028GB

E119

DAYTIME RUNNING LIGHT SYSTEM

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

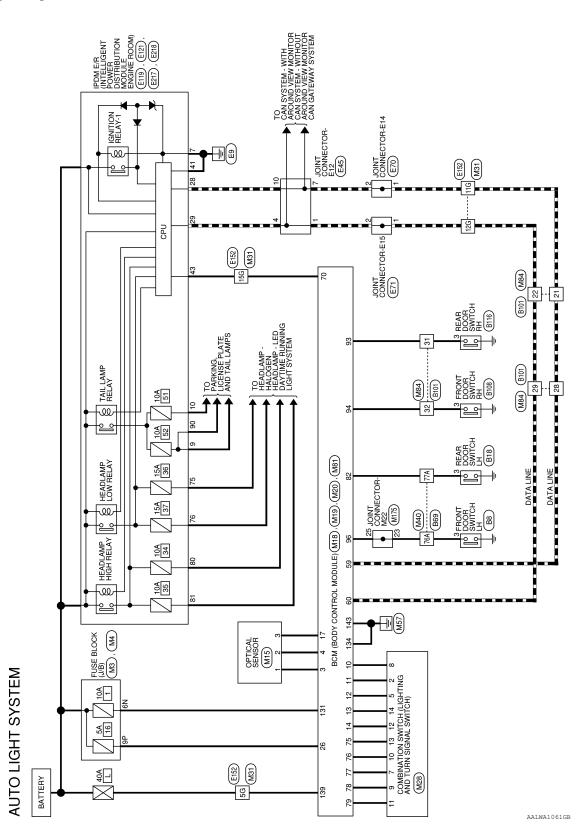


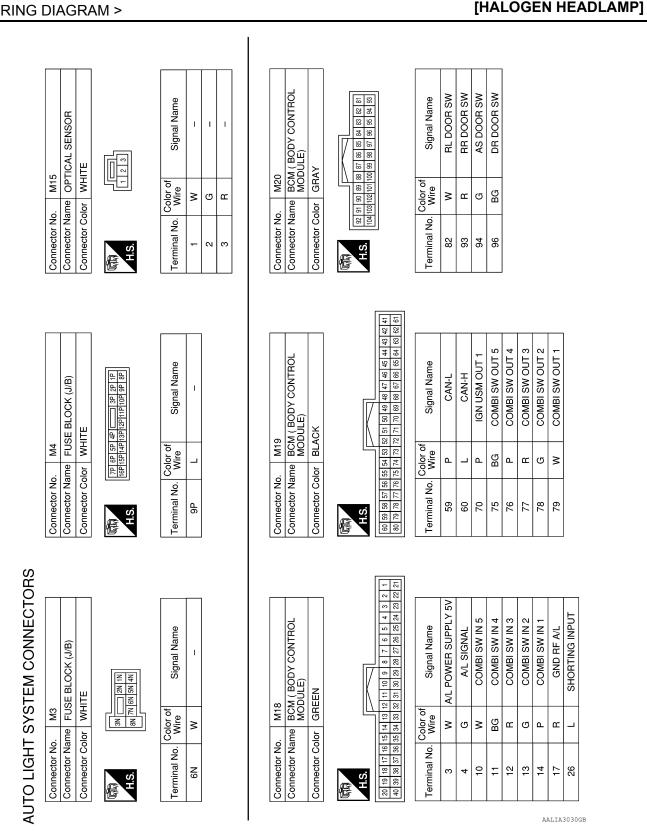
AUTO LIGHT SYSTEM

Wiring Diagram

INFOID:000000011564147

[HALOGEN HEADLAMP]





< WIRING DIAGRAM >

Revision: October 2014

F

J

Κ

EXL

Μ

Ν

0

А

В

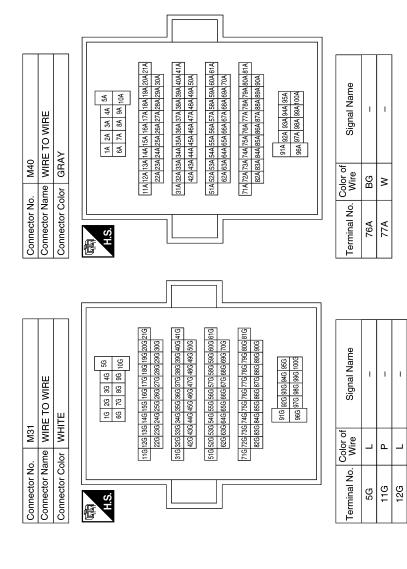
С

D

Ρ

AUTO LIGHT SYSTEM

< WIRING DIAGRAM >



~	COMBINATION SWITCH (LIGHTING AND TURN SIGNAL SWITCH)	WHITE	10 11 12 13 14	Signal Name	I	I	Ι	I	I	I	I	I	I	1
ne			7 8 9	Color of Wire	BG	œ	щ	×	თ	Р	≥	٩	BG	თ
Connector No.	Connector Name	Connector Color	品.S.H	Terminal No.	2	5	2	8	6	10	11	12	13	14

AALIA3031GB

I

٩

15G

NG DIAGRAM >		
Connector No. M175 Connector Name JOINT CONNECTOR-M22 Connector Name JOINT CONNECTOR-M22 Connector Color WHITE Main Joint Connector Milite 111098756 Main 2221201918177161541312 Main 22221201918177161541312	Terminal No. Color of Wire Signal Name 23 BG – 25 BG – 25 BG – Connector No. E71 Connector Name JOINT CONNECTOR-E15 Connector Name JOINT CONNECTOR-E15 Image: Signal Name Image: Signal Name	Terminal No. Color of Wire Signal Name 1 L - 2 L -
r No. M84 r Name WIRE TO WIRE r Color WHITE r Solor 2 2 2 2 2 2 2 2 1 2 1 1 1 1 1 1 1 1 1	e Signal Name E Co Signal Name 	Signal Name
0. M84 ame WIRE T 000r WHITE 111111111111111111111111111111111111		P P Color of
Connector No. Connector Name Connector Color H.S (1615)141 (1615)141 (1815)1	Terminal No. Colo 21 F 22 L 28 F 29 L 29 L 29 L 29 L 20 Colo Connector Nor	Terminal No.
M81 me BCM (BODY CONTROL MODULE) or WHITE 13[132[131[132]132] 143[142]141[140][132]133]	rof Signal Name R BAT BCM FUSE R GND2 BAT POWER F/L R GND1 E45 JOINT CONNECTOR-E12 BLUE	Signal Name
		Mire Vire Vire Vire Vire Vire Vire Vire V
nector Nc nector Na nector Cc	niinal 131 139 139 139 139 139 133 133 133 133	Terminal No.
	Terr Con	Ter

AUTO LIGHT SYSTEM

< WIRING DIAGRAM >

Revision: October 2014

Ρ

[HALOGEN HEADLAMP]

AUTO LIGHT SYSTEM

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

Connector Name Connector No.

> T T I

Т

۵ ٩ _ _

5G 11G 12G 15G

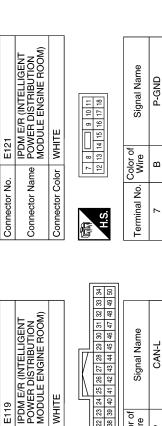
E217

[HALOGEN HEADLAMP]

HEADLAMP HI LH

G/V വ

80 81



WHITE

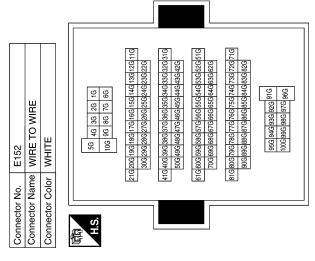
E119

Connector No.

Connector Name Connector Color

	3 34	9 50]					
	30 31 32 33	48 49						
	3	47 4						
	8	46 4		ne				F
	53	42	.	lar	Ļ	Ŧ	Ģ	ž
17	26 27 28 29	42 43 44 45	:	signal Name	CAN-L	CAN-H	S-GND	IGN SIGNAL
	27	43		g	U)	Q	ပ္	z
١Ń.	26	42	i	ע				≌∣
	25	41						
	24	6						
	33	38 39 40 41	ه ا	~				
	22	8	Color of	Wire	<u>م</u>		В	
	21	36 37	8	5				
	19 20 21 22 23 24 25	35 36		ġ				
	<u> </u>		1 :	а Б	_			_
	Q	ò	.	Ē	28	29	41	43
佢				l erminal No.				
			<u> </u>					

TAIL RH	TAIL LH		Signal Name
ŋ	Γ		Color of Wire
6	10		Terminal No.



AALIA3033GB

Connector Color	olor WHITE	ITE
品.S.H	74	25 75 76 1 79 80 81
Terminal No.	Color of Wire	Signal Name
75	SB	HEADLAMP LO RH (WITH LED HEADLAMPS)
75	ΓW	HEADLAMP LO RH (WITH HALOGEN HEADLAMPS)
76	_	HEADLAMP LO LH
80	ГG	HEADLAMP HI RH (WITH LED HEADLAMPS)
80	G/W	HEADLAMP HI RH (WITH HALOGEN HEADLAMPS)

AUTO LIGHT SYSTEM

< WIRING DIAGRAM >

WETH KINNELLICEN WETH KINNELLICEN DUE ENGINE FROM TE B B B B B B B B B B B B B B B B B B B	E218	Connector No. B8	Connector No. B18	
T T	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)	Connector Name FRONT DOOR SWITCH LH Connector Color WHITE		R DOOR SWITCH LH
Image: Signal Name Image: Si	WHITE			
Signat Name Signat Name CLEARANCE CLEARAN	88 88		<u>ن</u>	
3 0 - 3 0 - 1 1 1 <	Color of Signal Name	Color of Wire	Terminal No. Color of Wire	Signal Name
Image: signal Name Image: signal Name Tomector No. B101 Tomector Color WHTE ZM Tomector Color 20 Tomector Color	CLEARANCE			I
Terminal No. Color of Wire Signal Name 76A O - 77A W - 28 P P 22 L P 23 G(Wrei Signal Name 23 G(Wrei Signal Name				
Zahith	B69	Color of Wire		
TA W L Taility 22 L P 1 23 2 L T 2 23 2 L T 2 23 2 L T 1	IRE TO WIRE	0		TO WIRE
Image: State of the state		×	_	
12411A 224 224 224 23 23 23 23 23 24 27 29 29 29 21 31 32 24	2A 7A			7 8 9 10 11 12 13 14 15 23 24 25 26 27 28 29 30 31
	21A20A 19A 18A 17A 16A 15A 14A 13A 12A 11A 30A 29A 28A 27A 26A 25A 24A 23A 22A			Signal Name
22 L	200/200/270/250/250/220/220/210			I
	39A 30A 37A 30A 35A 35A 34A 35A 37A 31A 49A 48A 47A 46A 45A 44A 43A 43A 42A			I
	59A158A157A156A155A154A153A152A151A			1
	59A 68A 67A 66A 65A 64A 63A 62A			
	79A 78A 77A 76A 75A 74A 73A 72A 71A			1
	94 884 87 4 864 854 844 854 824 954 944 938 937 914 1004 934 984 974 953		_	

А

В

С

D

Е

F

G

Н

J

Κ

EXL

Μ

Ν

Ο

Ρ

Revision: October 2014

Connector No.

Connector Name Connector Color Connector No.

Terminal No. 8

H.S.

佢

Connector Color

H.S.

E

AALIA3034GB

AALIA3035GB

B116	Connector Name REAR DOOR SWITCH RH	MHITE	1234
Connector No.	Connector Name	Connector Color WHITE	S.H
Connector No. B108	Connector Name FRONT DOOR SWITCH RH	Connector Color WHITE	(項) H.S.

	Signal Name
1234	Color of S
EI H.S.	Terminal No.

Т

G/V

ო

Signal Name Т

Color of Wire >

Terminal No. ო

AUTO LIC	GHT SYS	ТЕМ

А

В

С

D

Ε

F

Н

J

Κ

EXL

Μ

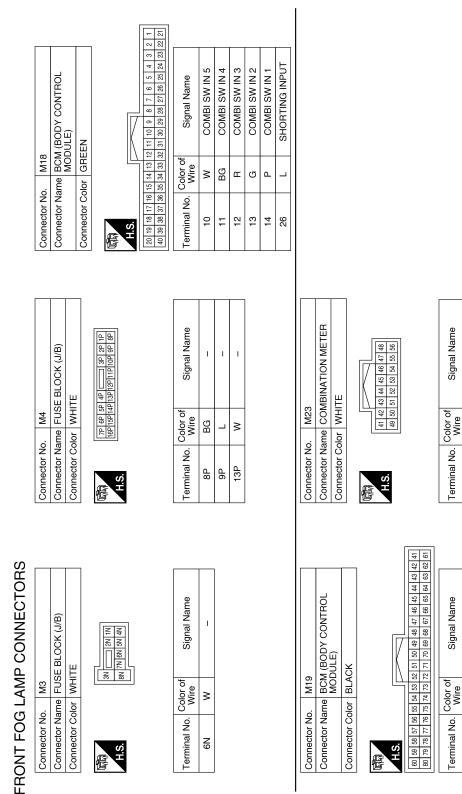
Ν

Ο

Ρ

FRONT FOG LAMP SYSTEM Wiring Diagram INFOID:000000011564148 IPDM E/R (INTELIGENT INTELIGENT DISTRIBUTION MODULE MODULE (E119) .(E121), (E217) JOINT CONNECTOR-E12 (E45) JOINT CONNECTOR-E14 E70 £ IGNITION RELAY-1 (M31 (E152 ₽ -00 ရှိ δ 12G JOINT CONNECTOR-E15 (E71) СРU (M84 52 21 B101) FOG LAMP RH E241 28 M84 B101 - 50 82 6 E FOG LAMP FOG LAMP LH (E242) DATA LINE DATA LINE 15A 49 6 COMBINATION METER M23 SYSTI V DND V 010 ABO NO FUSE BLOCK (J/B) M3), M4 EOG LIGHT UNIFIED METER CONTROL UNIT (WITH INFORMATION DISPLAY) IGNITION SWITCH ON OR START 31 31 4 45 g φ 0 10A മ 4 BCM (BODY CONTROL MODULE) (M18), (M19), (M81) 16 16 9 7 10 13 12 14 5 2 COMBINATION SWITCH (LIGHTING AND TURN SIGNAL SWITCH) (M28) 20 E15G FRONT FOG LAMP 2 ₽ F 5 2 1 El 5G M31 20 BATTERY 5

AALWA1063GB



10 70										
	Signal Name	CAN-L	CAN-H	IGN USM OUT 1	COMBI SW OUT 5	COMBI SW OUT 4	COMBI SW OUT 3	COMBI SW OUT 2	COMBI SW OUT 1	
· ^ + · · ·	Color of Wire	٩	L	٩	BG	Р	В	ŋ	M	
0/ // 0/ 0/ M	Terminal No.	59	60	70	75	76	77	78	29	

POWER (BAT)

CAN-H

CAN-L

٩

52 53

_

POWER (IGN)

BG

4

ш

43

GND1

GND2

____≥

45

46

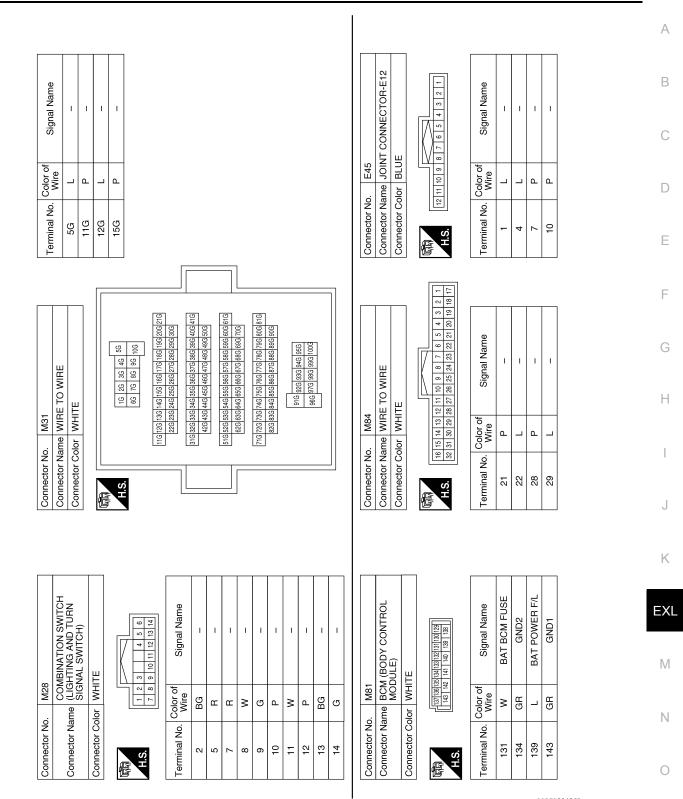
AALIA3042GB

< WIRING DIAGRAM >



< WIRING DIAGRAM >

[HALOGEN HEADLAMP]



AALIA3043GB

Ρ

FRONT FOG LAMP SYSTEM

< WIRING DIAGRAM >

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

> Connector Name Connector Color

Connector Name JOINT CONNECTOR-E15

Connector Name JOINT CONNECTOR-E14

E70

Connector No.

Connector Color BLACK

E71

Connector No.

Connector Color BLACK

E119

Connector No.

惛

H.S.

۲ ۵

H.S.

F

E

WHITE

19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 Signal Name Signal Name IGN SIGNAL CAN-H CAN-L S-GND T I. L I Color of Wire Color of Wire ۵ _ Ш ۵. ۵ _ _ Terminal No. Terminal No. 11G 12G 15G 5G 29 28 4 43 H.S. 216206196186176166156146136126116 306296286276266256246236226 416 406 396 386 376 366 356 346 336 326 316 506 496 486 476 466 456 446 436 426 610600590580570560550540530520510 7006906806706606506406336220 81G80G79G78G77G76G75G74G73G72G71G 90G89G88G87G86G85G84G83G82G Signal Name 95G 94G 93G 92G 91G 100G 99G 98G 97G 96G 5G 4G 3G 2G 1G 10G 9G 8G 7G 6G I. I Connector Name WIRE TO WIRE Connector Color WHITE E152 Color of Wire _ _ Connector No. Terminal No. -N H.S. f IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) Signal Name Signal Name P-GND 7 8 9 10 11 12 13 14 15 16 17 18 I. 1 WHITE E121 Color of Wire Color of Wire ٩ ٩ ш Connector Name Connector Color Connector No. Terminal No. Ferminal No. -N \sim H.S. F

AALIA3044GB



А

В

С

D

Ε

F

G

Н

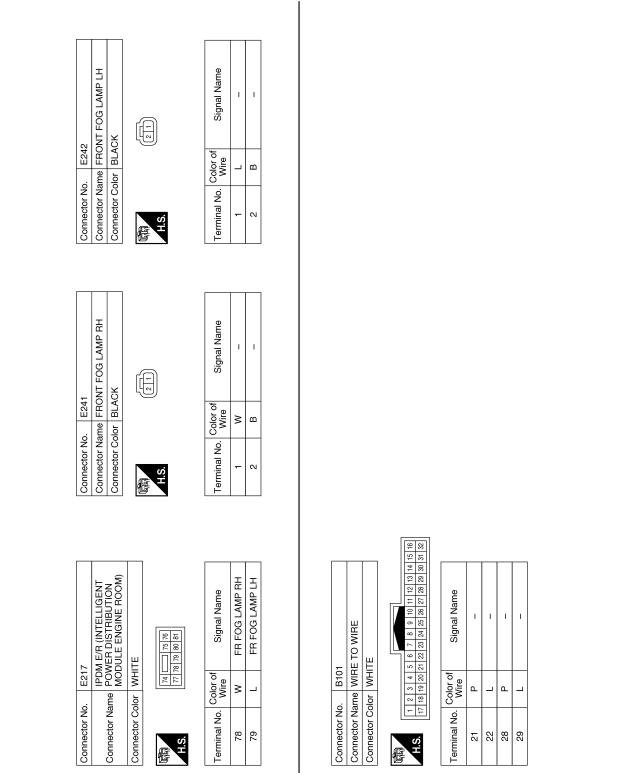
J

Κ

EXL

Μ

Ν



AALIA3045GB

Ρ

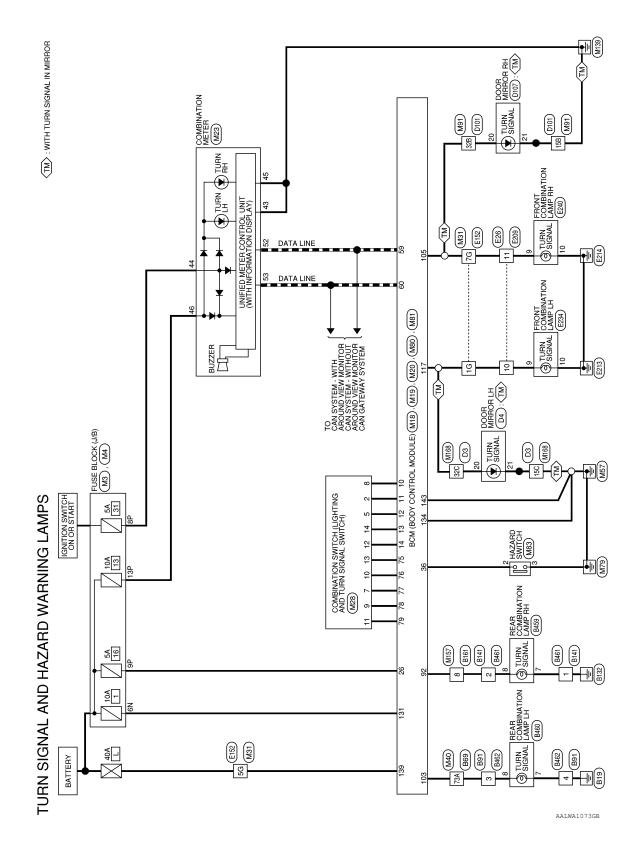
< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

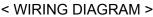
TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

Wiring Diagram

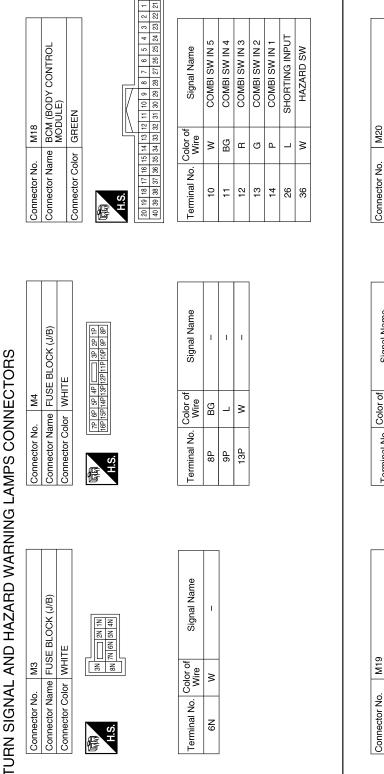
INFOID:000000011564149

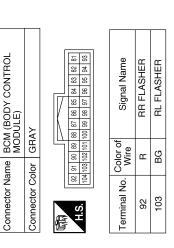




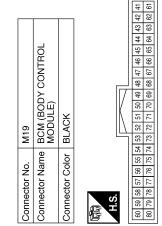


[HALOGEN HEADLAMP]





Signal Name	CAN-L	CAN-H	COMBI SW OUT 5	COMBI SW OUT 4	COMBI SW OUT 3	COMBI SW OUT 2	COMBI SW OUT 1
Color of Wire	Ь	_	BG	٩	œ	G	×
Terminal No.	59	60	75	76	17	78	62



AALIA3069GB

0

А

В

С

D

Ε

F

Н

J

Κ

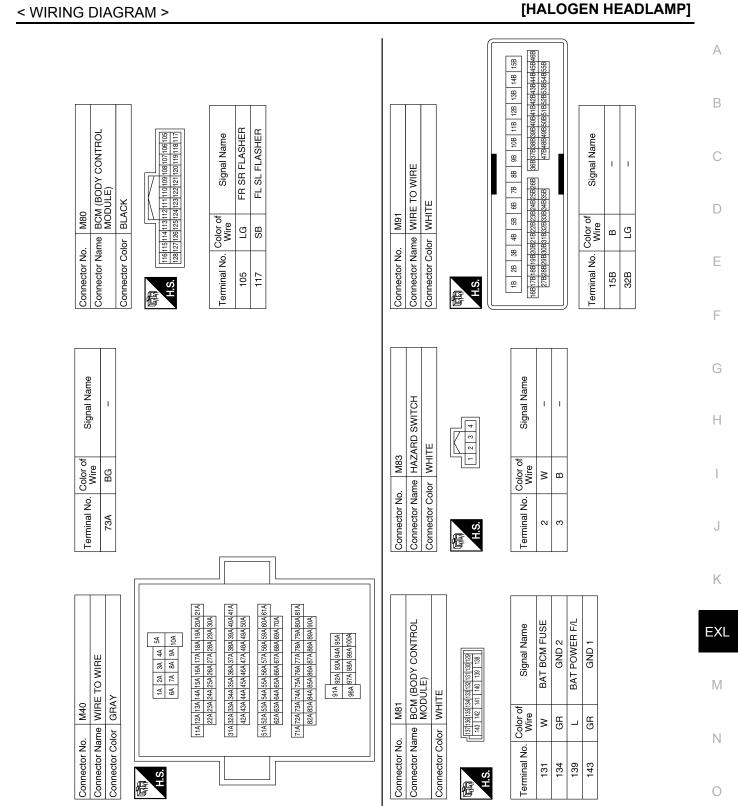
EXL

Μ

Ν

Color of Signal Name			BG	ı IJ																						
Terminal No.	5	12	13	14																						
	COMBINATION SWITCH (LIGHTING AND TURN	VAL SWITCH)	TE		10 11 12 13 14	Signal Name	1	1	1	1	1	I	Sinnal Name		1	1	I									
			olor WHITE		7 8 9 10	Color of Wire	BG	ш	œ	×	g	٩	Color of	Wire	SB	_	ГG									
Connector No.	Connector Name		Connector Color		H.S.	Terminal No.	N	ъ	7	ω	თ	10	Terminal No		16	5G	7G									
							1							1		٦	Γ]]
	Connector Name COMBINATION METER	<u> </u>	$\left[\right]$	41 42 43 44 45 46 47 48	52 53 54 55 56	Signal Name	GND1	POWER (IGN)	GND2	POWER (BAT)	CAN-L	CAN-H		Connector Name WIRE TO WIRE	LE			1G 2G 3G 4G 5G 6G 7G 8G 9G 10G	11G 12G 13G 14G 15G 16G 17G 18G 19G 20G 21G 22G 23G 24G 25G 26G 27G 28G 29G 30G	316 326 336 346 356 386 376 386 396 406 416 4261 4361 4461 4461 4461 476 4861 466	51G 52G 53G 54G 55G 56G 57G 58G 59G 60G 61G	62G 63G 64G 65G 66G 67G 68G 69G 70G	71G 72G 73G 74G 75G 76G 77G 78G 79G 80G 81G 82G 83G 84G 85G 87G 88G 89G 90G	91G 92G 93G 94G 95G	96G 97G 98G 99G 100G	
Connector No. M23				41 42 43	49 50 51	Color of Wire	B	BG	в	8	٩		. M31	me WIRt	lor WHITE			_	11G 12G 13G - 22G 23G 2	316 326 336 (516 526 536 5	62G 63G (71G 72G 73G			
	S a					Terminal No.							Connector No.	or Na.	Connector Color					_						

Revision: October 2014



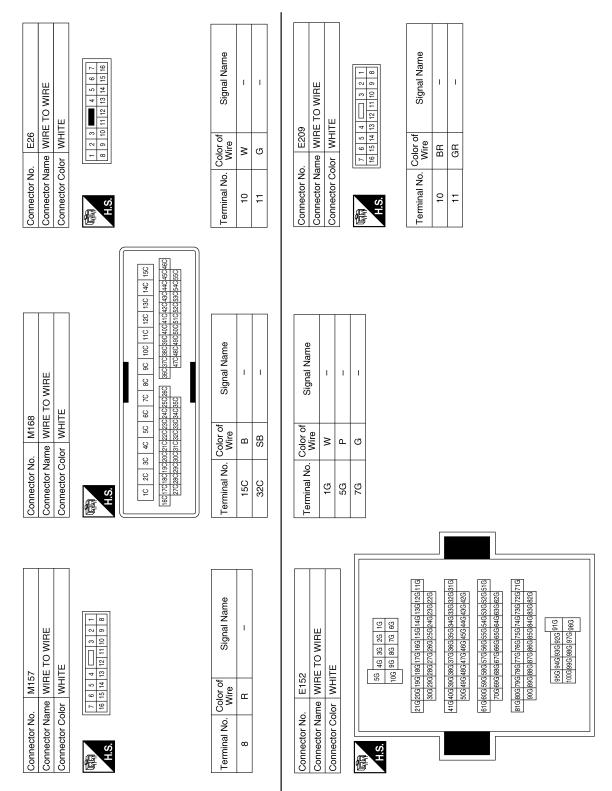
Revision: October 2014

Ρ

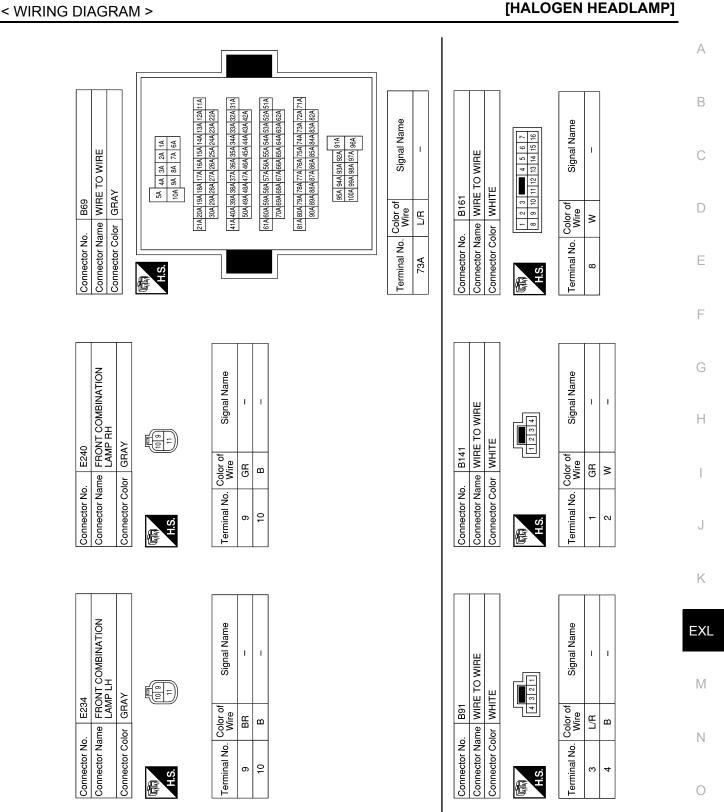
AALIA3071GB

< WIRING DIAGRAM >





AALIA3072GB



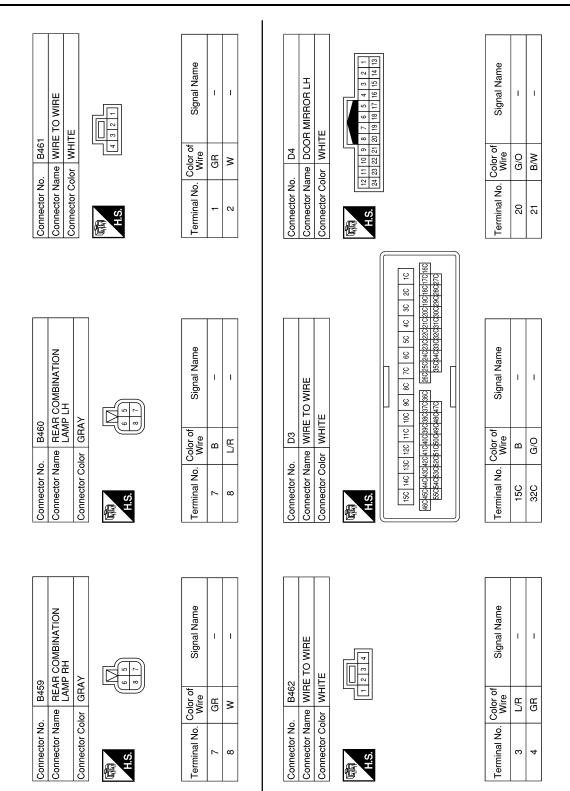
AALIA3073GB

Р

Revision: October 2014

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM GRAM > [HALOGEN HEADLAMP]

< WIRING DIAGRAM >



AALIA3074GB

D107 DOOR MIRROR RH WHITE	8 7 6 5 4 3 2 1 20 19 18 17 16 15 14 13		signal Name	I	I	
	12 11 10 9 24 23 22 21		Color of Wire	G/O	B/W	
Connector No. Connector Name Connector Color	国 H.S.		Terminal No.	20	21	
		3 7B 6B 5B 4B 3B 2B 1B 2685/552/5482/5482/5482/5482/5482/5482/548	Φ			
D101 WIRE TO WIRE WHITE			Signal Name	-	I	
		13B 12B 11B 13B22B51B50B49E	Color of Wire	В	G/O	
Connector No. Connector Name Connector Color	品.S.H	46694559479479479479479479479479479479479479479	Terminal No.	15B	32B	

AALIA3075GB

Ν

А

В

С

D

Е

F

G

Н

J

Κ

EXL

Μ

0

Ρ

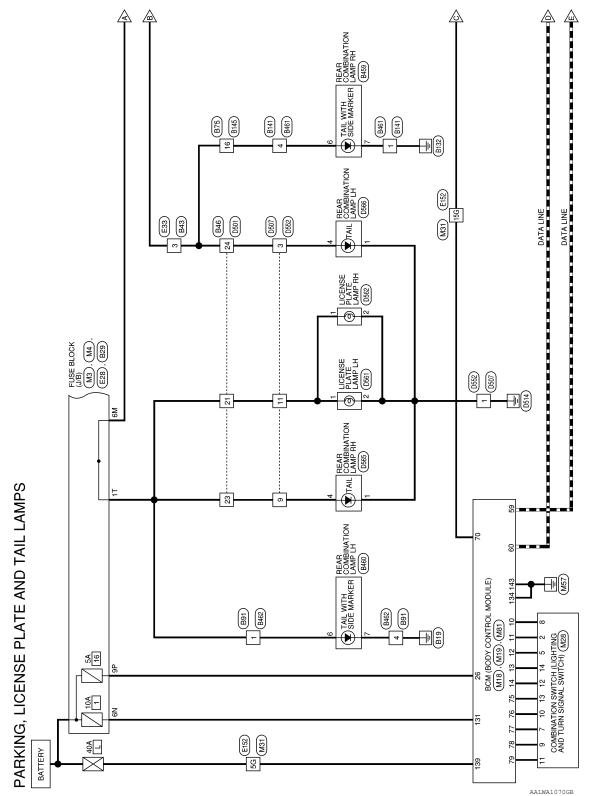
< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

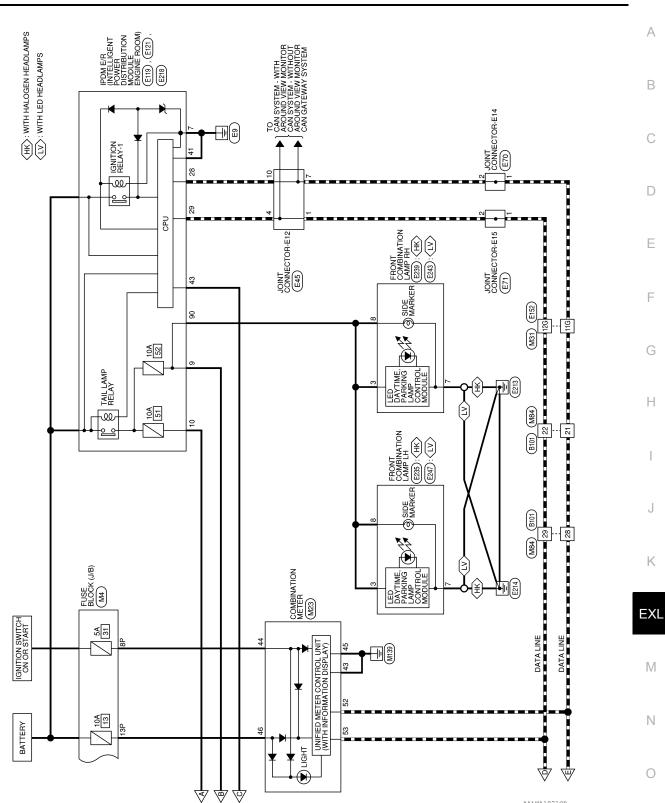
Wiring Diagram





PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM [HALOGEN HEADLAMP]

< WIRING DIAGRAM >



Ρ

AALWA1071GB

PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

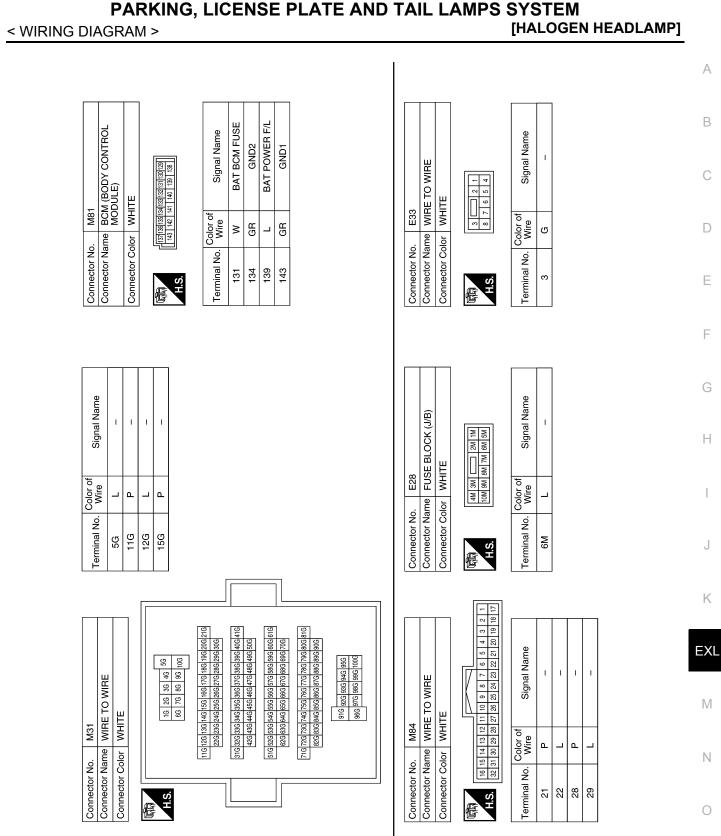
< WIRING DIAGRAM >

12 11 10 9 8 7 6 5 4 3 2 1 32 31 30 29 28 27 26 25 24 23 22 21 SHORTING INPUT COMBI SW IN 5 COMBI SW IN 3 COMBINATION SWITCH (LIGHTING AND TURN SIGNAL SWITCH) COMBI SW IN 4 COMBI SW IN 2 COMBI SW IN 1 BCM (BODY CONTROL MODULE) Signal Name Signal Name I. I. T. I. Т Т Т Т 1 T 9 4 13 20 19 18 17 16 15 14 13 40 39 38 37 36 35 34 33 ₽ ÷ GREEN WHITE 0 M18 M28 Color of Wire Color of Wire 6 8 ß ≥ BG BG ш വ ٩ _ œ œ ≥ ശ ٩ ≥ ٩ വ Connector Name Connector Name Connector Color Connector Color - -Connector No. Connector No. Terminal No. Terminal No. 9 42 13 4 26 ÷ 4 ω ი 9 ÷ 12 13 N ß \sim H.S. H.S. E 偃 Connector Name COMBINATION METER POWER (IGN) POWER (BAT) Signal Name Signal Name 7P 6P 5P 4P _____ 3P 2P 1P 16P15P14P13P12P11P10P 9P 8P CAN-H CAN-L GND1 GND2 FUSE BLOCK (J/B) I I I 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 PARKING, LICENSE PLATE AND TAIL LAMPS CONNECTORS WHITE WHITE M23 Color of Wire Color of Wire M 4 BG BG ≥ ≥ _ ш ш ٩ _ Connector Name Connector Color Connector Color Connector No. Connector No. Terminal No. Terminal No. 13P 8Р 9 43 4 45 46 52 53 H.S. H.S. F 佢 48 47 46 45 44 43 42 41 68 67 66 65 64 63 62 61 COMBI SW OUT 5 COMBI SW OUT 2 COMBI SW OUT 4 COMBI SW OUT 3 COMBI SW OUT 1 BCM (BODY CONTROL MODULE) IGN USM OUT 1 Signal Name Signal Name 60 59 58 57 56 55 54 53 52 51 50 49 80 79 78 77 76 75 74 73 72 71 70 69 CAN-H CAN-L FUSE BLOCK (J/B) 1 7N 6N 5N 4N WHITE BLACK M19 Color of Wire Color of Wire ВЩ SN 3N BG ≥ ۵. _ ۵ ۵ œ വ ≥ Connector Name Connector Color Connector Color Connector Name Connector No. Connector No. Terminal No. Terminal No. 6N 59 60 20 75 \sim 78 79 H.S.H H.S. E 佢

AALIA3058GB

[HALOGEN HEADLAMP]

Revision: October 2014



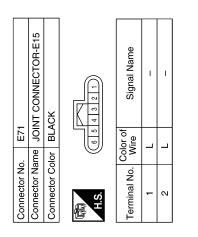
AALIA3059GB

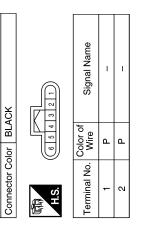
Р



< WIRING DIAGRAM >

[HALOGEN HEADLAMP]





E45	Connector Name JOINT CONNECTOR-E12	BLUE	987654321
Connector No.	Connector Name	Connector Color BLUE	H.S.

Т

Connector Name JOINT CONNECTOR-E14

E70

Connector No.

12 11 10 9 8 7 6 5 4 3 2 1	Signal Name	Ι	Ι	I
1 10 9 8	Color of Wire	L	L	Р
H.S.	Terminal No.	1	4	7

Т

۲

9

	GENT TION ROOM)		
E119	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)	WHITE	
Connector No.	Connector Name	Connector Color WHITE	

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

Connector Name Connector Color

E121

Connector No.

WHITE

	8	49					
	19 20 21 22 23 24 25 26 27 28 29 30 31 32 33	48					
	31	47					
	8	45 46 47		Signal Name			
	29	45		Na	1	CAN-H	S-GND
117	28	39 40 41 42 43 44		ਯ	CAN-L	Æ	ģ
11	27	43		g	0	0	Ś
IN	26	42		l <u>o</u>			
Π	25	41					
5	24	40					
	23	39		5			
	22	38		Color of Wire	0		в
	21	36 37		lğ≥	_		-
	20	36					
	19	35		2			
		_	1	ਯੂ	8	പ	-
	U N	ò		i,	28	29	41
F	Y			Terminal No.			
y							

Signal Name

Color of Wire

Terminal No.

H.S.

34

佢

TAIL RH TAIL LH

ശ

_

10 ი \sim

IGN SIGNAL

_

43

۵

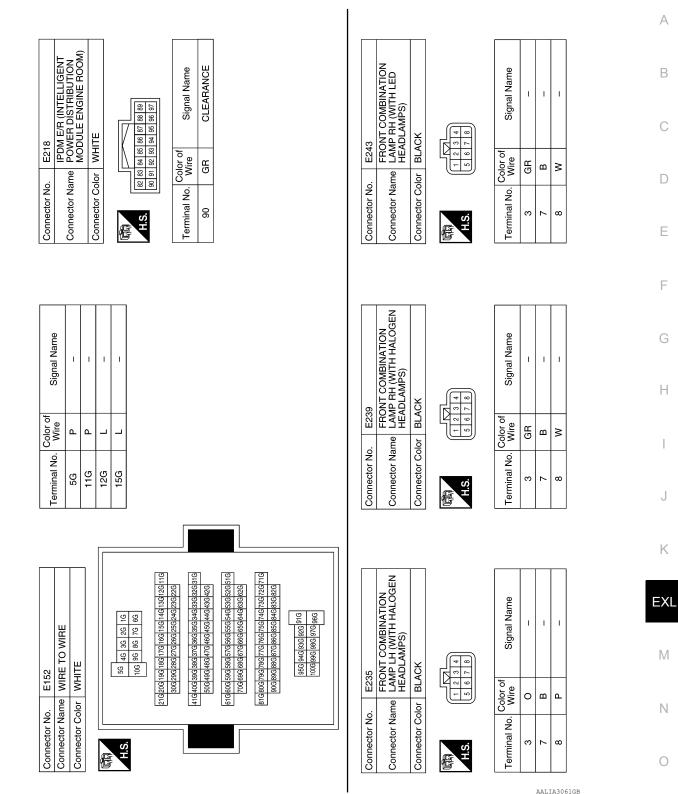
P-GND

AALIA3060GB



< WIRING DIAGRAM >

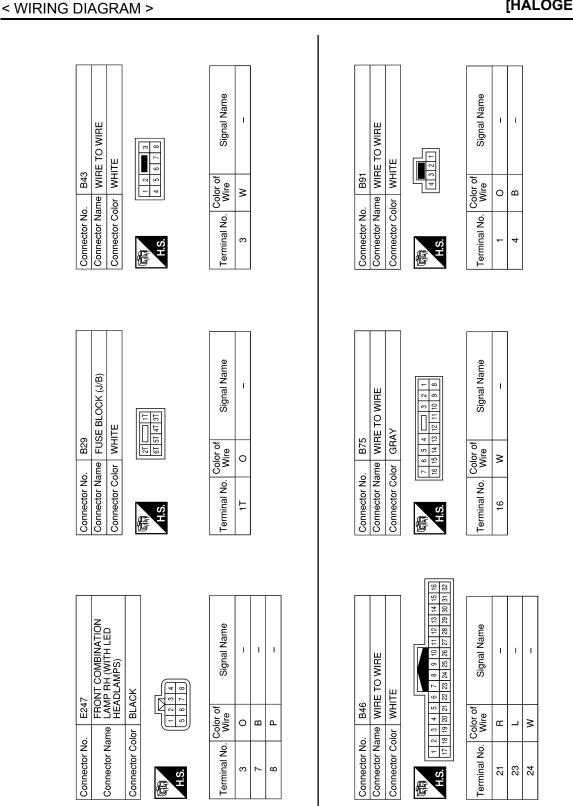
[HALOGEN HEADLAMP]



0100

Ρ

PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM [HALOGEN HEADLAMP]

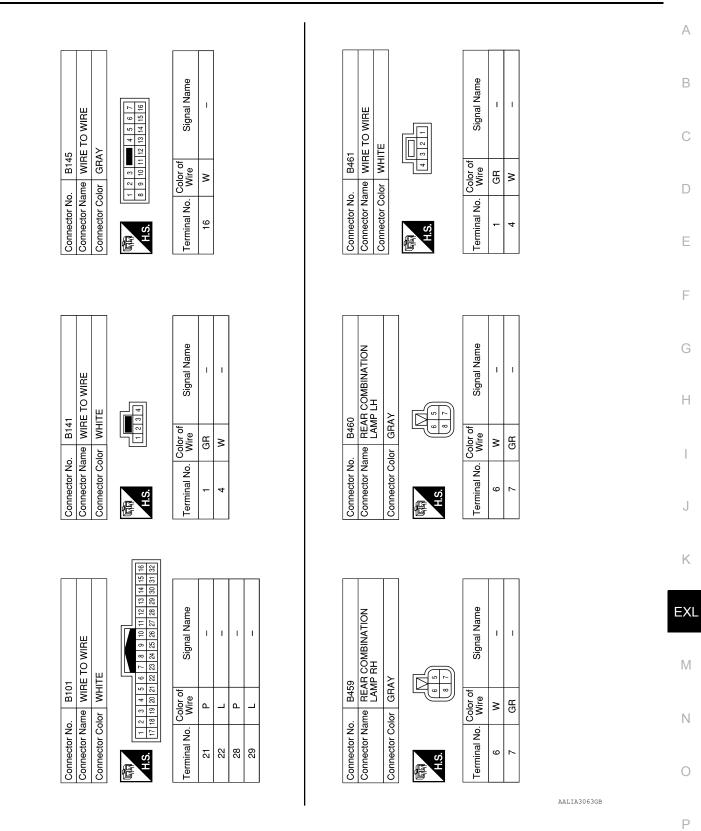


AALIA3062GB

PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]



PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM [HALOGEN HEADLAMP]

Connector Name | LICENSE PLATE LAMP RH Signal Name Signal Name
 12
 11
 10
 9
 8
 7
 6
 5
 4
 3
 2
 1

 24
 23
 22
 21
 20
 19
 18
 17
 16
 15
 14
 13
 I. L Т I I Т WIRE TO WIRE Connector Color BROWN -Connector Color WHITE D562 D507 Color of Wire Color of Wire _ 0 0 0 в ≥ Connector Name Connector No. Connector No. Terminal No. Terminal No. ო თ ÷ -N -H.S. H.S. f 惛
 16
 15
 14
 13
 12
 11
 10
 9
 8
 7
 6
 5
 4
 3
 2
 1

 32
 31
 30
 29
 28
 27
 26
 25
 24
 23
 22
 1
 30
 17
 10
 18
 7
 6
 5
 4
 3
 2
 1
 17
 10
 18
 7
 12
 12
 11
 10
 11
 17
 12
 12
 14
 17
 17
 10
 10
 14
 17
 14
 17
 16
 14
 17
 16
 17
 10
 10
 17
 10
 17
 10
 14
 17
 17
 10
 10
 10
 12
 12
 10
 10
 11
 17
 10
 10
 10
 11
 17
 10
 10
 10
 11
 17
 10
 10
 10
 10
 10
 10
 10
 10
 10 Connector Name LICENSE PLATE LAMP LH Signal Name Signal Name L Т Т Т Т WIRE TO WIRE Connector Color BROWN WHITE 2 1 D501 D561 Color of Wire Color of Wire 0 0 0 ≥ _ Connector Name Connector Color Connector No. Connector No. Terminal No. Terminal No. 23 24 N 2 -H.S. H.S. E 佢 9 10 11 12 21 22 23 24 Signal Name I Т 20 2 3 4 6 2 -

Connector Name WIRE TO WIRE Connector Color WHITE B462 Connector No. F





Signal Name	1	I	I	I
Color of Wire	в	Ν	_	0
Terminal No.	-	в	6	11

AALIA3064GB

< WIRING DIAGRAM >

	90	REAR COMBINATION LAMP LH	ITE	321	Signal Name	I
	. D566		lor WHITE		Color of Wire	В
	Connector No.	Connector Name	Connector Color	际内 H.S.	Terminal No. Wire	1
I						

Т

≥

4

Γ

Connector No.	. D565	35
Connector Name		REAR COMBINATION LAMP RH
Connector Color	lor WHITE	ITE
园 H.S.		321
Terminal No.	Color of Wire	Signal Name
1	В	-
4	Γ	-

AALIA3065GB

Р

Ο

А

В

С

D

Е

F

G

Н

J

Κ

EXL

Μ

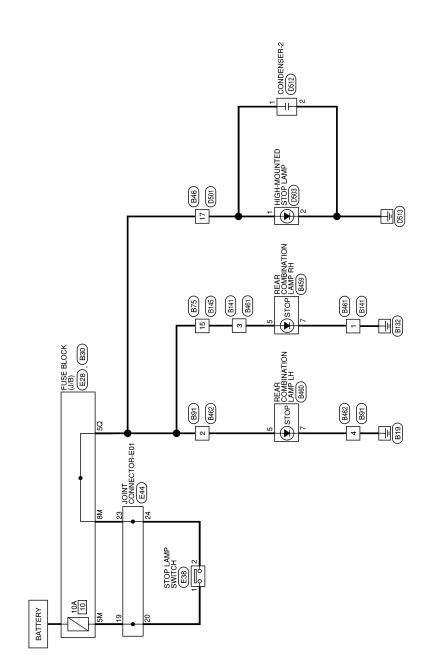
Ν

STOP LAMP

Wiring Diagram

INFOID:000000011564151

[HALOGEN HEADLAMP]



STOP LAMP

AALWA1072GB

Connector No. E44 Connector Name JOINT CONNECTOR-E01 Connector Color WHITE	11 10 9 8 7 6 5 4 3 2 1 22 21 20 19 18 17 16 15 14 13 12 33 32 31 30 29 28 27 26 25 24 23	Signal Name	O WIRE	Signal Name	
. E44 me JOINT C lor WHITE	1110987 22221201918 33322313029	Color of Wife of Mile	. B75 me WIRE TC lor GRAY	Color of Wire G	
Connector No. Connector Name Connector Color	SH SH	Terminal No. 19 20 23 23 24	Connector No. B75 Connector Name WIRE TO WIRE Connector Color GRAY	Terminal No. 15	
E38 STOP LAMP SWITCH WHITE		Signal Name	TO WIRE E		
. E38 me STOP lor WHITI		Color of Wire of Wire	Vo. B46 Vame WIRE T Solor WHITE	Golor of Gol	
Connector No. E38 Connector Name STOP L Connector Color WHITE	S.H.S.	Terminal No.	Connector No. B46 Connector Name WIRE TO WIRE Connector Color WHITE	10 10 10 10 10 10 10 10 10 10 10 10 10 1	
STOP LAMP CONNECTORS Connector No. E28 Connector Name FUSE BLOCK (J/B) Connector Color WHITE		Signal Name	0 SE BLOCK (J/B) ITTE 30 2010 9070605040	Signal Name	
DP LAMP CONNECTOR: Connector No. E28 Connector Name FUSE BLOCK (J/B) Connector Color WHITE	4M 3M 2M 1M 10M 9M 8M 7M 6M 5M	Color of Wire of K		Color of Wire G	
DP LAMP C Connector No. Connector Name Connector Color	S.H.	5M 5M 8M	Connector No. Connector Name Connector Color	Terminal No. 50	
STOP STOP			Con Con	AALIA3066GB	

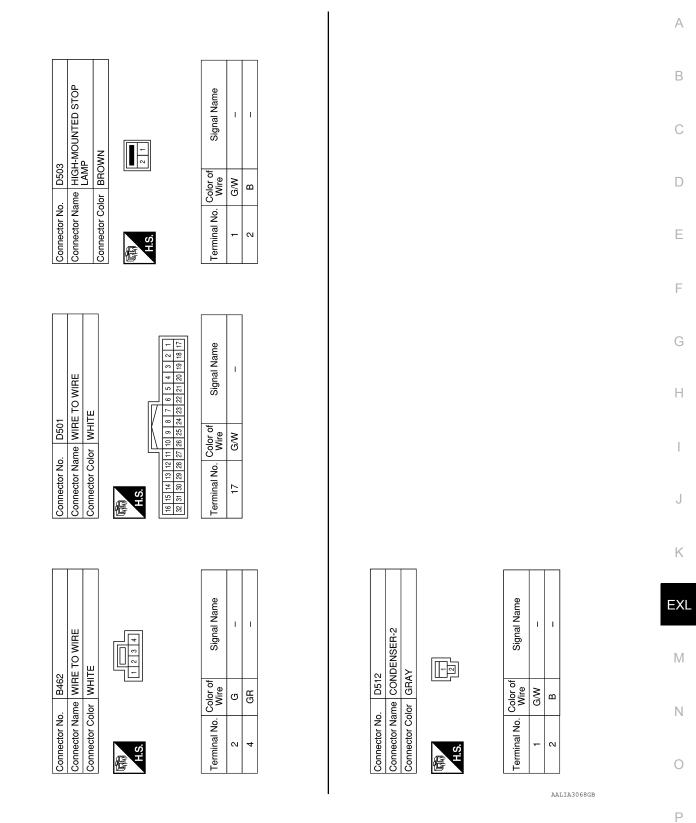
< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

Revision: October 2014

Ρ

B145 NRE TO WIRE Or GRAY 1 2 4 5 7 8 9 10 11 12 13 14 15 16	of Signal Name	B461 WIRE TO WIRE WHITE	
Connector No. B145 Connector Name WIRE TO WIRE Connector Color GRAY Mission 1 B 9 Hist 8 B 9 B 9	Terminal No. Color of Wire 15 G	Connector No. B461 Connector Name WIRE TO WIRE Connector Color WHITE	- 1 GR
bin	Color of Signal Name Write GR – – – – – – – – – – – – – – – – – –		Wire olynal name G
Connector No. Connector Name Connector Color	Terminal No.	Connector No. B460 Connector Name REAR Connector Color GRAY	
E TO WIRE	Signal Name		
Connector No. B91 Connector Name WIRE TO WIRE Connector Color WHITE	Terminal No. Color of Wire 4 B B		5 G G

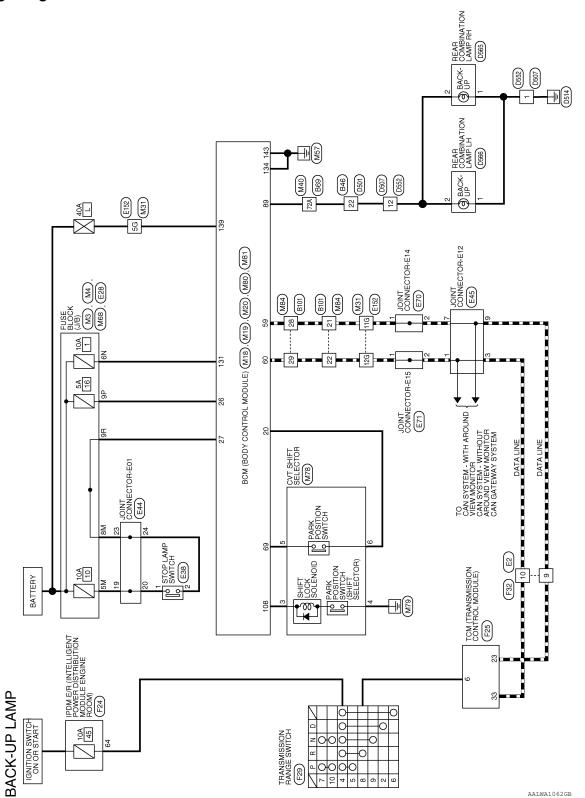


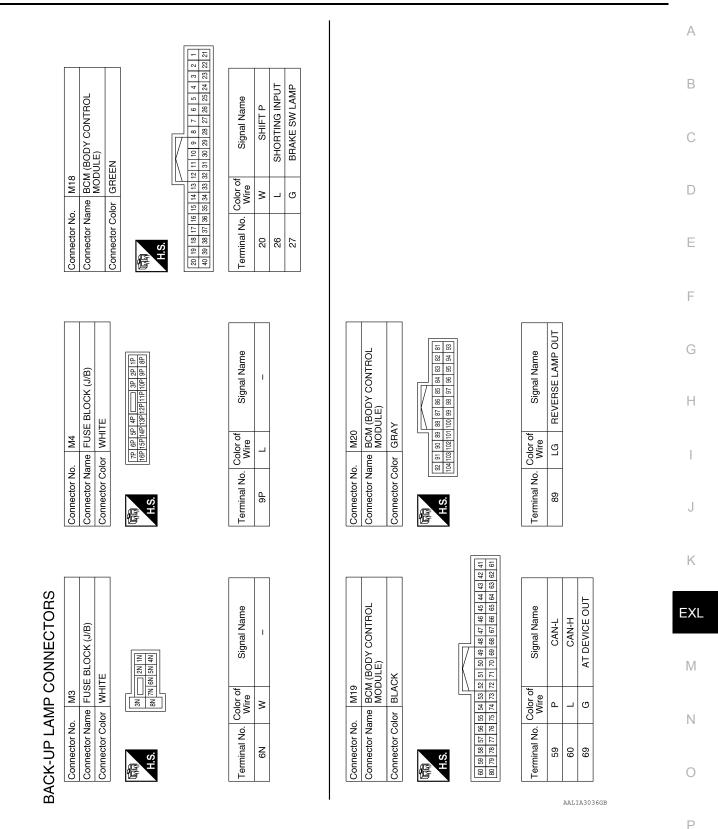
INFOID:000000011564152

< WIRING DIAGRAM >

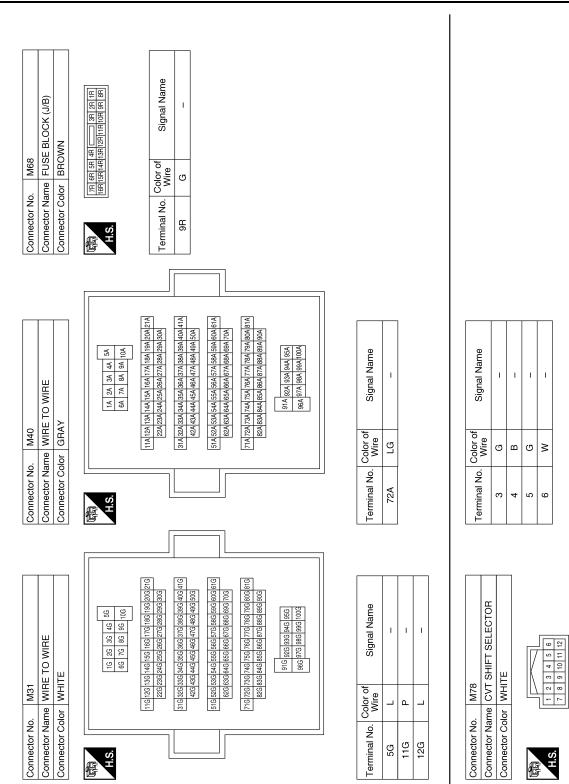
BACK-UP LAMP

Wiring Diagram



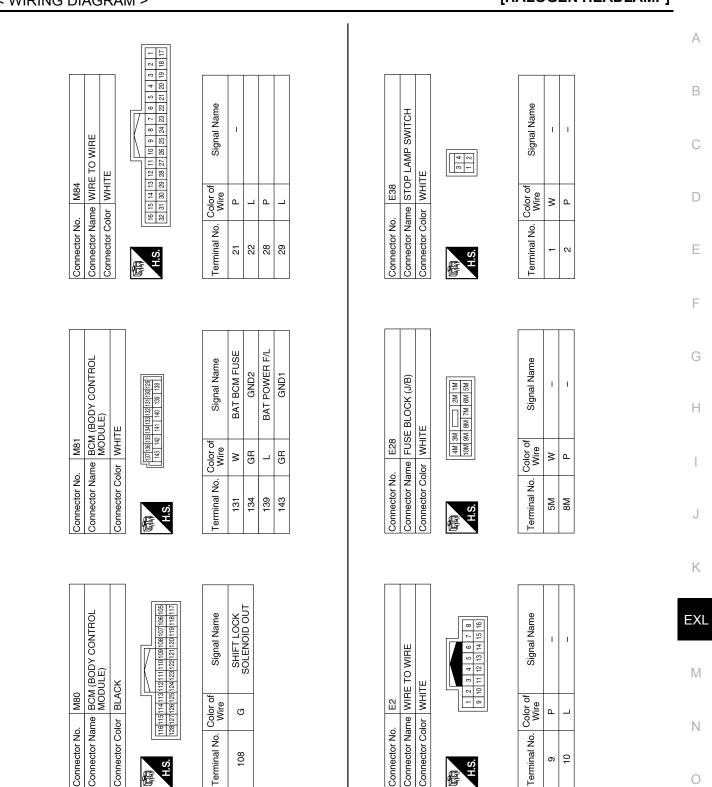


[HALOGEN HEADLAMP]



AALIA3037GB

< WIRING DIAGRAM >



BACK-UP LAMP

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]

Revision: October 2014

AALIA3038GB

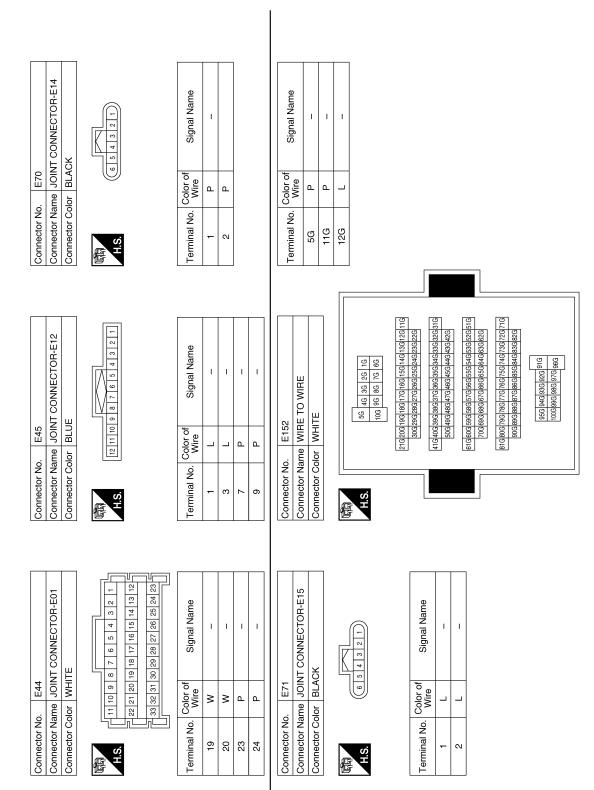
Ο

Ρ

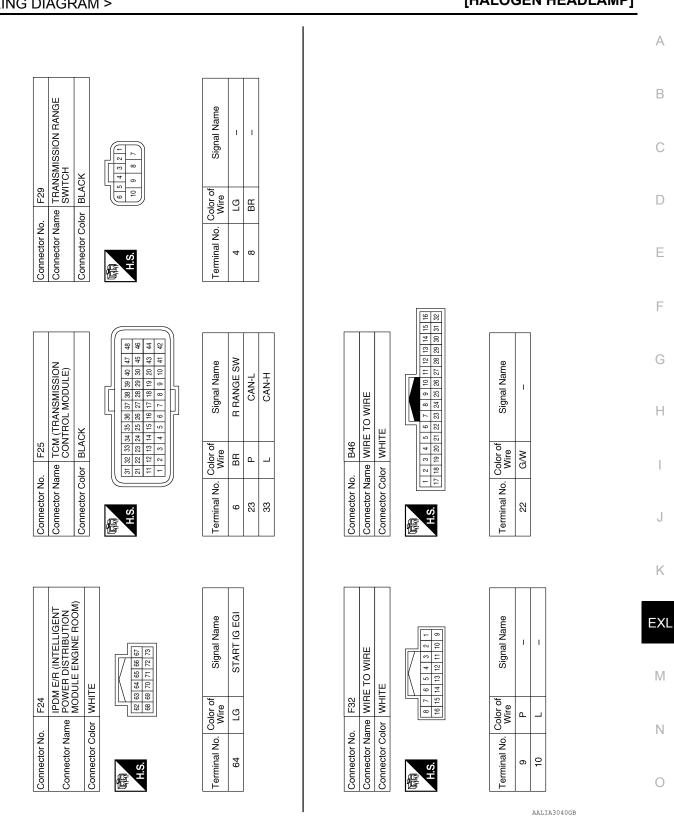
< WIRING DIAGRAM >

BACK-UP LAMP

BACK-UP LAIVIP

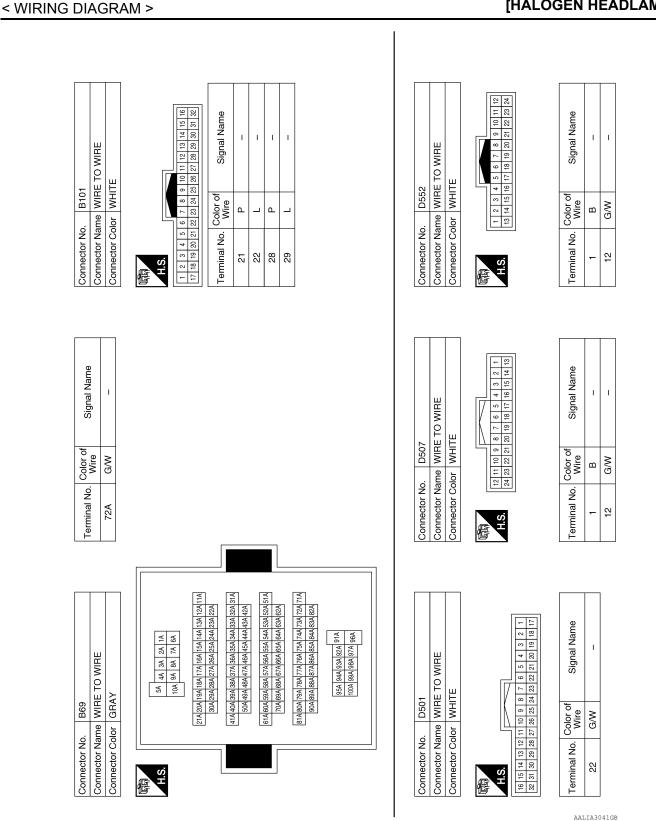


AALIA3039GB



Ρ

< WIRING DIAGRAM >



Revision: October 2014

AALIA3108GB

Connector No. D566 R COMBINATION Connector Name REAR COMBINATION RH E Image: Signal Name Image:						1		1
Connector No. Signal Name 		R COMBINATION P LH	Ш	321	Signal Name	I	I	
Connector No Connector No Connector No Connector No Connector No Connector No Connector No Connector No Connector No		me REA LAM	lor WHI	Ľ	Color of Wire	в	G/W	
Signal Name	Connector No.	Connector Nar	Connector Col	际 H.S.		-	2	
					[I
	D565	REAR COMBINATION LAMP RH	ш		Signal Name	I	I	
	Connector No.	Connector Name	Connector Color WHITE	所.S.H	Terminal No. Color of Wire	÷	2	

BACK-UP LAMP

Κ

А

В

С

D

Е

F

G

Н

J

EXL

Μ

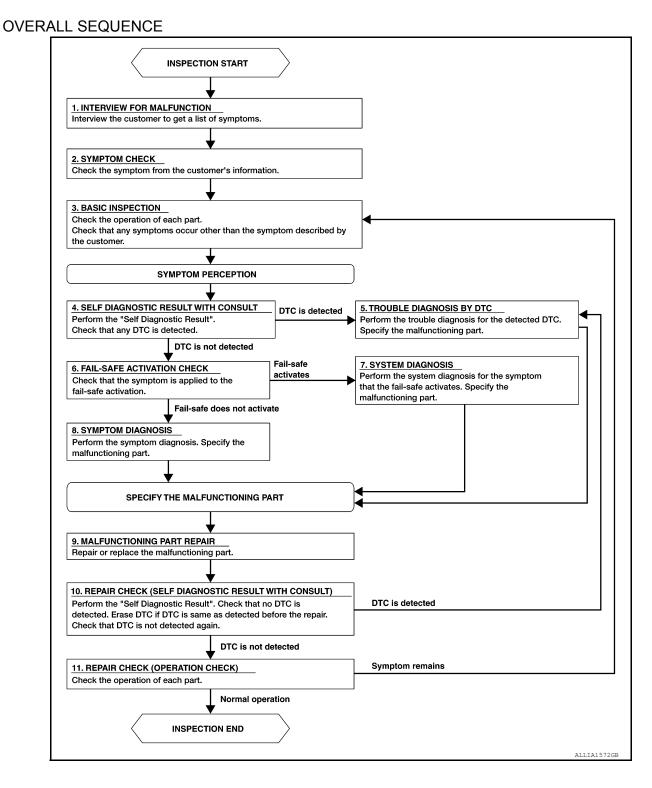
Ν

Ο

Ρ

BASIC INSPECTION DIAGNOSIS AND REPAIR WORK FLOW

Work Flow



DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION > [HALOGEN HEADL.	AMP]
DETAILED FLOW	
1.INTERVIEW FOR MALFUNCTION	
Find out what the customer's concerns are.	
>> GO TO 2.	
2. SYMPTOM CHECK	
Verify the symptom from the customer's information.	
>> GO TO 3.	
3.BASIC INSPECTION	
Check the operation of each part. Check any concerns that occur other than those mentioned in the cus interview.	stomer
>> GO TO 4.	
4.SELF DIAGNOSTIC RESULT WITH CONSULT	
Perform the "Self Diagnostic Result". Check that any DTC is detected.	
<u>Is any DTC detected?</u> YES >> GO TO 5.	
NO >> GO TO 6.	
5. TROUBLE DIAGNOSIS BY DTC	
Perform the trouble diagnosis for the detected DTC. Specify the malfunctioning part.	
>> GO TO 9.	
6.FAIL-SAFE ACTIVATION CHECK	
Determine if the customer's concern is related to fail-safe activation.	
Does the fail-safe activate?	
YES >> GO TO 7. NO >> GO TO 8.	
7.SYSTEM DIAGNOSIS	
Perform the system diagnosis for the system in which the fail-safe activates. Specify the malfunctioning	part.
>> GO TO 9.	
8. SYMPTOM DIAGNOSIS	
Perform the symptom diagnosis. Specify the malfunctioning part.	
>> GO TO 9. 9.MALFUNCTION PART REPAIR	
	<u> </u>
Repair or replace the malfunctioning part.	
>> GO TO 10.	
10.REPAIR CHECK (SELF DIAGNOSTIC RESULT WITH CONSULT)	to the
Perform the "Self Diagnostic Result". Verify that no DTCs are detected. Erase all DTCs detected prior repair. Verify that DTC is not detected again.	to the
Is any DTC detected?	

Is any DTC detected?

DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

[HALOGEN 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.

DTC/CIRCUIT E	DIAGNOSI	S >		,	[HALOO	GEN HEADLAMP]
DTC/CIRC	UIT D	IAGNOS	S			
IEADLAMP	(HI) CIF	RCUIT				
Component Fu	Inction C	heck				INFOID:000000011565471
CHECK HEADL	.AMP (HI) (OPERATION				
		PS" in "Active Tes tems, check that t				
	Headlamp second ea	(HI) blinks (ON/C ach.))FF is repe	ated		
Off :	Headlamp	(HI) OFF				
 Check that the s the inspection re YES >> Headla 	R auto activ headlamp <u>esult norma</u> amp (HI) cir	. ,		anosis Descriptior	<u>"</u> .	
Diagnosis Proc						INFOID:000000011565472
Ū						
.CHECK HEADL		-USE				
. Turn ignition so Check that the		uses are not blow	'n:			
Unit		Location		Fuse No.		Capacity
Headlamp HI		IPDM E/R		34		10A
Headlamp H	、 ,			35		
YES >> GO TO NO >> Replace CHECK HEADL With CONSULT Disconnect ap Turn ignition so Select "EXTER While operatin	2. ce the blow _AMP (HI) (plicable fro witch ON. RNAL LAMI g the test it	n fuse after repair OUTPUT VOLTAG nt combination lar PS" in "Active Tes	E mp connect t" mode of '	tor. "IPDM E/R".	combination lar	np harness connec-
tor and ground						
Fror	+ nt combinatior	n lamp	-	Te	est item	Voltage
Conne		Terminal	-			Ŭ
RH	E239				Hi	Battery voltage
1 1 1	2200	2	Ground	EXTERNAL	Off	0
				LAMPS	Hi	Battery voltage
LH	E235				Off	0

NO >> GO TO 3. ce the headiamp build. Refer to EXE-279, Build Specifications.

3. CHECK HEADLAMP (HI) POWER SUPPLY CIRCUIT

HEADLAMP (HI) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

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	/I E/R	IPDN	Front combination lamp			
Continuity	Terminal	Connector	Terminal	Connector		
Yes	80	E217	2	E239	RH	
fes	81	EZII	2	E235	LH	

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-37. "Removal and Installation".

NO >> Repair or replace harness.

HEADLAMP (LO) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >	>			[HALOO	SEN HEADLAMP]		
HEADLAMP (LO) CIR	CUIT						
omponent Function Check							
1.CHECK HEADLAMP (LO) OF	PERATION						
 With CONSULT Select "EXTERNAL LAMPS While operating the test iten 				I.			
Lo : Headlamp (L	O) ON						
Off : Headlamp (L	O) OFF						
Without CONSULT 1. Start IPDM E/R auto active t 2. Check that the headlamp (L <u>Is the inspection result normal?</u> YES >> Headlamp (LO) circl NO >> Refer to <u>EXL-225.</u> "	O) is turned ON uit is normal.		<u>sis Description"</u> .				
Diagnosis Procedure					INFOID:000000011565476		
1.CHECK HEADLAMP (LO) FL	ISE						
 Turn ignition switch OFF. Check that the following fustories 		1:	E co No				
Unit Headlamp LO (RH)	Location		Fuse No. 36		Capacity		
Headlamp LO (LH)	IPDM E/R		37		15A		
 YES >> GO TO 2. NO >> Replace the blown f 2.CHECK HEADLAMP (LO) OU With CONSULT 1. Disconnect applicable front 2. Turn ignition switch ON. 3. Select "EXTERNAL LAMPS 4. While operating the test item tor and ground. 	JTPUT VOLTAG	DE onnector. ' mode of "IPI	DM E/R".	nbination lan	np harness connec-		
+							
Front combination la	-	-	Test i	tem	Voltage		
Connector	Terminal			Lo	Battery voltage		
I I	E239			Off	Dattory voltage		
RH E239			EVTEDNAL	()//	0		
	1	Ground	EXTERNAL LAMPS	Lo	0 Battery voltage		
RH E239 LH E235	1	Ground			0 Battery voltage 0		

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.

Revision: October 2014

HEADLAMP (LO) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

	Front combination lam	р	IPDN	Continuity	
Conr	Connector Terminal		Connector	Terminal	Continuity
RH	E239	1	1 E217 7		Yes
LH	E235	I		76	165

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-37, "Removal and Installation".

NO >> Repair or replace harness.

< DTC/CIRCUIT DIAGNOS	YTIME RUNNING	LIGHT RELAY CI	RCUIT [HALOGEN HEADLAMP]
DAYTIME RUNNING	-	CIRCUIT	<u> </u>
Component Function (Check		INFOID:000000011573859
1.CHECK DAYTIME RUNN		I	
CONSULT Select "EXTERNAL LAM	IPS" in "Active Test" mod items, check daytime rur	e of "IPDM E/R".	
	AL LAMPS Hi AL LAMPS Off		
Is the inspection result normal YES >> Daytime running NO >> Refer to EXL-22	<u>al?</u> light relay circuit is norm 7, "Diagnosis Procedure'	nal.	
Diagnosis Procedure			INFOID:000000011573860
 CHECK DAYTIME RUNN Turn ignition switch OFF Check that the following 		E	
Unit	Fu	ise No.	Capacity
Daytime running light re	lay	50	10A
YES >> GO TO 2.			
2.CHECK DAYTIME RUNN 1. Remove daytime running		/ER SUPPLY	nd ground.
 CHECK DAYTIME RUNN Remove daytime running Check voltage between 	ING LIGHT RELAY POW	/ER SUPPLY	E
2.CHECK DAYTIME RUNN 1. Remove daytime running 2. Check voltage between	ING LIGHT RELAY POW g light relay. daytime running light rela +) ning light relay	/ER SUPPLY	-
2.CHECK DAYTIME RUNN 1. Remove daytime running 2. Check voltage between	ING LIGHT RELAY POW g light relay. daytime running light rela +) ning light relay Terminal	/ER SUPPLY ay harness connector a	Voltage
2.CHECK DAYTIME RUNN 1. Remove daytime running 2. Check voltage between	ING LIGHT RELAY POW g light relay. daytime running light rela +) ning light relay	/ER SUPPLY ay harness connector a	Voltage (Approx.)
2.CHECK DAYTIME RUNN 1. Remove daytime running 2. Check voltage between	ING LIGHT RELAY POW g light relay. daytime running light rela +) ning light relay Terminal 2 7 5	/ER SUPPLY ay harness connector a (-)	Voltage (Approx.)
2.CHECK DAYTIME RUNN 1. Remove daytime running 2. Check voltage between	ING LIGHT RELAY POW g light relay. daytime running light rela +) ning light relay Terminal 2 7 5 al? e harness. ING LIGHT RELAY relay. Refer to EXL-228, al? e running light relay.	/ER SUPPLY ay harness connector a (-) Ground "Component Inspection	Voltage (Approx.) Battery voltage

DAYTIME RUNNING LIGHT RELAY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

2. Turn ignition switch ON.

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

(+) M E/R	(-)	Test	Test item	
Connector	Terminal				(Approx.)
E218	85	Ground	EXTERNAL	On	0 V
E210	00	Ground	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-37, "Removal and Installation".

${f 5.}$ CHECK DAYTIME RUNNING LIGHT RELAY CONTROL SIGNAL (OPEN) CIRCUIT

- 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	M E/R	Daytime runr	Continuity	
Connector	Terminal	Connector	Terminal	Continuity
E218	85	E4	1	Yes

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

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

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

IPDM	1 E/R		Continuity	
Connector	Terminal	Ground	Continuity	
E218	85		No	

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to PCS-37, "Removal and Installation".

NO >> Repair or replace harness.

Component Inspection

INFOID:000000011573861

1.CHECK DAYTIME RUNNING LIGHT RELAY

- 1. Turn ignition switch OFF.
- 2. Remove daytime running light relay.

3. Apply battery voltage to daytime running light relay between terminals 1 and 2.

4. Check continuity between daytime running light relay terminals.

Daytime runr	ning light relay	Condition		Continuity
Terr	minal			
7	7 6		Apply	Yes
I I		Voltage	Not Apply	No
5	3	vollage	Apply	Yes
5			Not Apply	No

Is the inspection result normal?

Revision: October 2014

DAYTIME RUNNING LIGHT RELAY CIRCUIT

[HAL	OGEN	HEADI	_AMP]
------	------	-------	-------

< DTC	/CIRCUIT DIAGNOSIS >	[HALOGEN HEADLAMP]	
YES NO	 > Daytime running light relay is normal. > Replace daytime running light relay. 	A	
		В	
		C	
		D	
		E	

EXL

M

F

G

Н

J

Κ

Ν

Ο

Ρ

< DTC/CIRCUIT DIAGNOSIS >

PARKING LAMP CIRCUIT

Component Function Check

1.CHECK PARKING LAMP OPERATION

CONSULT

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

TAIL : Parking lamp ON

Off : Parking lamp OFF

Is the inspection result normal?

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

Diagnosis Procedure

INFOID:000000011573863

INFOID:000000011573862

Regarding Wiring Diagram information. Refer to EXL-198. "Wiring Diagram".

1.CHECK PARKING LAMP FUSE

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

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

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2.CHECK PARKING LAMP CIRCUIT

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

IPDM	1 E/R		Continuity
Connector	Terminal	Ground	No
E218	90		INO

Is the inspection result normal?

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

3.CHECK PARKING LAMP

Check applicable LED lamp.

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace applicable LED lamp.

4.CHECK PARKING LAMP OUTPUT VOLTAGE

1. Disconnect front combination lamp connector.

PARKING LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

2. Turn ignition switch ON.

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

(+)					В
IPDI	M E/R	(-)	Test	item	Voltage (Approx.)	
Connector	Terminal					
E218	90	Ground	EXTERNAL	TAIL	Battery voltage	С
L210	30	Ground	LAMPS	Off	0 V	

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace IPDM E/R. Refer to PCS-37, "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.

	Continuity	M E/R	IPDN	ıp	Front combination lam	F
G	Continuity	Terminal	Connector	Terminal	nector	Conr
_	Yes	90	E218	2	E239	RH
	res	90	E210		E235	LH
— H						

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
Conr	nector	Terminal	Ground	Continuity
RH	E239	7	Ground	Yes
LH	E235	1		165

Is the inspection result normal?

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

NO >> Repair or replace harness.

Revision: October 2014

А

D

Е

F

EXL

Μ

Ν

Ο

Ρ

Κ

FRONT SIDE MARKER LAMP CIRCUIT

Component Function Check

1. CHECK PARKING LAMP OPERATION

Check that the parking lamp is turned ON.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Check parking lamp circuit. Refer to EXL-230, "Component Function Check".

2. CHECK FRONT SIDE MARKER LAMP OPERATION

CONSULT

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

TAIL : Front side marker lamp ON

Off : Front side marker lamp OFF

Is the inspection result normal?

YES >> Front side marker lamp circuit is normal.

NO >> Refer to EXL-232, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:000000011573865

Regarding Wiring Diagram information. Refer to EXL-198, "Wiring Diagram".

1.CHECK FRONT SIDE MARKER LAMP BULB

Check applicable lamp bulb.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace bulb.

2.CHECK FRONT SIDE MARKER LAMP POWER SUPPLY CIRCUIT

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

I	Front combination lam	р	IPDI	M E/R	Continuity
Conr	nector	Terminal	Connector	Terminal	Continuity
RH	E239	8	E218	90	Yes
LH	E235	O	L210	30	Tes

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

$\mathbf{3}$.check front side marker lamp ground circuit

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

	Front combination lamp			Continuity
Con	nector	Terminal	Ground	Continuity
RH	E239	7	Giouna	Yes
LH	E235	I		res

Is the inspection result normal?

FRONT SIDE MARKER LAMP CIRCUIT < DTC/CIRCUIT DIAGNOSIS > [HALOGEN HEADLAMP]

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

YES NO

>> Repair or replace harness.

А

В

С

D

Е

F

G

Н

J

Κ

EXL

Μ

Ν

Ο

Ρ

< DTC/CIRCUIT DIAGNOSIS >

TAIL LAMP CIRCUIT

Component Function Check

1.CHECK TAIL LAMP OPERATION

- 1. Select "EXTERNAL LAMPS" in "Active Test" mode of "IPDM E/R".
- 2. While operating the test items, check that the tail lamp is turned ON.
 - TAIL : Tail Lamp ON

Off : Tail lamp OFF

Is the inspection result normal?

YES >> Tail lamp circuit is normal.

NO >> Refer to EXL-234, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:000000011573867

INFOID:000000011573866

Regarding Wiring Diagram information. Refer to EXL-198. "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 <u>EXL-230, "Component Function Check"</u>.

2. CHECK TAIL LAMP (LH) FUSE

1. Turn ignition switch OFF.

2. Check that the following fuses are not blown:

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

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace the blown fuse after repairing the affected circuit.

3.CHECK TAIL LAMP OUTPUT VOLTAGE

CONSULT

T. Disconnect rear combination lamp RH or LH connector.

2. Turn ignition switch ON.

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

4. While operating the test items, check voltage between applicable rear combination lamp harness connector and ground.

R	(+) tear combination lar	np	(-)	Test	item	Voltage (Approx.)
Con	nector	Terminal				(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
RH	D565				TAIL	Battery voltage
КП	D303	4	Ground	EXTERNAL	Off	0 V
LH	D566	4	Ground	LAMPS	TAIL	Battery voltage
Ln	D300				Off	0 V

TAIL LAMP CIRCUIT

1	AGNOSIS >				OGEN HEADLAMP
the inspection resu	ult normal?				
ES >> GO TO 6					
NO >> GO TO 4					
.CHECK TAIL LAN					
	I E/R connector ar between IPDM E/				
Check continuity				u.	
	(+)				
IPC	M E/R		(-)		Continuity
Connector	Terminal				
E121	9		Ground		No
	10		0.00.00		
the inspection resu					
/ES >> GO TO 5 NO >> Repair o	5. r replace harness.				
.CHECK TAIL LAN			сшт		
			COIT		
Turn ignition swi Disconnect IPDN	tch OFF. /I E/R connector ar	nd rear combina	tion lamn conne	ctor	
					harness connector.
	ear combination lamp			DM E/R	Continuity
Conne		Terminal	Connector	Terminal	
RH	B459			9	
	D 100	6	E121	_	Yes
LH	B460	6	E121	10	Yes
LH the inspection resu	ult normal?			10	Yes
LH the inspection resu (ES >> Replace	<u>ult normal?</u> IPDM E/R. Refer t	to <u>PCS-37. "Rer</u>		10	Yes
LH the inspection resu /ES >> Replace NO >> Repair o	<u>ult normal?</u> IPDM E/R. Refer t r replace harness.	to <u>PCS-37. "Rer</u>		10	Yes
LH the inspection resu (ES >> Replace NO >> Repair o .CHECK TAIL LAM	<u>ult normal?</u> IPDM E/R. Refer t r replace harness. IP GROUND CIRC	to <u>PCS-37. "Rer</u> CUIT	noval and Install	10 ation"	Yes
LH the inspection resu /ES >> Replace NO >> Repair o	<u>ult normal?</u> IPDM E/R. Refer t r replace harness. IP GROUND CIRC	to <u>PCS-37. "Rer</u> CUIT	noval and Install	10 ation"	Yes
LH the inspection resu (ES >> Replace NO >> Repair o .CHECK TAIL LAM	<u>ult normal?</u> IPDM E/R. Refer t r replace harness. IP GROUND CIRC	to <u>PCS-37, "Rer</u> CUIT ation lamp harne	noval and Install	10 ation"	
LH the inspection resu (ES >> Replace NO >> Repair o .CHECK TAIL LAM neck continuity betw	ult normal? IPDM E/R. Refer t r replace harness. IP GROUND CIRC ween rear combina	to <u>PCS-37, "Rer</u> CUIT ation lamp harne	noval and Install	10 ation" d ground.	Continuity
LH the inspection resu (ES >> Replace NO >> Repair o .CHECK TAIL LAM neck continuity betw	ult normal? IPDM E/R. Refer t r replace harness. IP GROUND CIRC ween rear combination Rear combination	to PCS-37, "Rer CUIT ation lamp harne lamp Terr	noval and Install	10 ation"	Continuity
LH the inspection result (ES >> Replace NO >> Repair o .CHECK TAIL LAM heck continuity betw	ult normal? IPDM E/R. Refer to r replace harness. IP GROUND CIRC ween rear combination Rear combination	to PCS-37, "Rer CUIT ation lamp harne lamp Terr	noval and Install	10 ation" d ground.	
LH the inspection result (ES >> Replace NO >> Repair o .CHECK TAIL LAM heck continuity betw C RH	ult normal? IPDM E/R. Refer to replace harness. IP GROUND CIRC ween rear combination Rear combination onnector B459 B460	to PCS-37, "Rer CUIT ation lamp harne lamp Terr	noval and Install	10 ation" d ground.	Continuity
LH the inspection result (ES >> Replace NO >> Repair o .CHECK TAIL LAM heck continuity betw C RH LH the inspection result (ES >> Replace	ult normal? IPDM E/R. Refer tr r replace harness. IP GROUND CIRC ween rear combination onnector B459 B460 ult normal? rear combination I	to <u>PCS-37, "Rer</u> CUIT ation lamp harne lamp Terr damp. Refer to <u>E</u>	moval and Install ess connector an minal	10 ation" d ground. Ground	Continuity Yes
LH the inspection result (ES >> Replace NO >> Repair o .CHECK TAIL LAM heck continuity betw C RH LH the inspection result (ES >> Replace	ult normal? IPDM E/R. Refer tr r replace harness. IP GROUND CIRC ween rear combination Rear combination onnector B459 B460 ult normal?	to <u>PCS-37, "Rer</u> CUIT ation lamp harne lamp Terr damp. Refer to <u>E</u>	moval and Install ess connector an minal	10 ation" d ground. Ground	Continuity Yes
LH the inspection result (ES >> Replace NO >> Repair o .CHECK TAIL LAM heck continuity betw C RH LH the inspection result (ES >> Replace	ult normal? IPDM E/R. Refer tr r replace harness. IP GROUND CIRC ween rear combination onnector B459 B460 ult normal? rear combination I	to <u>PCS-37, "Rer</u> CUIT ation lamp harne lamp Terr damp. Refer to <u>E</u>	moval and Install ess connector an minal	10 ation" d ground. Ground	Continuity Yes
LH the inspection result (ES >> Replace NO >> Repair o .CHECK TAIL LAM heck continuity betw C RH LH the inspection result (ES >> Replace	ult normal? IPDM E/R. Refer tr r replace harness. IP GROUND CIRC ween rear combination onnector B459 B460 ult normal? rear combination I	to <u>PCS-37, "Rer</u> CUIT ation lamp harne lamp Terr damp. Refer to <u>E</u>	moval and Install ess connector an minal	10 ation" d ground. Ground	Continuity Yes
LH the inspection result (ES >> Replace NO >> Repair o .CHECK TAIL LAM heck continuity betw C RH LH the inspection result (ES >> Replace	ult normal? IPDM E/R. Refer tr r replace harness. IP GROUND CIRC ween rear combination onnector B459 B460 ult normal? rear combination I	to <u>PCS-37, "Rer</u> CUIT ation lamp harne lamp Terr damp. Refer to <u>E</u>	moval and Install ess connector an minal	10 ation" d ground. Ground	Continuity Yes
LH the inspection result (ES >> Replace NO >> Repair o .CHECK TAIL LAM heck continuity betw C RH LH the inspection result (ES >> Replace	ult normal? IPDM E/R. Refer tr r replace harness. IP GROUND CIRC ween rear combination onnector B459 B460 ult normal? rear combination I	to <u>PCS-37, "Rer</u> CUIT ation lamp harne lamp Terr damp. Refer to <u>E</u>	moval and Install ess connector an minal	10 ation" d ground. Ground	Continuity Yes
LH the inspection result (ES >> Replace NO >> Repair o .CHECK TAIL LAM heck continuity betw C RH LH the inspection result (ES >> Replace	ult normal? IPDM E/R. Refer tr r replace harness. IP GROUND CIRC ween rear combination onnector B459 B460 ult normal? rear combination I	to <u>PCS-37, "Rer</u> CUIT ation lamp harne lamp Terr damp. Refer to <u>E</u>	moval and Install ess connector an minal	10 ation" d ground. Ground	Continuity Yes
LH the inspection result (ES >> Replace NO >> Repair o .CHECK TAIL LAM heck continuity betw C RH LH the inspection result (ES >> Replace	ult normal? IPDM E/R. Refer tr r replace harness. IP GROUND CIRC ween rear combination onnector B459 B460 ult normal? rear combination I	to <u>PCS-37, "Rer</u> CUIT ation lamp harne lamp Terr damp. Refer to <u>E</u>	moval and Install ess connector an minal	10 ation" d ground. Ground	Continuity Yes
LH the inspection result (ES >> Replace NO >> Repair o .CHECK TAIL LAM heck continuity betw C RH LH the inspection result (ES >> Replace	ult normal? IPDM E/R. Refer tr r replace harness. IP GROUND CIRC ween rear combination onnector B459 B460 ult normal? rear combination I	to <u>PCS-37, "Rer</u> CUIT ation lamp harne lamp Terr damp. Refer to <u>E</u>	moval and Install ess connector an minal	10 ation" d ground. Ground	Continuity Yes

< DTC/CIRCUIT DIAGNOSIS >

LICENSE PLATE LAMP CIRCUIT

Component Function Check

1. CHECK TAIL LAMP LH OPERATION

Check that the tail lamp LH is turned ON.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Check tail lamp circuit. Refer to EXL-234, "Component Function Check".

2. CHECK LICENSE PLATE LAMP OPERATION

CONSULT

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

TAIL: License plate lamp ONOff: License plate lamp OFF

Is the inspection result normal?

YES >> License plate lamp circuit is normal.

NO >> Refer to EXL-236, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:000000011573869

Regarding Wiring Diagram information. Refer to EXL-198, "Wiring Diagram".

1. CHECK LICENSE PLATE LAMP BULB

Check the applicable lamp bulb.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace bulb.

2.CHECK LICENSE PLATE LAMP POWER SUPPLY CIRCUIT

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

Continuity	IPDM E/R		License plate lamp		
Continuity	Terminal	Connector	Terminal	onnector	Co
Yes	10	E121	1	D562	RH
res	10	EIZI		D561	LH

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.CHECK LICENSE PLATE LAMP GROUND CIRCUIT

Check continuity between license plate lamp harness connector and ground.

	License plate lan	np		Continuity
	Connector	Terminal	Ground	Continuity
RH	D562	2	Giouna	Yes
LH	D561			165

Is the inspection result normal?

LICENSE PLATE LAMP CIRCUIT

< DTC/	/CIRCUIT DIAGNOSIS >	[HALOGEN HEADLAMP]
YES NO	>> Check corresponding bulb socket and harness. Repair or >> Repair or replace harness.	replace if necessary.

Ρ

< DTC/CIRCUIT DIAGNOSIS >

FRONT FOG LAMP CIRCUIT

Component Function Check

1.CHECK FRONT FOG LAMP OPERATION

CONSULT

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

Fog : Front fog lamp ON

Off : Front fog lamp OFF

Is the inspection result normal?

YES >> Front fog lamp circuit is normal.

NO >> Refer to EXL-238, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:000000011573871

Regarding Wiring Diagram information. Refer to EXL-185. "Wiring Diagram".

1.CHECK FRONT FOG LAMP FUSE

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

Unit	Location	Fuse No.	Capacity
Front fog lamp	IPDM E/R	49	15A

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 2.

2.CHECK FRONT FOG LAMP OUTPUT VOLTAGE

- 1. Disconnect front fog lamp connector.
- 2. Turn ignition switch ON.
- 3. Select "EXTERNAL LAMPS" in "Active Test" mode of "IPDM E/R".

4. While operating the test items, check the voltage between IPDM E/R harness connector and ground.

	(+) Front fog lamp			Test item		Voltage (Approx.)
Con	nector	Terminal				(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
RH	E241				Fog	Battery voltage
БП	E241	1	Ground	EXTERNAL	Off	0 V
	E242		Ground	LAMPS	Fog	Battery voltage
LH	E242				Off	0 V

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 3.

 ${f 3.}$ CHECK FRONT FOG LAMP POWER SUPPLY (SHORT) CIRCUIT

1. Disconnect applicable front fog lamp connector and IPDM E/R connector.

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

FRONT FOG LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

I	PDM E/R					Continuity	
Connector		Terminal	Cround			Continuity	
F047		78	- Ground			Na	
E217		79	_			No	
ne inspection result ne	ormal?						
S >> GO TO 4.							
>> Repair or rep							
CHECK FRONT FOG	LAMP POW	/ER SUPPLY (O	PEN) CIRCUIT				
Turn ignition switch (
Disconnect IPDM E/ Check continuity bet			nector and front fo	ng lamp ha	rness c	onnector	
Chook continuity bot				yg iamp na	11000 0		
Front fog lam	ıp		IPD	M E/R		Continuity	
Connector		Terminal	Connector	Term	inal	Continuity	
RH	E241	1	E217	78	}	Yes	
LH	E242			79)		
S >> Replace IPD) >> Repair or rep CHECK FRONT FOG	M E/R. Refe blace harnes LAMP GRC	s. DUND CIRCUIT	emoval and Installa				
D >> Repair or rep CHECK FRONT FOG eck continuity betweet	M E/R. Refe blace harnes LAMP GRC n front fog la Front fog la	s. DUND CIRCUIT mp harness coni	nector and ground			Continuity	
ES >> Replace IPD D >> Repair or rep CHECK FRONT FOG eck continuity betweet Conne	M E/R. Refe blace harnes LAMP GRC n front fog la Front fog la	s. DUND CIRCUIT mp harness coni				Continuity	
ES >> Replace IPD D >> Repair or rep CHECK FRONT FOG eck continuity between Conne	M E/R. Refe blace harnes LAMP GRC n front fog la Front fog la ctor E241	s. DUND CIRCUIT mp harness coni	nector and ground			Continuity Yes	
ES >> Replace IPD D >> Repair or rep CHECK FRONT FOG eck continuity betweet Conne RH LH	M E/R. Refe blace harnes LAMP GRC n front fog la Front fog la ctor E241 E242	s. DUND CIRCUIT mp harness coni	nector and ground				
ES >> Replace IPD D >> Repair or rep CHECK FRONT FOG eck continuity between Conne RH LH he inspection result no	M E/R. Refe blace harnes LAMP GRC n front fog la Front fog la ctor E241 E242 ormal?	s. DUND CIRCUIT mp harness conr amp Te	rminal				
ES >> Replace IPD D >> Repair or rep CHECK FRONT FOG eck continuity between Conne RH LH he inspection result no	M E/R. Refe blace harnes LAMP GRC n front fog la Front fog la ctor E241 E242 <u>ormal?</u> D. Refer to <u>E</u>	s. DUND CIRCUIT mp harness conr amp Te XL-146, "Bulb Sp	rminal				
ES >> Replace IPD D >> Repair or rep CHECK FRONT FOG eck continuity between Conne RH LH he inspection result no ES >> Replace bult	M E/R. Refe blace harnes LAMP GRC n front fog la Front fog la ctor E241 E242 <u>ormal?</u> D. Refer to <u>E</u>	s. DUND CIRCUIT mp harness conr amp Te XL-146, "Bulb Sp	rminal				
ES >> Replace IPD D >> Repair or rep CHECK FRONT FOG eck continuity between Conne RH LH he inspection result no ES >> Replace bult	M E/R. Refe blace harnes LAMP GRC n front fog la Front fog la ctor E241 E242 <u>ormal?</u> D. Refer to <u>E</u>	s. DUND CIRCUIT mp harness conr amp Te XL-146, "Bulb Sp	rminal				
ES >> Replace IPD D >> Repair or rep CHECK FRONT FOG eck continuity between Conne RH LH he inspection result no ES >> Replace bult	M E/R. Refe blace harnes LAMP GRC n front fog la Front fog la ctor E241 E242 <u>ormal?</u> D. Refer to <u>E</u>	s. DUND CIRCUIT mp harness conr amp Te XL-146, "Bulb Sp	rminal				
ES >> Replace IPD D >> Repair or rep CHECK FRONT FOG eck continuity between Conne RH LH he inspection result no ES >> Replace bult	M E/R. Refe blace harnes LAMP GRC n front fog la Front fog la ctor E241 E242 <u>ormal?</u> D. Refer to <u>E</u>	s. DUND CIRCUIT mp harness conr amp Te XL-146, "Bulb Sp	rminal				
ES >> Replace IPD D >> Repair or rep CHECK FRONT FOG eck continuity between Conne RH LH he inspection result no ES >> Replace bult	M E/R. Refe blace harnes LAMP GRC n front fog la Front fog la ctor E241 E242 <u>ormal?</u> D. Refer to <u>E</u>	s. DUND CIRCUIT mp harness conr amp Te XL-146, "Bulb Sp	rminal				
ES >> Replace IPD D >> Repair or rep CHECK FRONT FOG eck continuity between Conne RH LH he inspection result no ES >> Replace bult	M E/R. Refe blace harnes LAMP GRC n front fog la Front fog la ctor E241 E242 <u>ormal?</u> D. Refer to <u>E</u>	s. DUND CIRCUIT mp harness conr amp Te XL-146, "Bulb Sp	rminal				
ES >> Replace IPD D >> Repair or rep CHECK FRONT FOG eck continuity between Conne RH LH he inspection result no ES >> Replace bult	M E/R. Refe blace harnes LAMP GRC n front fog la Front fog la ctor E241 E242 <u>ormal?</u> D. Refer to <u>E</u>	s. DUND CIRCUIT mp harness conr amp Te XL-146, "Bulb Sp	rminal				
ES >> Replace IPD D >> Repair or rep CHECK FRONT FOG eck continuity between Conne RH LH he inspection result no ES >> Replace bult	M E/R. Refe blace harnes LAMP GRC n front fog la Front fog la ctor E241 E242 <u>ormal?</u> D. Refer to <u>E</u>	s. DUND CIRCUIT mp harness conr amp Te XL-146, "Bulb Sp	rminal				
ES >> Replace IPD D >> Repair or rep CHECK FRONT FOG eck continuity between Conne RH LH he inspection result no ES >> Replace bult	M E/R. Refe blace harnes LAMP GRC n front fog la Front fog la ctor E241 E242 <u>ormal?</u> D. Refer to <u>E</u>	s. DUND CIRCUIT mp harness conr amp Te XL-146, "Bulb Sp	rminal				
ES >> Replace IPD D >> Repair or rep CHECK FRONT FOG eck continuity between Conne RH LH he inspection result no ES >> Replace bult	M E/R. Refe blace harnes LAMP GRC n front fog la Front fog la ctor E241 E242 <u>ormal?</u> D. Refer to <u>E</u>	s. DUND CIRCUIT mp harness conr amp Te XL-146, "Bulb Sp	rminal				

Revision: October 2014

Ρ

TURN SIGNAL LAMP CIRCUIT

Component Function Check

1.CHECK TURN SIGNAL LAMP

CONSULT

- 1. Select "FLASHER" in "Active Test" mode of "BCM (FLASHER)".
- 2. While operating the test items, check that the turn signal lamp blinks.
 - LH : Turn signal lamp LH blinking
 - RH : Turn signal lamp RH blinking

OFF : The turn signal lamp OFF

Is the inspection result normal?

- YES >> Turn signal lamp circuit is normal.
- NO >> Refer to EXL-240, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:000000011573873

Regarding Wiring Diagram information, refer to EXL-190, "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. <u>Is the bulb OK?</u>

YES >> GO TO 2.

NO >> Replace the bulb.

2.check turn signal lamp output voltage

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

	Front combinat	tion lamp	(-)	Voltage
Со	nnector	Terminal	(-)	Voltage
LH	E234			
RH	E240	9	Ground	

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

Door mir	ror	()	Voltage
Connector	Terminal	(-)	Voltage

TURN SIGNAL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

LH	D4				Λ
RH	D107	20	Ground	$ \begin{array}{c} (V)\\ 15\\ 10\\ 5\\ 0\\ \hline \\ 1\\ 1\\ \hline \\ 1\\ \hline 1$	В
				PKID0926E	

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

	Rear combination	on lamp			
Conr	nector	Terminal	(-)	Voltage	
LH	B460				E
RH	B459	4	Ground	$ \begin{array}{c} (V)\\ 15\\ 10\\ 5\\ 0\\ \hline \\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10\\ 10$	F
				PKID0926E	G

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 3.

${\it 3.}$ 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 connector.

Continuity	M	BC		Front combination lamp		
Continuity	Terminal	Connector	Terminal	Connector		
Yes	117	M80	0	E234	LH	
165	105	IVIOU	9	E240	RH	

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

_	Operationsity	М	BC	Door mirror lamp		
	Continuity	Terminal	Connector	Terminal	Connector	
-	Vee	117		20	D4	LH
	Yes	105	M80	_ 20	D107	RH

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

Continuity O	M	BC	Rear combination lamp		
	Terminal	Connector	Terminal	Connector	
Yes	103	M20	Q	B460	LH
P	92	WZ0		B459	RH

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair the harness or connector.

4. CHECK TURN SIGNAL LAMP GROUND CIRCUIT

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

Revision: October 2014

[HALOGEN HEADLAMP]

С

Н

EXL

TURN SIGNAL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

	Front combin	nation lamp		Continuity
Conr	nector	Terminal	· —	Continuity
LH	E234	10	Ground	Yes
RH	E240		Ground	103

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

	Door mirror lamp Continuit		Continuity	
Conr	nector	Terminal	*	Continuity
LH	D4	21	Ground	Yes
RH	D107	21	Ground	165

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

	Rear combination lamp		nation lamp	
Conr	nector	Terminal	· —	Continuity
LH	B460	7	Ground	Yes
RH	B459	Ι	Ground	105

Is the inspection result normal?

YES >> Replace the malfunctioning lamp.

NO >> Repair the harness or connector.

OPTICAL SENS	OR			
Component Function	on Check		INFOID:000000011573874	A
1. CHECK OPTICAL SE	ENSOR SIGNAL BY (CONSULT		В
3. Turn lighting switch	" in "Data Monitor" m			С
Monitoritom		Condition	Voltage (Approx.)	D
Monitor item		Condition When illuminating	Voltage (Approx.) 3.1 V or more *	
OPTISEN (DTCT)	Optical sensor	When shutting off light	0.6 V or less	Е
*: Illuminates the optical sense	or. The value may be less	than the standard value if brightness		
Is the inspection result r YES >> Optical sense	ormal?			F
Diagnosis Procedu	re		INFOID:000000011573875	G
 CHECK OPTICAL SE Turn ignition switch Turn lighting switch 	ENSOR POWER SUF ON. AUTO.	to <u>EXL-178, "Wiring Diagram</u> " PPLY INPUT arness connector and ground.	<u>.</u>	H I J
((+)			
Optica	Il sensor	(-)	Voltage (Approx.)	Κ
Connector	Terminal		· · · · · ·	
M15	1	Ground	5 V	EXL
Is the inspection result r YES >> GO TO 2. NO >> GO TO 4. 2.CHECK OPTICAL SE Check voltage between	ENSOR GROUND IN	PUT ss connector and ground.		M
((+)			
Optica	Il sensor	(–)	Voltage (Approx.)	0
Connector	Terminal		(, , , , , , , , , , , , , , , , , , ,	0
M15	3	Ground	0 V	
Is the inspection result r YES >> GO TO 3. NO >> GO TO 6. 3.CHECK OPTICAL SE		IPUT		Ρ

While illuminating the optical sensor, check voltage between optical sensor harness connector and ground.

< DTC/CIRCUIT DIAGNOSIS >

OPTICAL SENSOR

< DTC/CIRCUIT DIAGNOSIS >

(+ Optical s	/	(-)	Condition		Voltage (Approx.)
Connector	Terminal				(
M15	2	Ground	Optical sensor		3.1 V or more *
WI15	2	Giouna	Optical sensor	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-266, "Removal and Installation".

4. CHECK OPTICAL SENSOR (OPEN) CIRCUIT

- 1. Turn ignition switch OFF.
- 2. Disconnect optical sensor connector and BCM connector.

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

Optical sensor		BCM		Continuity
Connector	Terminal	Connector		
M15	1	M18	3	Yes

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

5.CHECK OPTICAL SENSOR (SHORT) CIRCUIT

Check continuity between optical sensor harness connector and ground.

Optical sensor			Continuity
Connector	Terminal	Ground	Continuity
M15	1		No

Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-82</u>, "Removal and Installation".

NO >> Repair or replace harness.

6.CHECK OPTICAL SENSOR GROUND CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect optical sensor connector and BCM connector.

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

Optical sensor		BCM		Continuity
Connector	Terminal	Connector	Terminal	Continuity
M15	3	M18	17	Yes

Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-82, "Removal and Installation"</u>.

NO >> Repair or replace harness.

7. CHECK OPTICAL SENSOR SIGNAL (OPEN) CIRCUIT

1. Turn ignition switch OFF.

2. Disconnect optical sensor connector and BCM connector.

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

OPTICAL SENSOR

< DTC/CIRCUIT DIAGNOSIS >

Connector	sensor Terminal	BC	Terminal	- Continuity
M15	2	M18	4	Yes
ne inspection resu			•	100
ES >> GO TO 8				
D >> Repair of	r replace harness.			
CHECK OPTICAL	SENSOR (SHORT)	CIRCUIT		
		arness connector and	l ground.	
	otical sensor			Continuity
Connector	Terminal	G	round	
M15	2			No
ne inspection resu				
ES >> Replace D >> Repair of	BCM. Refer to BCS-8	32, "Removal and Inst	<u>allation"</u> .	
	r replace harness.			

< DTC/CIRCUIT DIAGNOSIS >

HAZARD SWITCH

Component Function Check

1. CHECK HAZARD SWITCH SIGNAL BY CONSULT

CONSULT

- 1. Turn ignition switch ON.
- 2. Select "FLASHER" in "Data Monitor" mode of "BCM".
- 3. While operating the hazard switch, check the monitor status.

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

Is the inspection result normal?

- YES >> Hazard switch circuit is normal.
- NO >> Refer to <u>EXL-246, "Diagnosis Procedure"</u>.

Diagnosis Procedure

INFOID:000000011573877

Regarding Wiring Diagram information. Refer to EXL-190, "Wiring Diagram".

1. CHECK HAZARD SWITCH SIGNAL INPUT

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

(+)			
Haza	Hazard switch		Voltage (Approx.)
Connector	Terminal		
M83	2	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 2.

2.CHECK HAZARD SWITCH SIGNAL (OPEN) CIRCUIT

1. Disconnect BCM connector.

2. Check continuity between hazard switch harness connector and BCM harness connector.

Hazard	d switch	BCM		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
M83	2	M18	36	Yes	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.CHECK HAZARD SWITCH SIGNAL (SHORT) CIRCUIT

Check continuity between hazard switch harness connector and ground.

-	Hazard switch			Continuity
_	Connector	Terminal	Ground	Continuity
_	M83	2		No

Revision: October 2014

HAZARD SWITCH

А

В

Е

F

Н

J

Κ

< DTC/CIRCUIT DIAGNOSIS >

Is the inspection result normal?

>> Replace BCM. Refer to BCS-82, "Removal and Installation". YES

NO >> Repair or replace harness.

4. CHECK HAZARD SWITCH GROUND CIRCUIT

Check continuity between hazard switch harness connector and ground.

	Hazard switch			Continuity	C
	Connector	Terminal	Ground	Continuity	C
	M83	3		Yes	
ls	the inspection result nor	mal?			D

Is the inspection result normal?

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

NO >> Repair or replace harness.

EXL

Μ

Ν

Ο

Ρ

SYMPTOM DIAGNOSIS EXTERIOR LIGHTING SYSTEM SYMPTOMS

Symptom Table

INFOID:000000011517112

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	One side	 Fuse Halogen bulb (HI) Harness between IPDM E/R and headlamp (HI) Harness between headlamp (HI) and ground IPDM E/R 	Headlamp (HI) circuit Refer to <u>EXL-223, "Component</u> <u>Function Check"</u> .
turned ON.		 Harness between IPDM E/R and daytime running light relay Daytime running light relay IPDM E/R 	Daytime running light relay circuit Refer to <u>EXL-227, "Component</u> <u>Function Check"</u> .
	Both sides	Symptom diagnosis "BOTH SIDE HEADLAMPS (HI) ARE NOT TURNED ON" Refer to <u>EXL-252, "Diagnosis Procedure"</u> .	
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""HEADLAMP"
Headlamp (LO) is not turned ON.	One side	 Fuse Halogen bulb (LO) Harness between IPDM E/R and headlamp lamp (LO) Harness between headlamp (LO) and ground IPDM E/R 	Headlamp (LO) circuit Refer to <u>EXL-225, "Component</u> <u>Function Check"</u> .
	Both sides	Symptom diagnosis "BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON" Refer to <u>EXL-253, "Diagnosis Procedure"</u> .	
Each lamp is not turned ON/OFF with lighting switch AUTO.		 Combination switch Harness between combination switch and BCM BCM 	Combination switch Refer to <u>BCS-80, "Symptom Table"</u> .
		 Optical sensor Harness between optical sensor and BCM BCM 	Optical sensor Refer to <u>EXL-243, "Component</u> <u>Function Check"</u> .
Daytime running light is not turned ON. [Headlamp (HI) is turned ON.]		 Fuse Harness between IPDM E/R and daytime running light relay Daytime running light relay IPDM E/R BCM ECM Combination meter 	 Daytime running light relay circuit Refer to <u>EXL-227</u>, "Component <u>Function Check"</u>. BCM (HEADLAMP) "Data Monitor"""ENGINE STATE" Combination meter "Data Monitor""PKB SW" BCM (HEADLAMP) "Active Test""DAYTIME RUN- NING LIGHT"

EXTERIOR LIGHTING SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[HALOGEN HEADLAMP]

Symptom		Possible cause	Inspection item	
Parking lamp is not turned ON.		 Fuse Parking lamp LED Harness between IPDM E/R and front combination lamp IPDM E/R 	Parking lamp circuit Refer to <u>EXL-230. "Component</u> <u>Function Check"</u> .	
Front side marker lamp is not turned ON.		 Front side marker lamp bulb Harness between IPDM E/R and front side marker lamp Harness between front side marker lamp and ground IPDM E/R 	Front side marker lamp circuit Refer to <u>EXL-232, "Component</u> <u>Function Check"</u> .	
Tail lamp (Rear side marker lamp) is not turned ON.		 Fuse Tail lamp LED Harness between IPDM E/R and rear combination lamp Harness between and rear combination lamp and ground 	Tail lamp circuit Refer to <u>EXL-234. "Component</u> <u>Function Check"</u> .	
License plate lamp is not turned ON.		 License plate lamp bulb Harness between IPDM E/R and license plate lamp Harness between license plate lamp and ground 	License plate lamp circuit Refer to <u>EXL-236, "Component</u> <u>Function Check"</u> .	
Parking lamp, side marker lamp, tail lamp and li- cense plate lamp are not turned ON.		Symptom diagnosis "PARKING, SIDE MARKER, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON" Refer to <u>EXL-254, "Diagnosis Procedure"</u> .		
Tail lamp indicator is not turned ON. (Exterior lamps are turned ON.)		Combination meter	 Combination meter "Data Monitor""LIGHT IND" BCM (HEADLAMP) "Active Test""TAIL LAMP" 	
Turn signal lamp does not blink.	Indicator lamp is nor- mal. (Applicable side per- forms high flasher acti- vation.)	 Turn signal lamp bulb Door mirror Harness between BCM and each turn signal lamp Harness between each turn sig- nal lamp and ground 	Turn signal lamp circuit Refer to <u>EXL-240, "Component</u> <u>Function Check"</u> .	
	Indicator lamp is includ- ed.	 Combination switch Harness between combination switch and BCM BCM 	Combination switch Refer to <u>BCS-80, "Symptom Table</u> "	
	One side	Combination meter	_	
Turn signal indicator lamp does not blink.	Both sides (Always)	 Turn signal indicator lamp signal 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 supply and ground circuit Combination meter 	Combination meter Power supply and ground circuit Refer to <u>MWI-59</u> , "COMBINATION <u>METER : Diagnosis Procedure"</u> .	
 Hazard warning lamp does not activate. Hazard warning lamp continues activating. (Turn signal is normal.) 		 Hazard switch Harness between hazard switch and BCM Harness between hazard switch and ground BCM 	Hazard switch circuit Refer to <u>EXL-246, "Component</u> <u>Function Check"</u> .	

EXTERIOR LIGHTING SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[HALOGEN HEADLAMP]

Symptom		Possible cause	Inspection item
Front fog lamp is not turned ON.	One side	 Front fog lamp bulb Harness between IPDM E/R and front fog lamp Harness between front fog lamp and ground IPDM E/R 	Front fog lamp circuit Refer to <u>EXL-238, "Component</u> <u>Function Check"</u> .
	Both sides	Symptom diagnosis "BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON" Refer to <u>EXL-255, "Diagnosis Procedure"</u> .	

< SYMPTOM DIAGNOSIS >

NORMAL OPERATING CONDITION

Description

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.

Μ

Ν

Ο

Ρ

INFOID:000000011517113

А

В

С

D

Е

F

Н

J

Κ

BOTH SIDE HEADLAMPS (HI) ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

BOTH SIDE HEADLAMPS (HI) ARE NOT TURNED ON

Description

Both side headlamps (HI) are not turned ON when setting to the lighting switch HI or PASS.

Diagnosis Procedure

1.COMBINATION SWITCH INSPECTION

Check combination switch. Refer to <u>BCS-80, "Symptom Table"</u>.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

2.CHECK HEADLAMP (HI) REQUEST SIGNAL INPUT

CONSULT DATA MONITOR

T. Select "HL HI REQ" in "Data Monitor" mode of "IPDM E/R".

2. While operating the lighting switch, check the monitor status.

Monitor item	Con	Monitor status	
HL HI REQ	Lighting switch (2ND)	HI or PASS	On
		LO	Off

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace BCM. Refer to <u>BCS-82. "Removal and Installation"</u>.

3.HEADLAMP (HI) CIRCUIT INSPECTION

Check headlamp (HI) circuit. Refer to EXL-223, "Component Function Check".

Is the inspection result normal?

YES >> Refer to GI-42, "Intermittent Incident".

NO >> Repair or replace the malfunctioning part.

INFOID:0000000011517114

BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON AGNOSIS > [HALOGEN HEADLAMP]

~	SVI				NOSIS >	
<	211	ᄢᄭ	UIVI.	DIAG	110212 >	

BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

DOTTI SIDE TIEADE				А
Description			INFOID:000000011517118	
Both side headlamps (LO) ar	e not turned ON in any co	ndition.		В
Diagnosis Procedure			INFOID:000000011517119	
1. CHECK COMBINATION S	SWITCH			С
Check combination switch. R		n Table".		
Is the inspection result norma YES >> GO TO 2. NO >> Repair or replace				D
2.CHECK HEADLAMP (LO	e the malfunctioning part.) REQUEST SIGNAL INP	UT		Е
	OR Data Monitor" mode of "IP ing switch, check the mon			F
Monitor item	Con	dition	Monitor status	
HL LO REQ	Lighting switch	2ND	On	G
	Lighting Switch	OFF	Off	
3.HEADLAMP (LO) CIRCU	Refer to <u>BCS-82, "Remova</u> IT INSPECTION			H
Check headlamp (LO) circuit	. Refer to <u>EXL-225, "Com</u>	<u>ponent Function Check"</u> .		
	- 10			I
	al? Intermittent Incident". e the malfunctioning part.			J

EXL

Μ

Ν

Ο

Ρ

PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMPS ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

[HALOGEN HEADLAMP]

PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMPS ARE NOT TURNED ON

Description

INFOID:000000011517120

The parking, license plate, side marker, tail lamps and each illumination are not turned ON in any condition.

Diagnosis Procedure

INFOID:0000000011517121

1. COMBINATION SWITCH INSPECTION

Check combination switch. Refer to BCS-80, "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

CONSULT DATA MONITOR

- 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	Con	Monitor status	
TAIL & CLR REQ	Lighting owitch	1ST	On
	Lighting switch	OFF	Off

Is the inspection result normal?

YES >> Replace IPDM E/R.

NO >> Replace BCM. Refer to <u>BCS-82, "Removal and Installation"</u>.

< SYMPTOM DIAGNOSIS > [HALOGEN HEADLAMP] BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

Description					INFOID:0000000115171
The front fog lamps are no	-	condition.			
Diagnosis Procedure					INFOID:0000000115171
1. CHECK FRONT FOG L	AMP FUSE				
 Turn ignition switch OF Check that the following 		٦.			
Unit	Location	ı	F	⁻ use No.	Capacity
Front fog lamp	IPDM E/	R		49	15A
s the inspection result nor YES >> GO TO 3. NO >> GO TO 2. CHECK FRONT FOG L Disconnect front fog co Check continuity betwo	AMP SHORT CIR	I E/R conr		ground.	
	IPDM E/R				
Connecto)r	Term	ninal	Ground	Continuity
RH	E217	7	-	Cround	No
LH s the inspection result nor		7	9		
YES >> Replace fuse. NO >> Repair or repla 3.COMBINATION SWITC Check combination switch.	ice harness and th H INSPECTION	en replace	e the fuse.		
s the inspection result nor YES >> GO TO 4. NO >> Repair or repla .CHECK FRONT FOG L	<u>mal?</u> ice the malfunctior	ning part.			
CONSULT DATA MONI Select "FR FOG REQ" While operating the from	in "Data Monitor"				
Monitor item		Conc	dition		Monitor status
FR FOG REQ	Front fog lamp (With lighting swi			ON OFF	On Off
the item status normal?	(UII
s the item status normal? YES >> GO TO 5. NO >> Replace BCM.			and Insta	llation".	
5.FRONT FOG LAMP CI					
Check the front fog lamp ci		<u>238, "Co</u> i	mponent F	Function Check"	
Is the inspection result nor YES >> Refer to GI-42		lent"			
NO >> Repair or repla					

< PERIODIC MAINTENANCE >

INFOID:000000011569028

PERIODIC MAINTENANCE HEADLAMP AIMING ADJUSTMENT

Inspection

PREPARATION BEFORE ADJUSTING

Before performing aiming adjustment, check the following:

- Make sure all tires are inflated to correct pressure.
- Place vehicle and screen on level surface.
- Make sure 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.

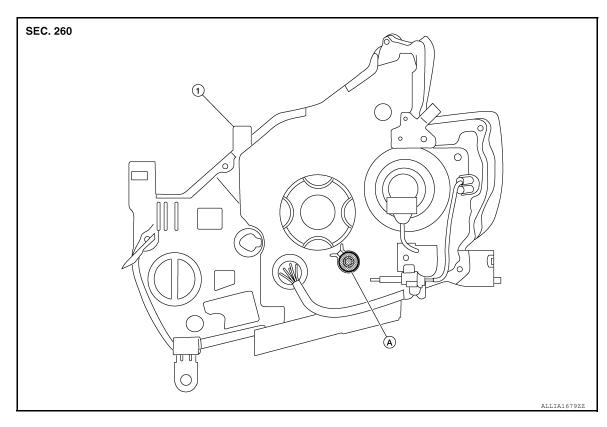
Do not use organic solvent (thinner, gasoline etc.)

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

NOTE:

- For headlamp aiming details, refer to regulations in your area.
- By regulation, no means for horizontal aim adjustment is provided from the factory; only vertical aim is adjustable.
- Use adjusting screw to perform aiming adjustment.
- · Perform headlamp aiming if:
- The vehicle front body has been repaired;
- The front combination lamp has been removed or replaced;
- Any outfitting has been installed;
- The vehicle's standard load condition has been substantially increased.

AIMING ADJUSTMENT SCREW



HEADLAMP AIMING ADJUSTMENT

< PERIODIC MAINTENANCE >

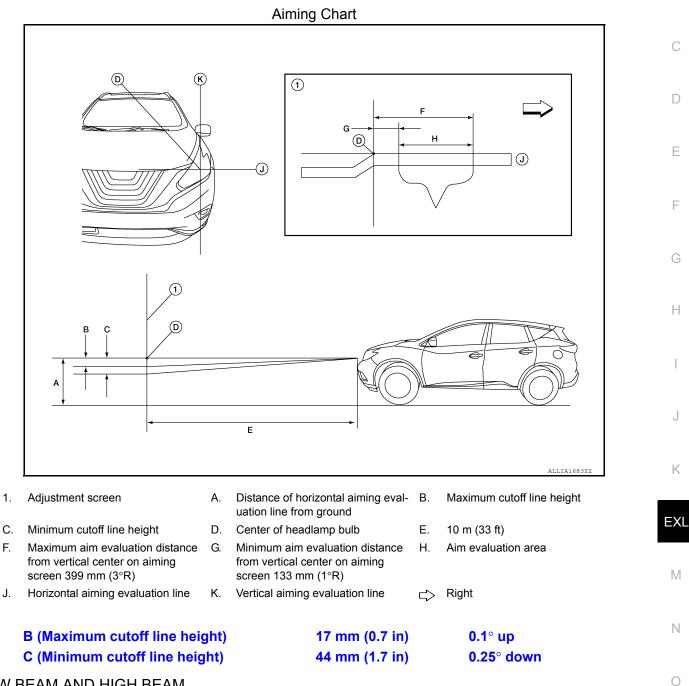
- 1. Front combination lamp (view from rear)
- A. Headlamp HI/LO (UP/DOWN) adjustment screw

INFOID:000000011569029

А

В

Aiming Adjustment Procedure



LOW BEAM AND HIGH BEAM **NOTE:**

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

- 1. Use adjustment screw to perform aiming adjustment.
 - Ensure fog lamps are turned off.
- Block the opposite headlamp from projecting a beam pattern onto the adjustment screen, using a suitable object. Aim each headlamp individually.
 CAUTION:

Do not cover the lens surface with tape, etc.

3. Place the screen on the same level and flat surface as the vehicle. **NOTE:**

Revision: October 2014

EXL-257

2015 Murano

Ρ

< PERIODIC MAINTENANCE >

Surface should be free of any debris that would cause a difference between the headlamp center and the adjustment screen.

4. Face the front of the vehicle to the screen and measure distance between the headlamp center and the screen surface.

Distance between the headlamp center and the screen (D) : 10 m (33 ft)

- 5. Start the engine. Turn the headlamp on.
- 6. Determine the preferred vertical aim range dimensions, using the aiming chart.
- 7. Measure the projected beam within the aim evaluation segment on the screen.
- 8. Adjust the beam pattern of each headlamp until the aim evaluation segment (the area relative to both the highest and lowest cutoff line height) is positioned within the vertical aim range dimensions shown on the aiming chart.

FRONT FOG LAMP AIMING ADJUSTMENT

	A
Aiming Adjustment	A 000011569149
PREPARATION BEFORE ADJUSTING	В
 The fog lamp is a semi-sealed beam type which uses a replaceable halogen bulb. Before performing adjustment procedure, check the following: Ensure all tires are inflated to correct pressure. 	aiming C
 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: 	E
 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 loa Place the front tires in the straight ahead position. 	F
 Aim each headlamp individually and ensure other headlamp beam pattern is blocked from screen. NOTE: 	G
 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 adjustable. Use adjusting acrow to perform aiming adjustment. 	aim is H
 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. 	I
Aiming Adjustment Procedure	J
 Place the screen. NOTE: Stop the vehicle facing the wall. Place the board on a plain road vertically. 	K
2. Face the vehicle with the screen. Maintain 7.62 m (25.0 ft) between the front fog lamp center a screen.	and the EXL
3. Start the engine. Turn the front fog lamp ON. NOTE:	
Shut off the headlamp light with the board to prevent from illuminating the adjustment screen.	Μ
Do not cover the lens surface with a tape etc. The lens is made of resin.	
4. Adjust aiming by turning the adjusting screw (A).	Ν
	0
	Р

ALLIA0035Z2

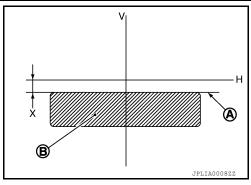
А

FRONT FOG LAMP AIMING ADJUSTMENT

< 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 lamp
 - V : Vertical center line of front fog lamp
 - X : Cutoff line height



REMOVAL AND INSTALLATION FRONT COMBINATION LAMP

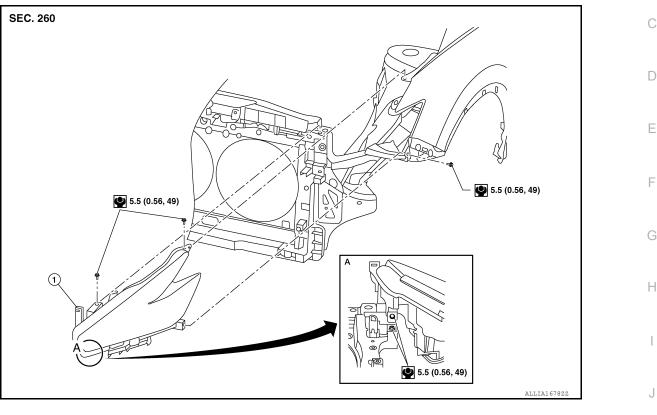
Exploded View

А

Κ

INFOID:0000000011569032

[HALOGEN HEADLAMP]



1. Front combination lamp

Removal and Installation

REMOVAL EXL Remove front bumper fascia. Refer to <u>EXT-25, "Removal and Installation"</u>. Remove front combination lamp bolts. Pull front combination lamp forward. 3. Μ 4. Disconnect harness connectors from front combination lamp and remove. INSTALLATION Installation is in the reverse order of removal. Ν NOTE: After installation, perform headlamp aiming adjustment. Refer to EXL-256, "Inspection". Bulb Replacement INFOID:000000011569033 WARNING: Ρ

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

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

HEADLAMP (LOW BEAM) BULB

Removal

- 1. Rotate bulb counterclockwise and remove from front combination lamp.
- 2. Disconnect harness connector from bulb and remove.

Installation

Installation is in the reverse order of removal.

CAUTION:

After installing bulb, install bulb socket securely for watertightness.

HEADLAMP (HIGH BEAM) BULB

Removal

- 1. Remove plastic cover.
- 2. Rotate bulb counterclockwise and remove from front combination lamp.
- 3. Disconnect harness connector from bulb and remove.

Installation

Installation is in the reverse order of removal.

CAUTION:

After installing bulb, install bulb socket securely for watertightness.

SIDE MARKER LAMP BULB

Removal

- 1. Rotate bulb counterclockwise and remove from front combination lamp.
- 2. Remove bulb from bulb socket.

Installation

Installation is in the reverse order of removal.

CAUTION:

After installing bulb, install bulb socket securely for watertightness.

TURN SIGNAL LAMP BULB

Removal

1. Rotate bulb socket counterclockwise and remove from front combination lamp.

2. Remove bulb from bulb socket.

Installation

Installation is in the reverse order of removal.

CAUTION:

After installing bulb, install bulb socket securely for watertightness.

FRONT FOG LAMP

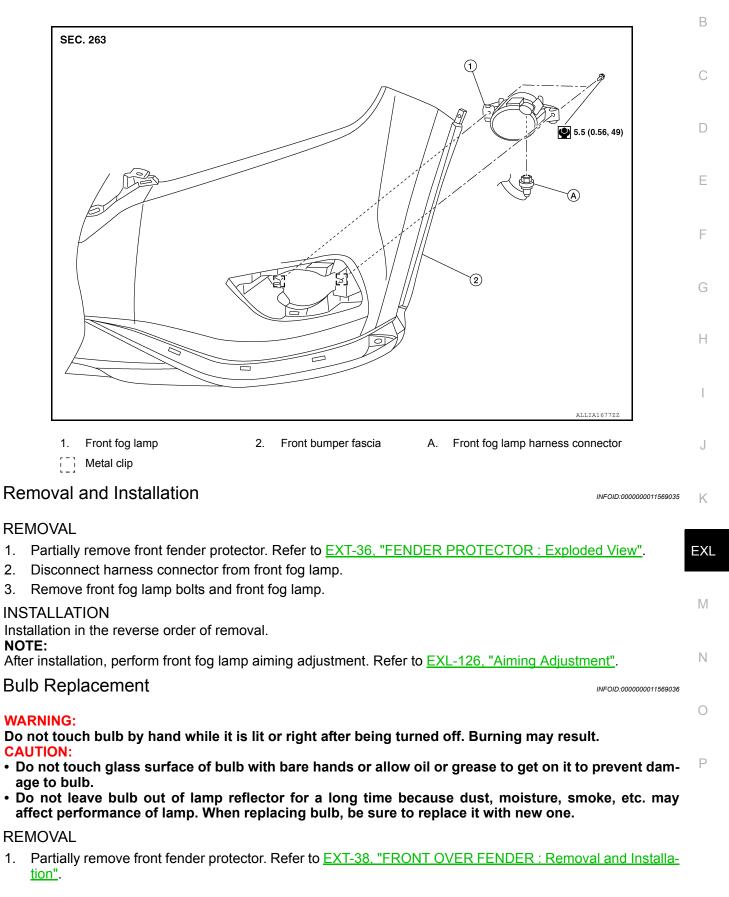
< REMOVAL AND INSTALLATION >

FRONT FOG LAMP

Exploded View

INFOID:000000011569034

А

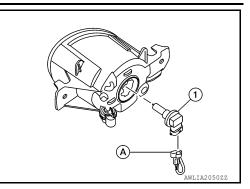


FRONT FOG LAMP

< REMOVAL AND INSTALLATION >

- 2. Disconnect harness connector from front fog lamp (A).
- 3. Rotate bulb (1) counterclockwise and remove.

[HALOGEN HEADLAMP]



INSTALLATION Installation is in the reverse order of removal. CAUTION: Install bulb securely for watertightness.

DOOR MIRROR TURN SIGNAL LAMP

[HALOGEN HEADLAMP] < REMOVAL AND INSTALLATION > DOOR MIRROR TURN SIGNAL LAMP А **Removal and Installation** INFOID:000000011569142 The door mirror turn signal lamp is serviced as part of the door mirror. Refer to MIR-21, "Removal and Installa-В tion". С D Е F G Н J Κ EXL Μ

Ν

Ο

Ρ

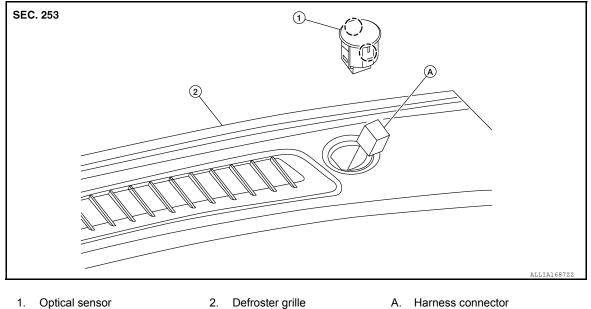
EXL-265

OPTICAL SENSOR

Exploded View

INFOID:000000011569037

INFOID:000000011569038



1. Optical sensor

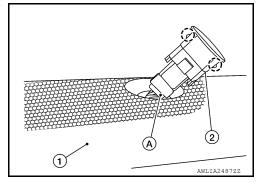
() Pawl

Removal and Installation

REMOVAL

Release pawls and remove the optical sensor (2) from defroster grille (1) using a suitable tool.

(): Pawl



INSTALLATION Installation is in the reverse order of removal.

LIGHTING & TURN SIGNAL SWITCH

< REMOVAL AND INSTALLATION >

LIGHTING & TURN SIGNAL SWITCH

Exploded View

INFOID:000000011569093

А

[HALOGEN HEADLAMP]

	В
SEC. 251	С
	D
	E
2 AWMIA129322	F
1. Combination switch 2. Combination switch harness connector <	G
Removal and Installation	94 ─
REMOVAL	
 Disconnect both the negative and positive battery terminals, then wait at least three minutes. Refer to <u>PG-86, "Exploded View"</u>. 	- 1
2. Remove the steering column covers. Refer to <u>IP-18. "Removal and Installation"</u> .	
3. Remove the combination switch screws.	J
4. Disconnect the harness connector from the combination switch and remove.	
INSTALLATION Installation is in the reverse order of removal.	K
 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 <u>SRC-17, "SRS Final Check"</u>. 	-
	M

Ν

Ο

Ρ

HAZARD SWITCH

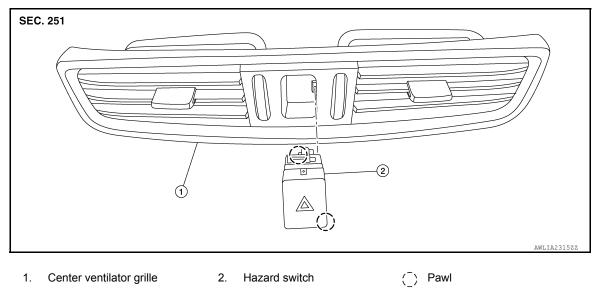
< REMOVAL AND INSTALLATION >

HAZARD SWITCH

Exploded View

INFOID:000000011569041

[HALOGEN HEADLAMP]



Removal and Installation

INFOID:000000011569042

REMOVAL

- 1. Remove center ventilator grille. Refer to <u>VTL-10</u>, "CENTER VENTILATOR DUCT : Removal and Installation".
- 2. Release pawls and remove hazard switch.

INSTALLATION

Installation is in the reverse order of removal.

REAR COMBINATION LAMP

< REMOVAL AND INSTALLATION >

REAR COMBINATION LAMP

Exploded View

INFOID:000000011569045

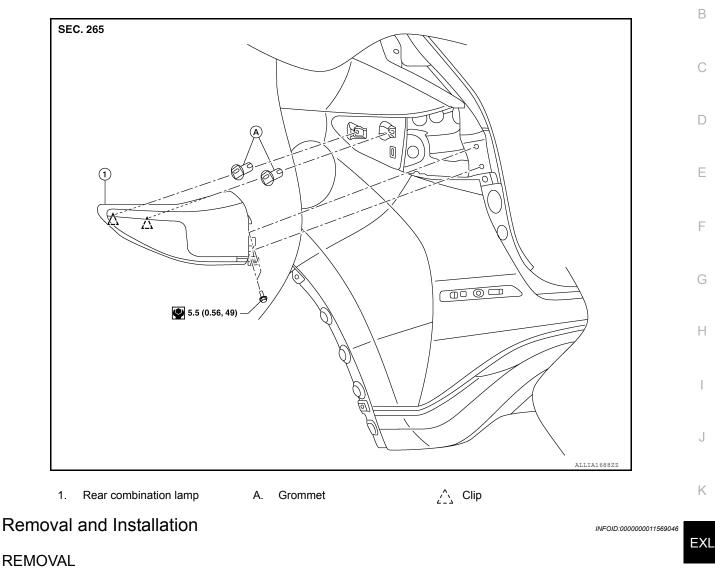
А

Μ

Ν

Ρ

[HALOGEN HEADLAMP]



- 1. Remove rear combination lamp side cover.
- 2. Remove rear combination lamp bolts.
- 3. Pull rear combination lamp sideward to release clip and locators.
- 4. Disconnect harness connector from rear combination lamp and remove.

INSTALLATION

Installation is in the reverse order of removal.

Bulb Replacement

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.

STOP LAMP BULB

The stop lamp bulb is LED and not serviced separately. Refer to EXL-136, "Removal and Installation".

Revision: October 2014

EXL-269

2015 Murano

INFOID:000000011569047

< REMOVAL AND INSTALLATION > SIDE MARKER LAMP BULB

Removal

- 1. Remove rear combination lamp. Refer to <u>EXL-136, "Removal and Installation"</u>.
- 2. Rotate side marker bulb socket counterclockwise and remove.
- 3. Remove side marker bulb from bulb socket.

Installation

Installation is in the reverse order of removal.

CAUTION: After installing bulb, install bulb socket securely for watertightness.

TURN SIGNAL LAMP BULB

Removal

- 1. Remove rear combination lamp. Refer to EXL-136. "Removal and Installation".
- 2. Rotate turn signal lamp bulb socket counterclockwise and remove.
- 3. Remove turn signal lamp bulb from bulb socket.

Installation

Installation is in the reverse order of removal.

CAUTION:

After installing bulb, install bulb socket securely for watertightness.

HIGH-MOUNTED STOP LAMP

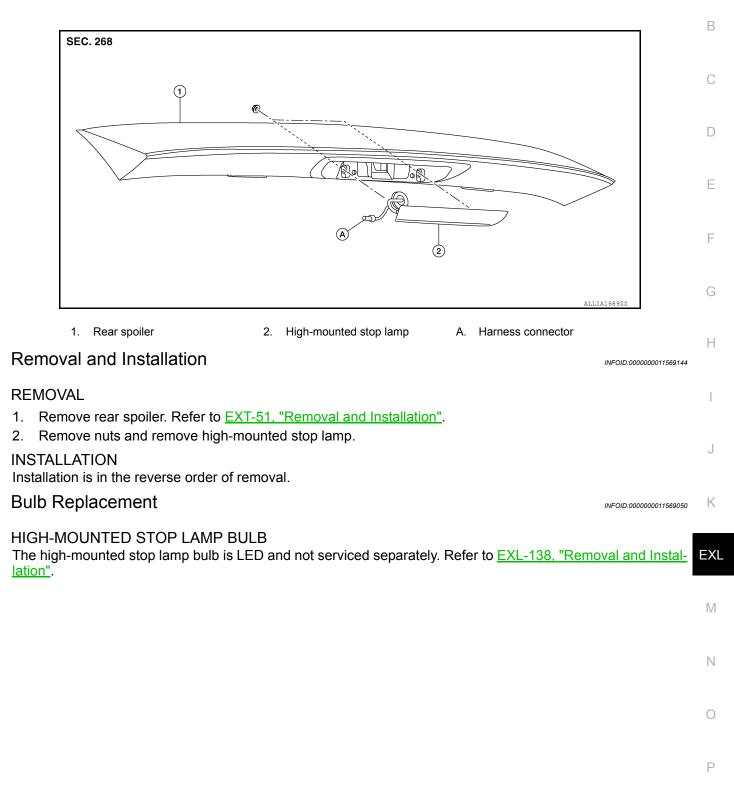
< REMOVAL AND INSTALLATION >

HIGH-MOUNTED STOP LAMP

Exploded View

INFOID:000000011569048

А

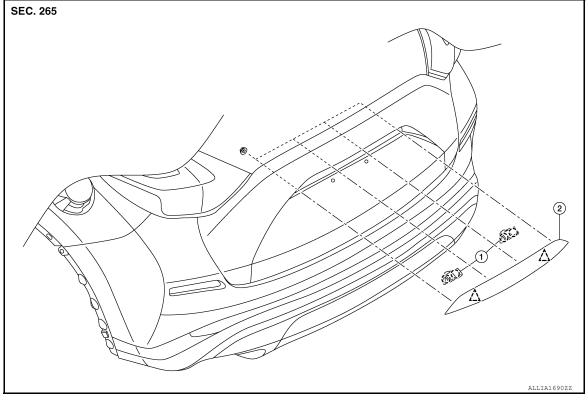


LICENSE PLATE LAMP

Exploded View

INFOID:000000011569054

[HALOGEN HEADLAMP]



Back door outer finisher

<u> </u>
へ Clip

1. License plate lamp

) Pawl

Removal and Installation

INFOID:000000011569055

REMOVAL

1. Remove back door outer finisher. Refer to EXT-53, "Removal and Installation".

2.

- 2. Disconnect harness connector from license plate lamp.
- 3. Release pawls and push license plate lamp forward.

INSTALLATION

Installation is in the reverse order of removal.

Bulb Replacement

INFOID:000000011569056

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. Remove back door lower finisher. Refer to <u>INT-34</u>, "BACK DOOR LOWER FINISHER : Removal and <u>Installation"</u>.
- 2. Rotate license plate lamp bulb socket counterclockwise and remove.

Revision: October 2014

EXL-272

< REMOVAL AND INSTALLATION >	[HALOGEN HEADLAMP]
3. Remove license plate lamp bulb from bulb socket.	
INSTALLATION Installation is in the reverse order of removal. CAUTION:	
After installing bulb, install bulb socket securely for watertightness.	

J

Κ

EXL

M

Ν

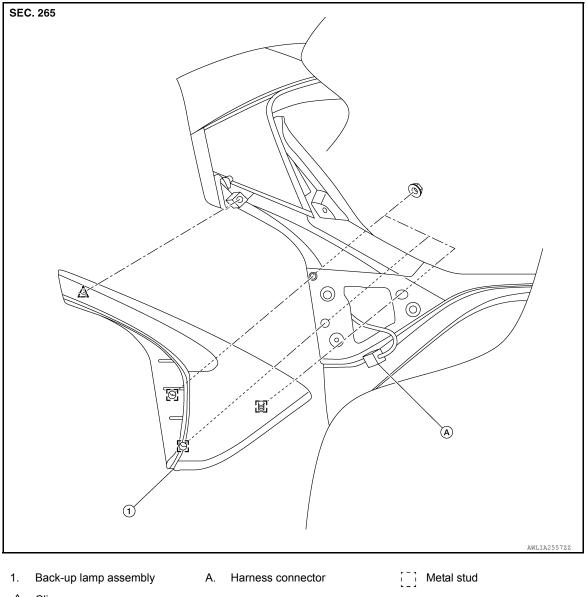
Ο

Ρ

BACK-UP LAMP ASSEMBLY

Exploded View

INFOID:000000011569051



Clip

Removal and Installation

INFOID:000000011569148

REMOVAL

- 1. Remove back door lower finisher. Refer to <u>INT-34, "BACK DOOR LOWER FINISHER : Removal and</u> <u>Installation"</u>.
- 2. Remove back-up lamp assembly nuts.
- 3. Disconnect harness connector, pull back-up lamp assembly rearward and remove.

INSTALLATION

Installation is in the reverse order of removal.

Bulb Replacement

WARNING:

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

Revision: October 2014

EXL-274

2015 Murano

INFOID:000000011569053

 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. 	A
REMOVAL	D
 Remove back-up lamp assembly. Refer to <u>EXL-141, "Removal and Installation"</u>. Rotate back-up lamp bulb socket counterclockwise and remove. Remove back-up lamp bulb from bulb socket. 	С
INSTALLATION Installation is in the reverse order of removal.	D
CAUTION: After installing bulb, install bulb socket securely for watertightness.	Е
	F
	G
	Н
	I
	I
	J
	K
	EXL
	Μ

Ν

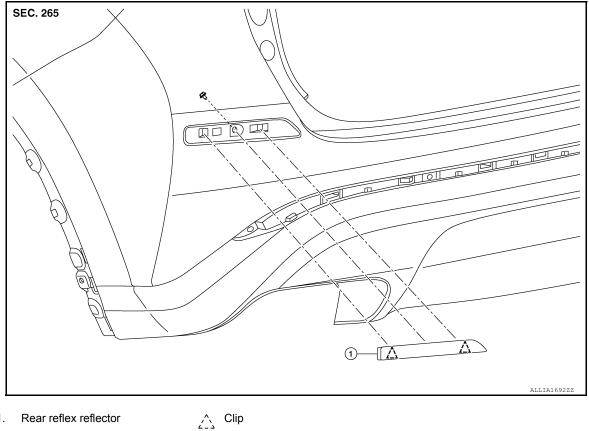
Ο

Ρ

REFLEX REFLECTOR

Exploded View

INFOID:000000011517152



1. Rear reflex reflector

Removal and Installation

INFOID:000000011517153

REMOVAL

- 1. Remove rear bumper fascia. Refer to EXT-27, "Removal and Installation".
- Remove rear reflex reflector fixing screw and pawls and then remove rear reflex reflector. 2.

INSTALLATION

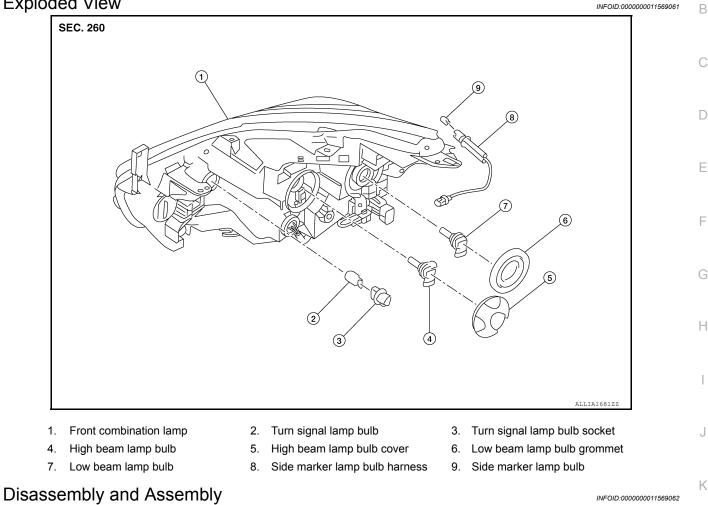
Install in the reverse order of removal.

[HALOGEN HEADLAMP]

А

UNIT DISASSEMBLY AND ASSEMBLY FRONT COMBINATION LAMP

Exploded View



DISASSEMBLY			
1. Remove front combination lamp. Refer to EXL-261, "Removal and Installation".	EXL		
2. Rotate headlamp (low beam) bulb counterclockwise and remove.			
3. Disconnect harness connector from headlamp (low beam) bulb.	M		
4. Remove plastic cover.			
5. Rotate headlamp (high beam) bulb counterclockwise and remove.			
6. Disconnect harness connector from headlamp (high beam) bulb.	Ν		
7. Rotate side marker lamp bulb socket counterclockwise and remove.			
8. Remove side marker lamp bulb from bulb socket.	\sim		
9. Rotate turn signal lamp bulb socket counterclockwise and remove.	0		
10. Remove turn signal lamp bulb from bulb socket.			
ASSEMBLY	Р		
Assembly is in the reverse order of disassembly.			
CAUTION:			
During assembly, be sure to install bulb sockets securely to ensure watertightness.			

REAR COMBINATION LAMP

< UNIT DISASSEMBLY AND ASSEMBLY >

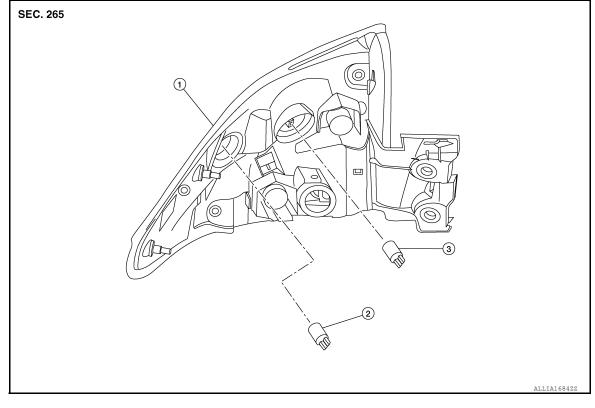
REAR COMBINATION LAMP

Exploded View

INFOID:000000011569063

INEOID:000000011569064

[HALOGEN HEADLAMP]



1. Rear combination lamp

2. Turn signal lamp bulb

3. Side marker lamp bulb

Disassembly and Assembly

DISASSEMBLY

- 1. Remove rear combination lamp. Refer to EXL-269, "Removal and Installation".
- 2. Rotate side marker lamp bulb socket counterclockwise and remove.
- 3. Remove side marker bulb from bulb socket.
- 4. Rotate turn signal lamp bulb socket counterclockwise and remove.
- 5. Remove turn signal lamp bulb from bulb socket.

ASSEMBLY

Assembly is in the reverse order of disassembly.

CAUTION:

During assembly, be sure to install bulb sockets securely to ensure watertightness.

SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS) SERVICE DATA AND SPECIFICATIONS (SDS)

Bulb Specifications

А

INFOID:000000011569057 B

[HALOGEN HEADLAMP]

Item		Туре	Wattage (W)		
	High beam	H9	65		
	Low beam	H11	55		
Front combination lamp	Turn signal lamp	7444NA	28/8		
	Side marker lamp	WY21W	5		
	Daytime running lamp	LED	1.5/10.7		
Front fog lamp (if equipped)		H8	35		
Door mirror turn signal lamp		LED	_		
	Stop lamp	LED	0.6/1.6		
Rear combination lamp	Side marker lamp	W5W	5		
	Turn signal lamp	WY21W	21		
Back-up lamp		921	16		
License plate lamp		W5W	5		
High-mounted stop lamp		LED	0.85		

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

EXL

Μ

Ν

Ο

Ρ

J