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PRECAUTION

PRECAUTIONS

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

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

WARNING:

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

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

WARNING:

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

General precautions for service operations

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- Do not work with wet hands.
- The xenon headlamp system includes a high voltage generating part. Be sure to disconnect battery negative cable (negative terminal) or power fuse before removing, installing, or touching the xenon headlamp (including lamp bulb).
- Turn the lighting switch OFF before disconnecting and connecting the connector.
- When turning the xenon headlamp on and while it is illuminated, do not touch the harness, bulb, and socket of the headlamp.
- When checking the headlamp on/off operation, check it on vehicle and with the power connected to the vehicle-side connector.
- Do not touch the headlamp bulb glass surface with bare hands or allow oil or grease to get on it. Do not touch the headlamp bulb just after the headlamp is turned off, because it is very hot.
- Install the xenon headlamp bulb socket correctly. If it is installed improperly, high-voltage leak or corona discharge may occur that can melt the bulb, connector or housing. Do not illuminate the xenon headlamp bulb out of the headlamp housing. Doing so can cause fire and harm your eyes.
- When the bulb has burned out, wrap it in a thick vinyl bag and discard. Do not break the bulb.
- Leaving the bulb removed from the headlamp housing for a long period of time can deteriorate the performance of the lens and reflector (dirt, clouding). Always prepare a new bulb and have it on hand when replacing the bulb.
- When adjusting the headlamp aiming, turn the aiming adjustment screw only in the tightening direction. If it is necessary to loosen the screw, first fully loosen the screw, and then turn it in the tightening direction.
- Do not use organic solvent (paint thinner or gasoline) to clean lamps and to remove old sealant.



PRECAUTIONS

< PRECAUTION > [HALOGEN HEADLAMP]

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.
- Oilv dirt:
- Dip a soft cloth into lukewarm water with mild detergent (concentration: within 2 to 3%) and wipe the dirty area.
- Then dip a cloth into fresh water, wring the water out of the cloth and wipe the detergent off.
- Then rub with a soft, dry cloth.
- Do not use organic solvent such as thinner, benzene, alcohol or gasoline.
- For genuine leather seats, use a genuine leather seat cleaner.

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PREPARATION

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[HALOGEN HEADLAMP]

PREPARATION

PREPARATION

Special Service Tool

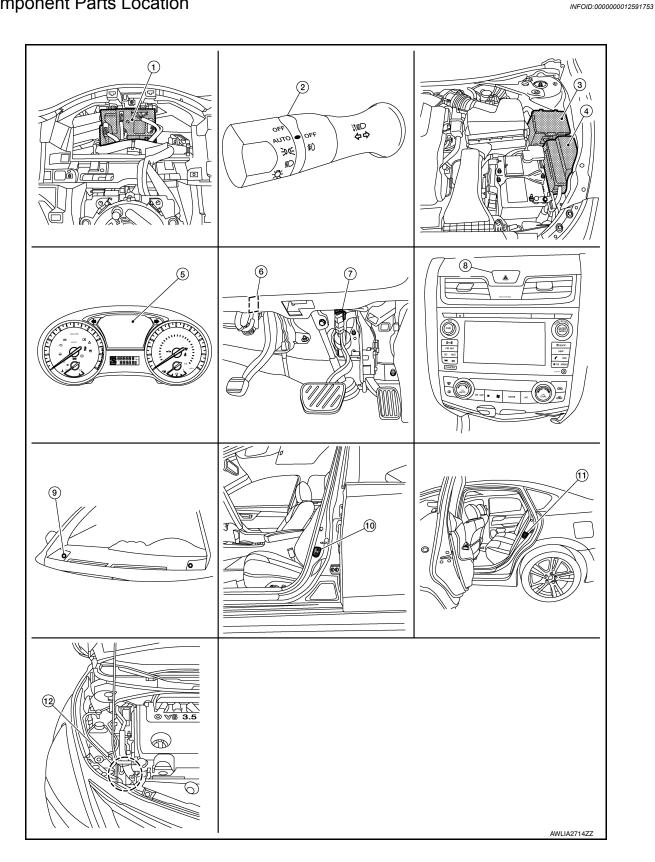
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The actual shape of the tools may differ from t	hose illustrated here.	
Tool number		Description
(TechMate No.) Tool name		
		Removing trim components
(J-46534) Trim Tool Set		ixemoving tim components
	AWJIA0483ZZ	

SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location



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COMPONENT PARTS

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

- BCM (view with combination meter removed)
- 4. Fuse, fusible link and relay box (Stop lamp relay)
- 7. Stop lamp switch
- Front door switch LH (RH similar)

- 2. Combination switch (lighting and turn signal switch)
- 5. Combination meter
- 8. Hazard switch
- 11. Rear door switch LH (RH similar)
- IPDM E/R (Headlamp high relay, Headlamp low relay, Tail lamp relay and Front fog lamp relay (if equipped))
- 6. Parking brake switch
- 9. Optical sensor
- 12. Daytime running light relay (if equipped)

Component Description

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

SYSTEM

HEADLAMP SYSTEM

HEADLAMP SYSTEM: System Diagram

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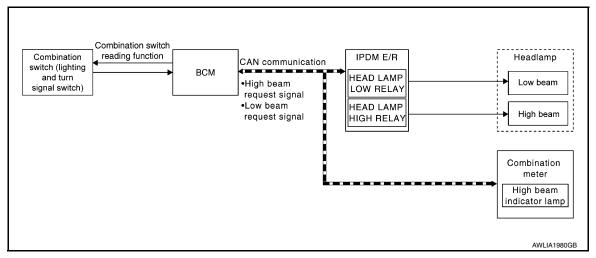
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HEADLAMP SYSTEM: System Description

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LOW BEAM OPERATION

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

HIGH BEAM OPERATION/FLASH-TO-PASS OPERATION

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

The combination meter receives a high beam request signal (ON) through the CAN communication lines and turns the high beam indicator lamp ON.

EXTERIOR LAMP BATTERY SAVER CONTROL

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

Under this condition, the headlamps remain illuminated for a period of time, unless the lighting switch position is changed. If the lighting switch position is changed, then the headlamps are turned off.

AUTO LIGHT SYSTEM

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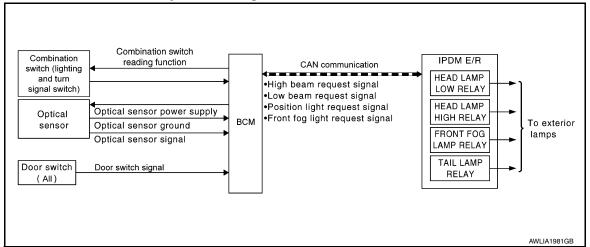
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AUTO LIGHT SYSTEM: System Diagram

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AUTO LIGHT SYSTEM: System Description

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

OUTLINE

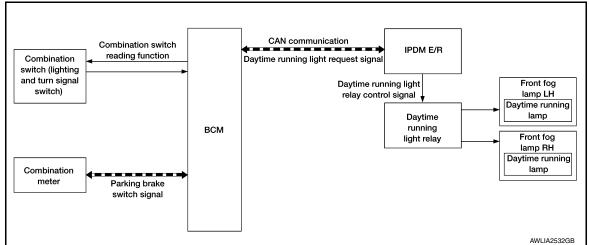
The auto light control system has an optical sensor that detects outside brightness.

When the lighting switch is in AUTO position, it automatically turns ON/OFF the parking, license plate, tail, front fog lamps and headlamps in accordance with the ambient light. Sensitivity can be adjusted. For the details of the setting, Refer to BCS-20, "HEADLAMP: CONSULT Function (BCM - HEADLAMP)".

DAYTIME RUNNING LIGHT SYSTEM

DAYTIME RUNNING LIGHT SYSTEM: System Diagram

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DAYTIME RUNNING LIGHT SYSTEM: System Description

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System Description

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

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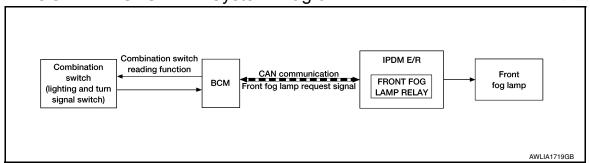
the daytime running lights will turn OFF. The daytime running lights will turn ON when the parking brake is released.

OPERATION

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

FRONT FOG LAMP SYSTEM

FRONT FOG LAMP SYSTEM: System Diagram



FRONT FOG LAMP SYSTEM: System Description

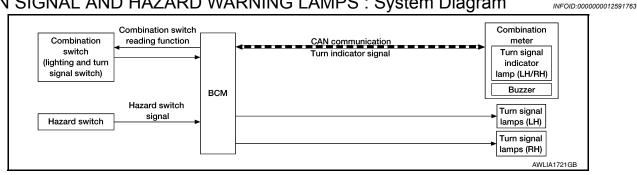
The front fog lamps are activated with the combination switch (lighting and turn signal switch). The lighting switch signal to the BCM is monitored with the BCM combination switch reading function. When the fog lamps are turned ON with the lighting switch, the BCM sends a front fog lamp request signal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

FRONT FOG LAMP OPERATION

When the lighting switch is in front fog lamp ON position and also in 1st or 2nd position or AUTO position (headlamp is ON), the BCM detects FR FOG ON and the HEAD LAMP 1, 2 ON or the AUTO LIGHT ON. The BCM sends a front fog lamp request ON signal via the CAN communication lines to the IPDM E/R. The IPDM E/R then turns ON the front fog lamp relay sending power to the front fog lamps.

TURN SIGNAL AND HAZARD WARNING LAMPS

TURN SIGNAL AND HAZARD WARNING LAMPS: System Diagram



TURN SIGNAL AND HAZARD WARNING LAMPS: System Description

TURN SIGNAL OPERATION

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

HAZARD LAMP OPERATION

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

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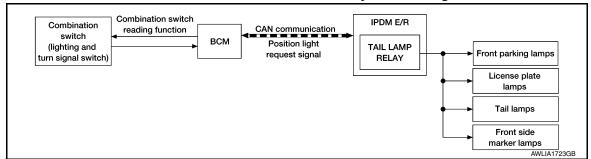
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indicator signal ON request via the CAN communication lines to the combination meter. The combination meter then activates both the LH and RH turn signal indicators and audible buzzer.

PARKING, LICENSE PLATE AND TAIL LAMPS

PARKING, LICENSE PLATE AND TAIL LAMPS: System Diagram

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PARKING, LICENSE PLATE AND TAIL LAMPS: System Description

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PARKING, LICENSE PLATE AND TAIL LAMPS OPERATION

When the lighting switch is in 1st or 2nd position, BCM detects the LIGHTING SWITCH 1st or 2nd POSITION ON. The BCM sends a parking light ON request via the CAN communication lines to the IPDM E/R. The IPDM E/R then activates the tail lamp relay which sends power to the parking and instrument illumination circuits.

EXTERIOR LAMP BATTERY SAVER CONTROL

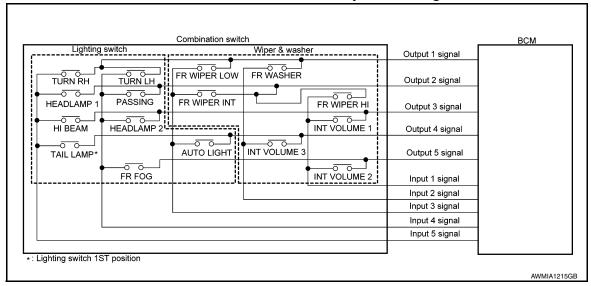
With the combination switch (lighting and turn signal switch) in the 1st or 2nd position and the ignition switch is turned from ON or ACC to OFF, the battery saver feature is activated.

Under this condition, the exterior lamps remain illuminated for a period of time unless the lighting switch position is changed. If the lighting switch position is changed, then the exterior lamps are turned off.

COMBINATION SWITCH READING SYSTEM

COMBINATION SWITCH READING SYSTEM: System Diagram

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COMBINATION SWITCH READING SYSTEM: System Description

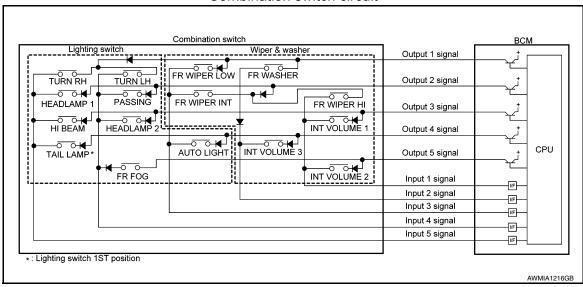
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OUTLINE

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

COMBINATION SWITCH MATRIX

Combination switch circuit



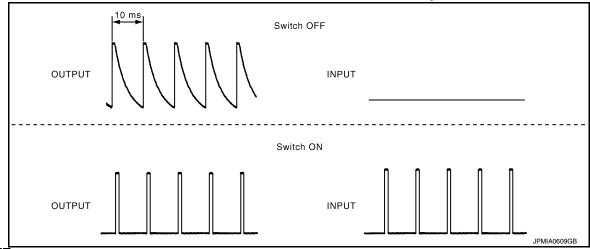
Combination switch INPUT-OUTPUT system list

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

COMBINATION SWITCH READING FUNCTION

Description

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



NOTE:

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

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

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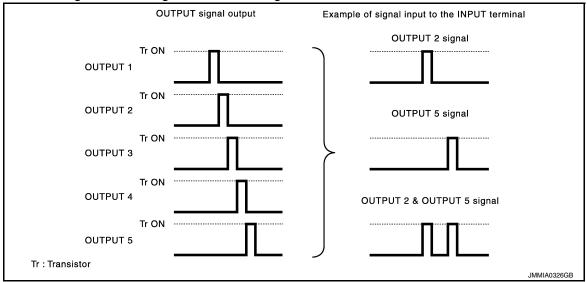
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- It reads this change of the voltage as the status signal of the combination switch.

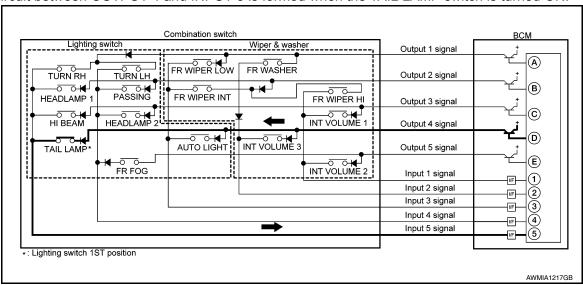


Operation Example

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

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

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



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

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

[HALOGEN HEADLAMP]

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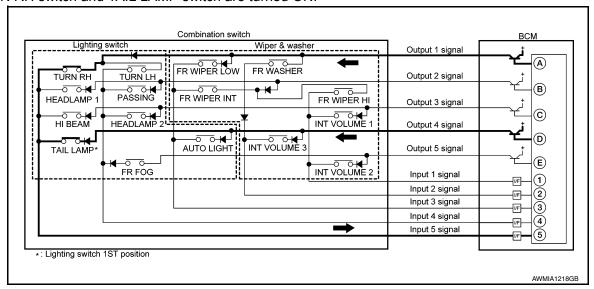
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• The circuits between OUTPUT 1 and INPUT 5 and between OUTPUT 4 and INPUT 5 are formed when the TURN RH switch and TAIL LAMP switch are turned ON.



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

WIPER INTERMITTENT DIAL POSITION SETTING

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

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

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DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

COMMON ITEM: CONSULT Function (BCM - COMMON ITEM)

INFOID:0000000012866008

CAUTION:

After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF \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.

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

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

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

HEADLAMP

HEADLAMP : CONSULT Function (BCM - HEADLAMP)

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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.

DATA MONITOR

Monitor Item [Unit]	Description	
PUSH SW [On/Off]	Indicates condition of push-button ignition switch.	
ENGINE STATE [STOP/STALL/CRANK/RUN]	Indicates engine status received from ECM on CAN communication line.	
VEH SPEED 1 [km/h]	Indicates vehicle speed signal received from ABS on CAN communication line.	
TURN SIGNAL R [On/Off]		
TURN SIGNAL L [On/Off]		
TAIL LAMP SW [On/Off]		
HI BEAM SW [On/Off]		
HEAD LAMP SW 1 [On/Off]	Indicates condition of combination switch.	
HEAD LAMP SW 2 [On/Off]		
PASSING SW [On/Off]		
AUTO LIGHT SW [On/Off]		
FR FOG SW [On/Off]		
DOOR SW-DR [On/Off]	Indicates condition of front door switch LH.	
DOOR SW-AS [On/Off]	Indicates condition of front door switch RH.	
DOOR SW-RR [On/Off]	Indicates condition of rear door switch RH.	
DOOR SW-RL [On/Off]	Indicates condition of rear door switch LH.	
DOOR SW-BK [On/Off]	Indicates condition of trunk switch.	
OPTI SEN (DTCT) [V]	Indicates outside brightness voltage signal from optical sensor.	
OPTI SEN (FILT) [V]	Indicates outside brightness voltage signal from optical sensor filtered by BCM.	
OPTICAL SENSOR [On/Off]	Indicates condition of optical sensor.	

ACTIVE TEST

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

WORK SUPPORT

Support Item	Setting	Description	
TWILIGHT On	MODE2*	Autolamp function ON.	
	MODE1	Autolamp function OFF.	
	MODE4	This mode is not used.	
WIPER LINK	MODE3*	Wiper link function operates in INT, LOW and HI.	
WIF LIX LIMIX	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.	
COSTONI A/LIGITI SETTING	MODE2	More sensitive than normal setting (turns ON earlier).	
	MODE1*	Normal setting.	
	MODE 8		
	MODE 7		
	MODE 6		
ILL DELAY SET	MODE 4	Autoloma dolov timor	
ILL DELAY SET	MODE 5	Autolamp delay timer.	
	MODE 3		
	MODE 2		
	MODE 1*		

^{*:} Initial setting

FLASHER

FLASHER: CONSULT Function (BCM - FLASHER)

INFOID:0000000012866010

CAUTION:

After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF \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.

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].

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

WORK SUPPORT

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

^{*:} Initial setting

COMB SW

COMB SW: CONSULT Function (BCM - COMB SW)

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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.

DATA MONITOR

Monitor Item [Unit]	Description	
FR WIPER HI [On/Off]		
FR WIPER LOW [On/Off]		
FR WASHER SW [On/Off]	Indicates condition of wiper operation of combination switch.	
FR WIPER INT [On/Off]		
INT VOLUME [1 - 7]	Indicates condition of intermittent wiper operation of combination switch.	
TURN SIGNAL R [On/Off]	Indicates condition of right turn signal operation of combination switch.	
TURN SIGNAL L [On/Off]	Indicates condition of left turn signal operation of combination switch.	
TAIL LAMP SW [On/Off]	Indicates condition of tail lamp switch operation of combination switch.	
HI BEAM SW [On/Off]	Indicates condition of Hi beam switch operation of combination switch.	
HEAD LAMP SW 1 [On/Off]	Indicates condition of head lamp switch 1 operation of combination switch.	
HEAD LAMP SW 2 [On/Off]	Indicates condition of head lamp switch 2 operation of combination switch.	
PASSING SW [On/Off]	Indicates condition of passing switch operation of combination switch.	
AUTO LIGHT SW [On/Off]	Indicates condition of auto light switch operation of combination switch.	
FR FOG SW [On/Off]	Indicates condition of front fog lamp switch operation of combination switch.	

BATTERY SAVER

BATTERY SAVER : CONSULT Function (BCM - BATTERY SAVER)

INFOID:0000000012866012

CAUTION:

After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF \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.

DATA MONITOR

Monitor Item [Unit]	Description
REQ SW -DR [On/Off]	Indicates condition of door request switch LH.
REQ SW -AS [On/Off]	Indicates condition of door request switch RH.
PUSH SW [On/Off]	Indicates condition push-button ignition switch.
UNLK SEN -DR [On/Off]	Indicates condition of door unlock sensor.
DOOR SW-DR [On/Off]	Indicates condition of front door switch LH.
DOOR SW-AS [On/Off]	Indicates condition of front door switch RH.

DIAGNOSIS SYSTEM (BCM)

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

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

ACTIVE TEST

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

DIAGNOSIS SYSTEM (IPDM E/R)

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

DIAGNOSIS SYSTEM (IPDM E/R)

Diagnosis Description

INFOID:0000000012866013

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AUTO ACTIVE TEST

Description

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

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

Operation Procedure

CAUTION:

Do not start the engine.

NOTE:

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

NOTE:

- If auto active test mode cannot be actuated, check door switch system. Refer to <u>DLK-99</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)
- 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.
- Turn the ignition switch ON within 10 seconds. After that the horn sounds once, and the auto active test starts.
- After a series of the following operations is repeated 3 times, auto active test is completed.

Inspection in Auto Active Test Mode

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

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

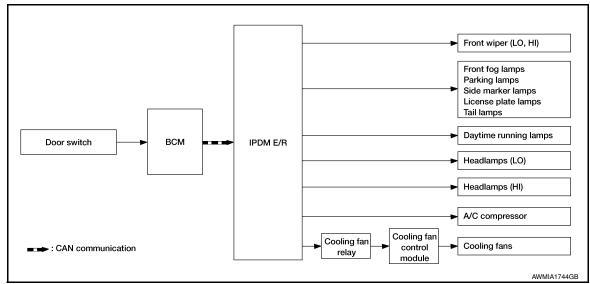
^{*:} Outputs duty ratio of 50% for 5 seconds → duty ratio of 100% for 5 seconds on the cooling fan control module.

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Concept of auto active test



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

Diagnosis chart in auto active test mode

Symptom	Inspection contents		Possible cause	
Any of the following components do not operate		YES	BCM signal input circuit	
 Front fog lamps (if equipped) Parking lamps Side marker lamps License plate lamps Tail lamps Daytime running lamps Headlamp (HI, LO) Front wiper 	Perform auto active test. Does the applicable system operate?	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 between cooling fans and cooling fan control module Cooling fan control module Harness or connectors between cooling fan relay and cooling fan control module Cooling fan relay Harness or connectors between IPDM E/R and cooling fan relay IPDM E/R	

CONSULT Function (IPDM E/R)

INFOID:0000000012866014

CAUTION:

After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF \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 >

[HALOGEN HEADLAMP]

APPLICATION ITEM

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

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

ECU IDENTIFICATION

The IPDM E/R part number is displayed.

SELF DIAGNOSTIC RESULT

Refer to PCS-21, "DTC Index".

DATA MONITOR

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

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DIAGNOSIS SYSTEM (IPDM E/R)

< SYSTEM DESCRIPTION >

[HALOGEN HEADLAMP]

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

ACTIVE TEST

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

CAN DIAG SUPPORT MNTR

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

BCM, IPDM E/R

< ECU DIAGNOSIS INFORMATION >

[HALOGEN HEADLAMP]

INFOID:0000000012591776

ECU DIAGNOSIS INFORMATION

BCM, IPDM E/R

List of ECU Reference

ECU	Reference
	BCS-31, "Reference Value"
BCM	BCS-50, "Fail Safe"
BCIVI	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"

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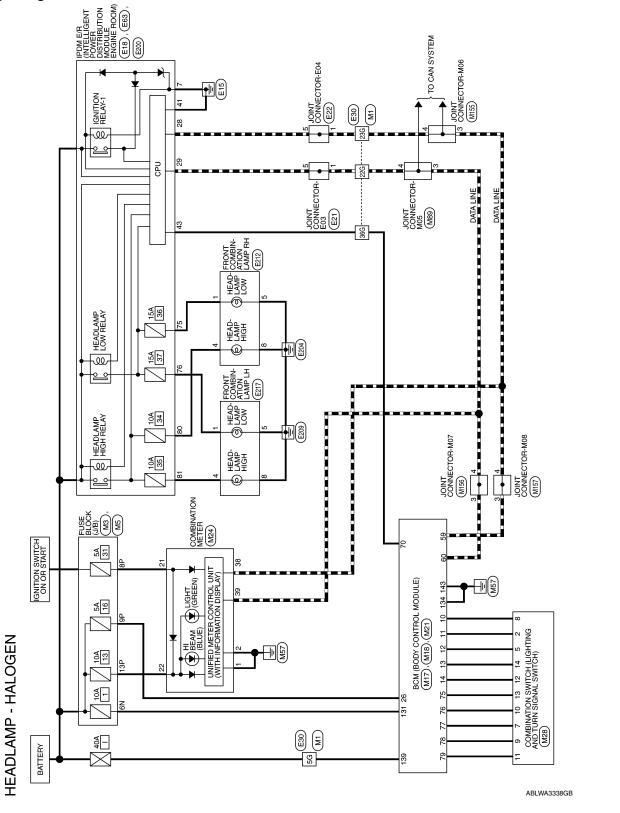
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WIRING DIAGRAM

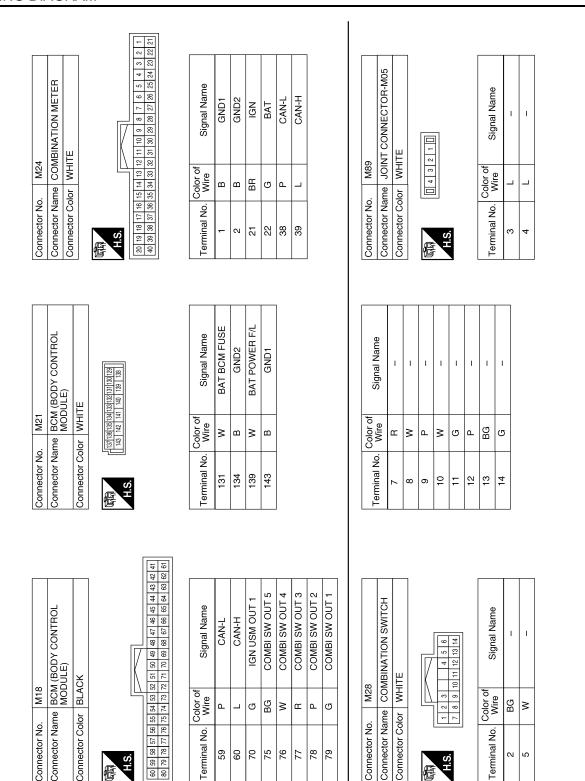
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Wiring Diagram



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HEADLAMP CONNECTORS - HAL	M1 WIRE TO WIRE Or WHITE 16	M5 M5	EXL
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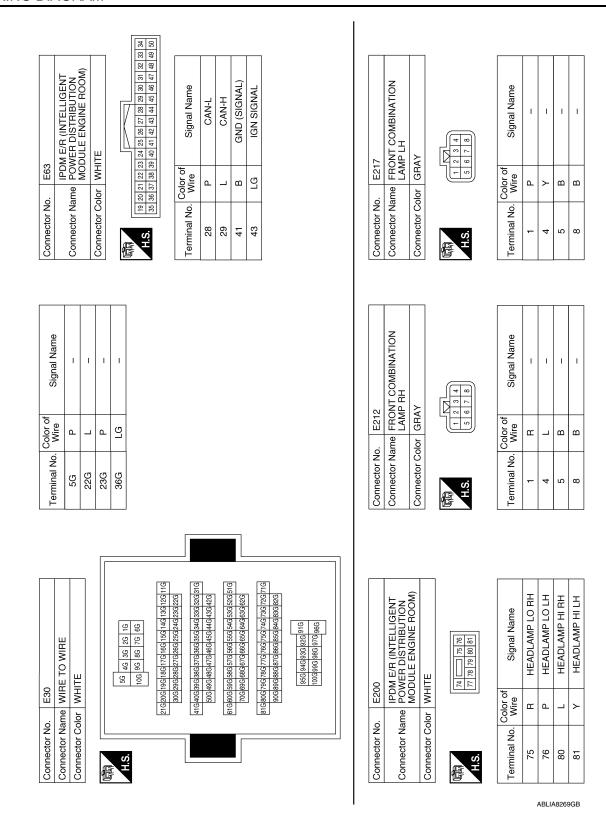
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Signal Name Color of Signal Name 1 P - 1 P - 5 P - 1			
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		Color o Wire P	۵
Signal Name	Color of Signal Name Wire Signal Name L L L	Terminal No.	5
Signal Name	Color of Wire Signal Name L L - L L		
	Color of Wire	Signal Name	ı

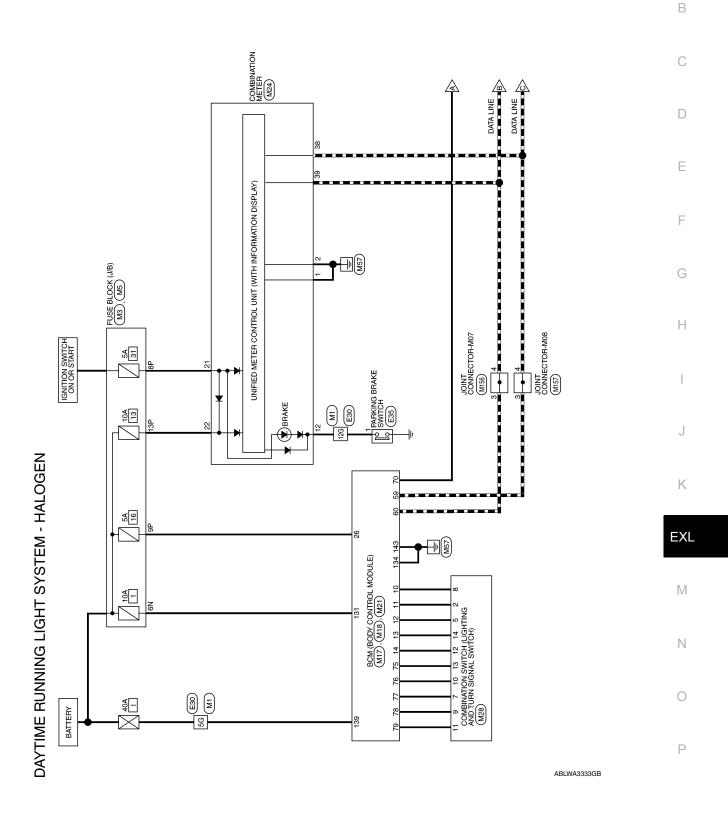
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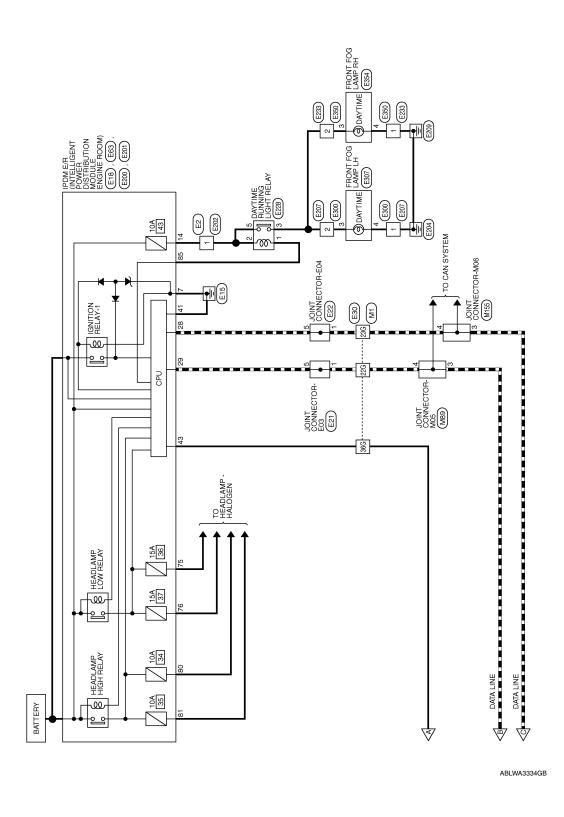
Revision: November 2015 **EXL-31** 2016 Altima Sedan



DAYTIME RUNNING LIGHT SYSTEM

Wiring Diagram

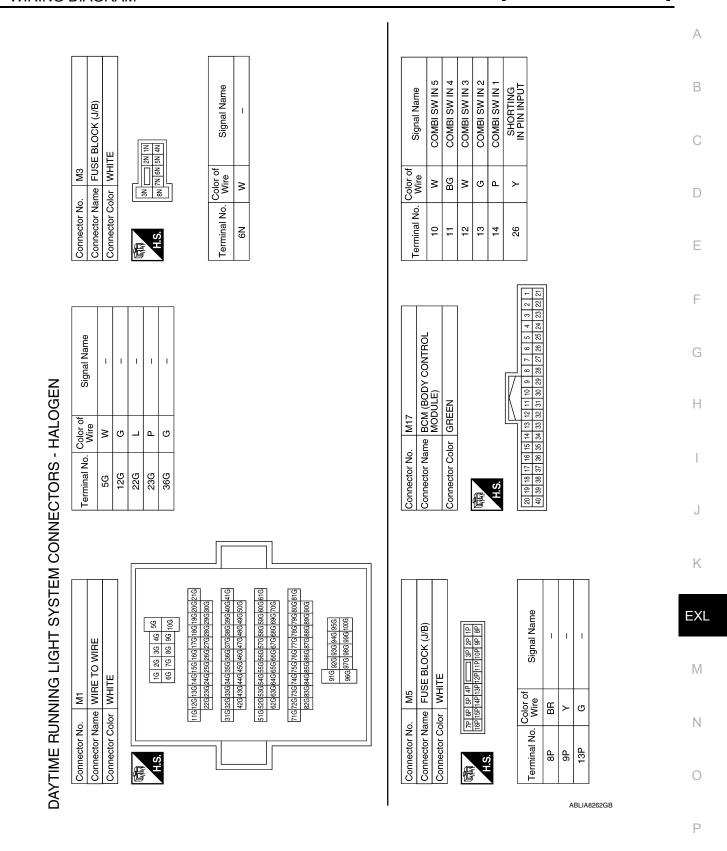




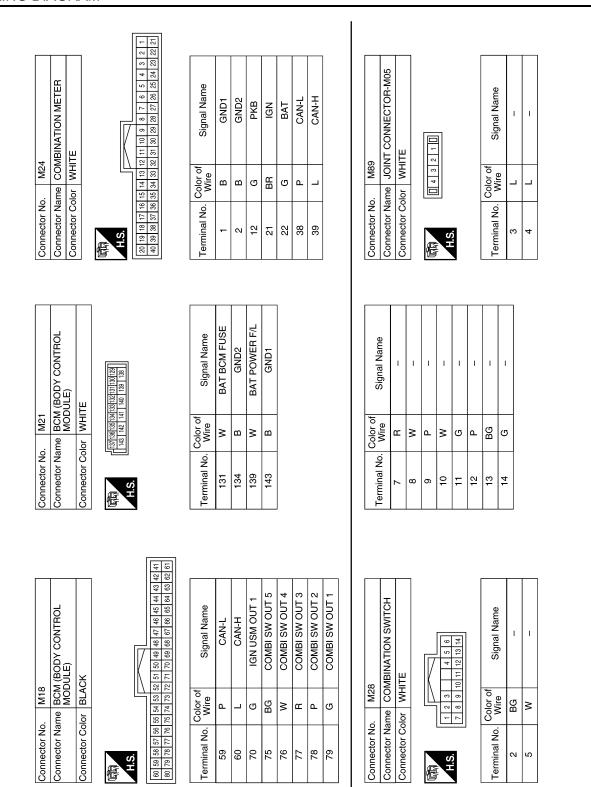
DAYTIME RUNNING LIGHT SYSTEM

< WIRING DIAGRAM >

[HALOGEN HEADLAMP]



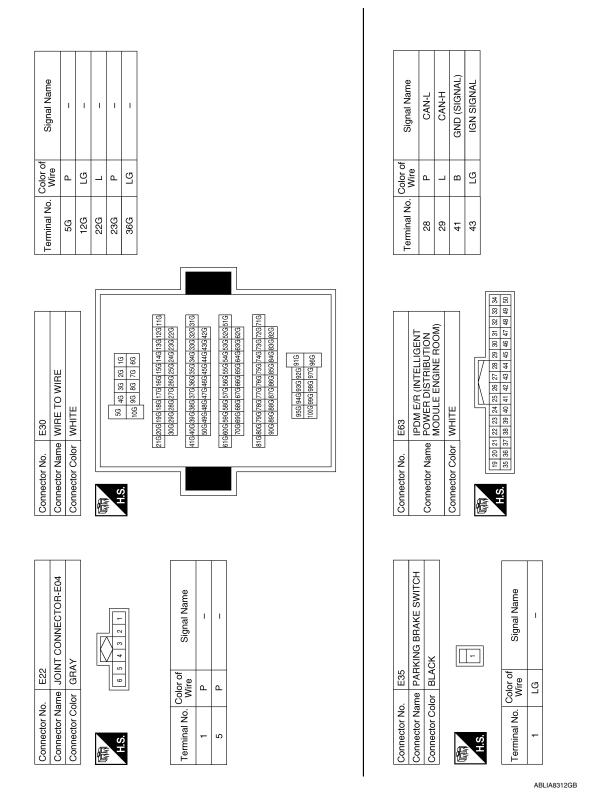
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				А
Connector No. M157 Connector Name JOINT CONNECTOR-M08 Connector Color WHITE MAS.	Signal Name	Connector No. E21 Connector Name JOINT CONNECTOR-E03 Connector Color GRAY	Signal Name	В
NT CONI		AY S		С
o. M157 ame JOINT olor WHIT	Color of Wire	o. E21 ame JOINT olor GRAY	Color of Wire L	D
Connector No. M157 Connector Name JOINT (Connector Color WHITE	Terminal No.	Connector No. Connector Name Connector Color	Terminal No.	Е
				F
Connector No. M156 Connector Name JOINT CONNECTOR-M07 Connector Color WHITE	Signal Name	E18 IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) WHITE	Signal Name GND (POWER) DTRL	G
M156 JOINT CONNE WHITE		E18 PDM E/R (POWER DIS MODULE E WHITE		Н
lo. M1	Color of Wire		Color of Wire B B Y	1
Connector No. M156 Connector Name JOINT (Connector Color WHITE H.S.	Terminal No.	Connector No. Connector Name Connector Color	Terminal No.	J
				K
Connector No. M155 Connector Name JOINT CONNECTOR-M06 Connector Color WHITE MA H.S.	Signal Name	Connector No. E2 Connector Name WIRE TO WIRE Connector Color WHITE	Signal Name	EX
Connector No. M155 Connector Name JOINT (Connector Color WHITE	Color of Wire P	E2 WHRE T	Color of Wire ∀ ≺	
Connector No. Connector Nam Connector Colo	Terminal No. C	Connector No. Connector Name Connector Color	Terminal No.	N
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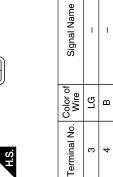
				Signal Name	1			
E202	WIRE TO WIRE		8 7 6 5 4					
Connector No.	Connector Name WIRE TO WIRE Connector Color WHITE		S.H.	Terminal No. Color of Wire	1 SB			
								
1	Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM)	TE	85 86 87 88 89 93 94 95 96 97	Signal Name	DTRL RLY			
E201	me POV	or WHI	90 91 82 83	Color of Wire	>			
Connector No.	Connector Na	Connector Color WHITE	H.S.	Terminal No. Color of Wire	85			
					<u> </u>			
00	Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM)	WHITE	74	Signal Name	HEADLAMP LO RH	HEADLAMP LO LH	HEADLAMP HI RH	HEADI AMP HI I H
). E200	Ime PO MC			Color of Wire	<u>~</u>	۵	_	>
Connector No.	Connector Na	Connector Color	副 H.S.	Terminal No.	75	9/	80	84

Connector No. E233	Connector Name WIRE TO WIRE	Connector Color BLACK			6 5 4 3 2 1		Terminal No. Color of Wire Signal Name	В .	2 LG		
Conne					O H		Termii				
E228	Connector Name DAYTIME RUNNING LIGHT	IELAY	·LUE		3	2 7 1	of Signal Name	1	1	1	ı
Connector No.	Connector Name		Connector Color BLUE		管	H.S.	Terminal No. Wire	-	2 SB	3 FG	5 SB
]	. •							
	Connector Name WIRE TO WIRE	×		7	3 2 1		Signal Name	ı	1		
E207	me WIRE	Connector Color BLACK			6 5 4		Terminal No. Wire	В	മ		
Connector No.	۱عا	ပ္ပ					al No.				

Connector No.	E350
Connector Name WIRE TO WIRE	WIRE TO WIRE
Connector Color BLACK	BLACK
	2 3 4 5 6

Signal Name	ı	_
Color of Wire	В	9T
erminal No. Wire	-	2







0	WIRE TO WIRE	CK	3 4 5 6	Signal Name	ı	
. E300	me WIR	lor BLA	1 2 1	Color of Wire	В	
Connector No.	Connector Name	Connector Color BLACK	可可 H.S.	Terminal No.	-	



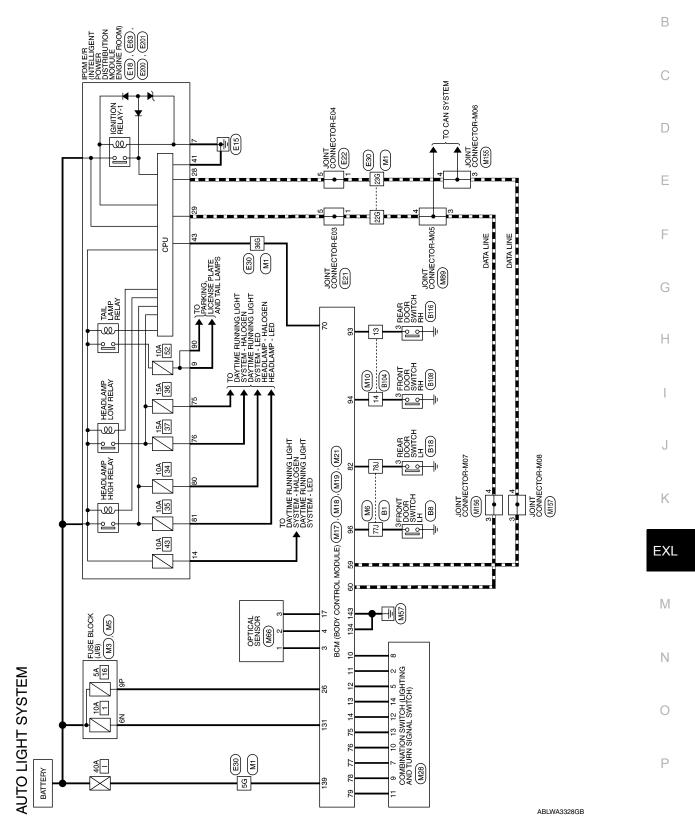
connector Name FRONT FOG LAMP RH	CK		Signal Name	ı
me FRC	lor BLA	[44]	Color of Wire	LG
onnector Na	connector Color BLACK	H.S.	erminal No.	3

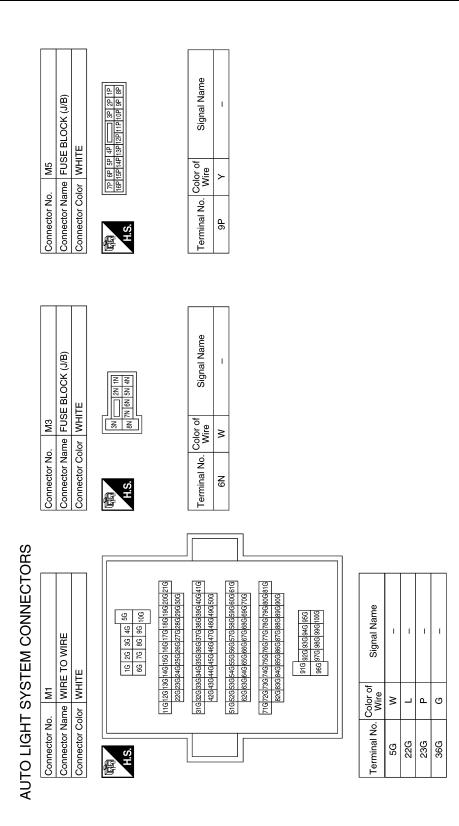
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AUTO LIGHT SYSTEM

Wiring Diagram





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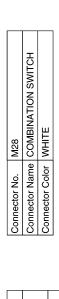
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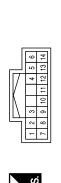
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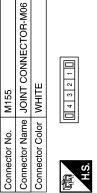
Revision: November 2015 **EXL-43** 2016 Altima Sedan

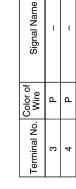




Signal Name	1	1	ı	ı	1	1	ı	1	ı	1
Color of Wire	BG	M	Œ	M	Ь	W	Э	Ь	BG	В
Terminal No. Wire	2	2	7	8	6	10	11	12	13	14

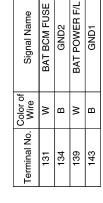






M21	Connector Name BCM (BODY CONTROL MODULE)	WHITE
Connector No.	Connector Name	Connector Color WHITE



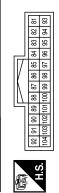






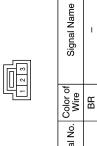
Signal I	_	-	
Color of Wire	٦	٦	
Terminal No.	3	4	

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



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l	84 83 82 81	94		Signal Name	8	Я	æ	ď
l	88	92		<u> </u>	Q	00	Q	၂င္ဂ
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	82	97		Sić	닕	Æ	S	۳
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	87	96						
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٦	92 91 90 89	104 103 102 101 100 99		Color of Wire		_	m	۳ ا
l	96	102		∺	_	>	SB	HH
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l	8	104		9				
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Ţ	C	ń		in	82	93	94	96
TIT	Œ	ó		Terminal No.				
Į		1		<u> </u>				

Oly socional	990
Connector No.	IMBO
Connector Name	Connector Name OPTICAL SENSOR
Connector Color WHITE	WHITE
雨 H.S.	1 2 3





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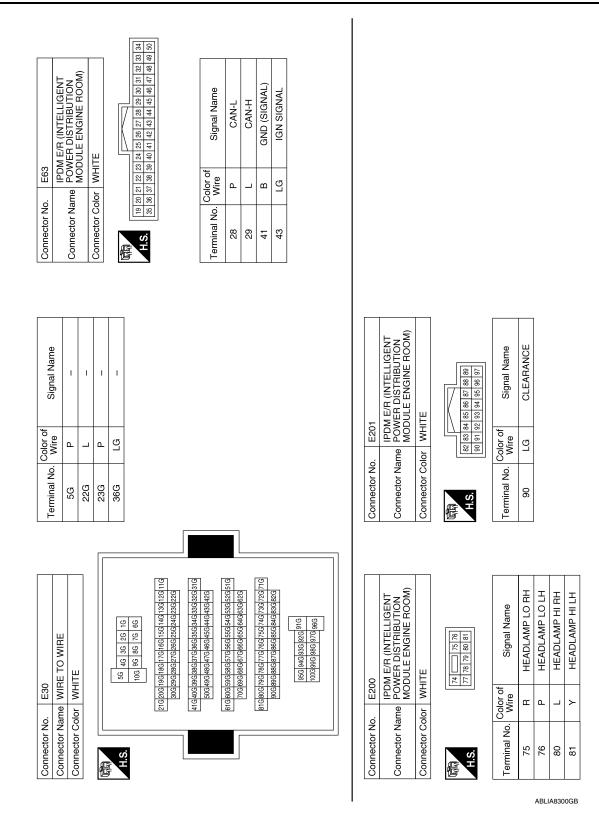
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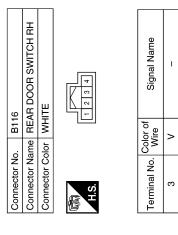
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Connector No. E18	DR-E04	ame
Connector No. M157 Connector Name JOINT CONNECTOR-M08 Connector Color WHITE H.S. Image: Im	Connector No. E22 Connector Name JOINT CONNECTOR-E04 Connector Color GRAY E 5 4 3 2 1	Terminal No. Color of Signal Name 1 P 5 P
or Name JOINT CONNECTOR-M07 or Color WHITE	or No. E21 or Name JOINT CONNECTOR-E03 or Color GRAY E 5 4 3 2 1	No. Wire Signal Name

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Connector No. B8 Connector Color WHITE Connector Color of Signal Name 3 L -	Connector No. B108 Connector Name FRONT DOOR SWITCH RH Connector Color WHITE Terminal No. Color of Signal Name 3 L -	A B C D
Terminal No. Color of Wire Signal Name 77J L 78J LG	Connector No. B104 Connector Name WIRE TO WIRE Connector Color BROWN	G H J
Connector No. B1 Connector Name WIRE TO WIRE Connector Color GRAY	Connector No. B18 Connector Name REAR DOOR SWITCH LH Connector Color WHITE Terminal No. Color of Signal Name 3 LG -	K EXL M N O

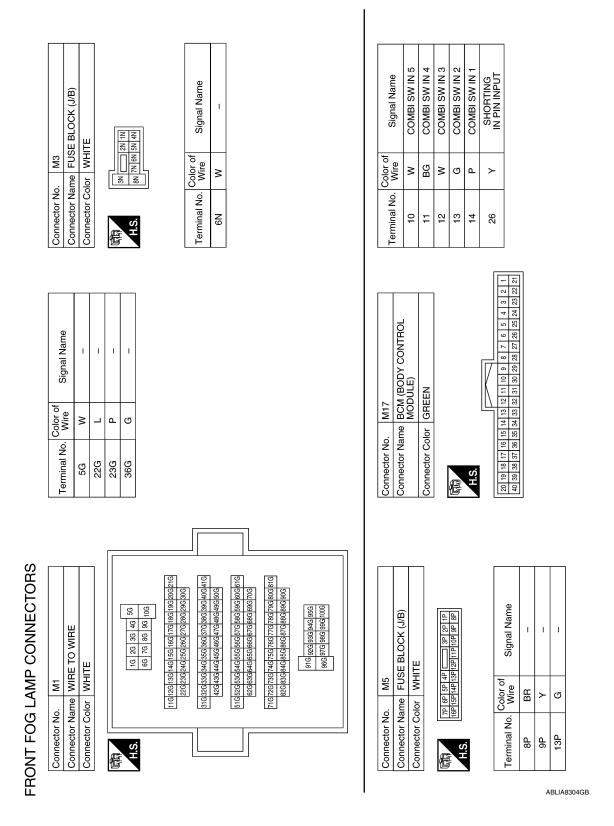


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FRONT FOG LAMP Α Wiring Diagram INFOID:0000000012591782 IPDM E/R
(INTELLGENT
POWER
DISTRIBUTION
MODULE
ENGINE ROOM)
(E18), (E63),
(E200) TO CAN SYSTEM В JOINT CONNECTOR-M06 (M155) JOINT CONNECTOR-E04 С ĮΨ (83) IGNITION RELAY-1 88 D w CPU JOINT CONNECTOR- E03 E21 JOINT CONNECTOR-M05 (M89) DATA LINE Е F Н J FUSE BLOCK (J/B) (M3), (M5) COMBIN-ATION METER (M24) K IGNITION SWITCH ON OR START 31 34 EXL W25/W25 BCM (BODY CONTROL MODULE)
(M17), (M18), (M21) 16 16 Fogure M COMBINATION SWITCH (LIGHTING AND TURN SIGNAL SWITCH)
(M28) 13 4 13 Ν FRONT FOG LAMP 4 P 0 BATTERY



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20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 2 1 1 4 8 8 9 8 9 9 8 9 9 8 9 9 9 9 9 9 9 9 9	of Signal Name	GND1	GND2	IGN	BAT	-F	_				105	2											
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17 16 15 37 36 35	do. Wire	В	В	BB	G	<u>а</u>	_			9	Name Name	Solor								-			
20 19 18 17 40 39 38 37	Terminal No.	-	2	21	22	88	39			oly reported	Connector Name	Connector Color			J.	į.		Terminal No.	٣	0 4			
]				 		Ι											
	Signal Name	BAT BCM FUSE	GND2	BAT POWER F/L	GND1						Signal Name	1	ı	_	1	ı	ı	-	I				
	Solor of Wire	8	В	8	В					30,010	Wire	Œ	>	Ь	M	ŋ	۵	BG	<u></u>				
_		_	4	6	ω													~	_				
	Termin	13	13	13	14						Termin	7	8	6) 	=	12	5	17				
12 41 52 61										_			_				_						
	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		HOTIWS NOITANIS				4 5 6	5		Signal Name)	1			
54 53 52 5	olor of Wire	۵	_	5	BG	M	œ	Ь	5	acm	NIZO A	LIHM .	_		2	위		olor of		2 >			
57 56 55	No.								\dashv	100	or Name	i Color			L								
60 59 58 80 79 78	Termina	29	09	70	75	9/	77	78	79			Connect		E	Į.	2		Termina		1 3			
	8 577 56 555 54 55 120 149 48 47 46 45 44 420 42 41 8 777 76 75 74 73 72 71 70 69 68 67 66 65 64 63 62 61	See 53 52 51 50 49 48 47 46 48 42 41 41 41 41 41 41 41	Signal Name Signal Name	Signal Signal Name Signal Name Color of Color o	Si Si Si Si Si Si Si Si	Signature Sign	Signation Sign	Signal Name Signal Name Signal Name Signal Name Signal Signal Name Signal Signal Name Signal Signal Name Signal	Signal Name Signal Name	Signal Name Signal Name	Signal Signal Name Color of Signal Name	45 44 43 42 41 42 41 42 41 42 41 42 41 42 41 42 41 42 41 42 41 42 41 42 42	Signal Name Color of Name Color of Signal Name Color of S	45 44 42 41 42 41 42 41 42 41 42 41 42 41 42 41 42 41 42 41 42 41 42 41 42 42	45 44 42 41 42 41 42 41 42 41 42 41 42 41 42 41 42 41 42 41 42 41 42 42	45 44 42 41 42 41 42 41 42 41 42 41 42 41 42 41 42 41 42 41 42 41 42 42	45 44 42 41 42 41 42 41 42 41 42 41 42 41 42 41 42 41 42 41 42 41 42 41 42 42	45 44 42 41 42 41 42 41 42 41 42 41 42 41 42 41 42 41 42 41 42 41 42 42	45 44 42 41 42 41 42 41 42 41 42 41 42 41 42 41 42 41 42 41 42 41 42 41 43 42 41 43 43 44 43 44 43 44 43 44	45 44 42 41 42 41 42 41 42 41 42 41 42 41 42 41 42 41 42 41 42 41 42 42	Signal Name Color of Color of Signal Name Color of Color o	Signal Name Terminal No. Color of Signal Name Terminal No. Wire Signal Name Terminal No. Wire Signal Name Terminal No. Color of Signal Name Terminal No. Color of Terminal No. Wire Signal Name Terminal No. Color of Terminal No. Color of Terminal No. Terminal No. Color of Signal Name Terminal No. Color of Terminal No. Terminal No. Color of Terminal No. Color of Signal Name Terminal No. Terminal No. Color of Terminal No. T	Terminal No. Color of Signal Name Connector No. Wire Connector No. Wire Signal Name Connector No. Wire Connector No

Signal Name

Terminal No.

Signal Name

Terminal No. Wire

GND (POWER) Signal Name

В

Terminal No. Wire

Connector No. M155 Connector Name JOINT CONNEC Connector Color WHITE	o. M155 ame JOINT olor WHIT	T CONNECTOR-M06	Connector No. M156 Connector Name JOINT (M156 a JOINT	Connector No. M156 Connector Name JOINT CONNECTOR-M07 Connector Color WHITE	Connector No. M157 Connector Name JOINT (Connector Color WHITE	M157 JOINT CONNECTOR-M08 WHITE
原 H.S.	4	3 2 1	是 H.S.	4 8	[] [] [] [] [] [] [] [] [] [] [] [] [] [優 S.H	
Terminal No.	Color of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name	Terminal No. W	Color of Signal Name
3	Ь	1	3	٦	ı	3	
4	Д	1	4	_	ı	4	ı
	_						
Connector No.	o. E18		Connector No.	E21		Connector No.	E22
Connector Name		IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)	Connector Name	GRAY	Connector Name JOINT CONNECTOR-E03 Connector Color GRAY	Connector Name Connector Color	Connector Name JOINT CONNECTOR-E04 Connector Color GRAY
Connector Color	olor WHITE	Щ.					
H.S.	7 8 12 13	7 8 9 10 11 12 13 14 15 16 17 18	S.	9	2 8 1	Ġ.	6 5 4 6 3 2 2 1 1

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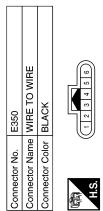
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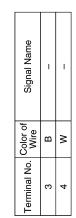
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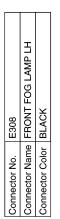
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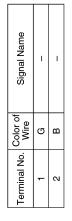
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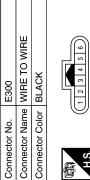
IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) WHITE	27 28 29 30 31 32 33 34 43 44 45 46 47 48 48 49 50 80 81 82 83 84 84 80 80 81 82 83 84 84 80 80 80 80 80 80 80 80 80 80 80 80 80	Connector No. E233 Connector Color BLACK M.S. (6 5 4 3 2 1)	Signal Name	1
	22 23 24 25 26 2 38 39 40 41 42 4 2 4 2 4 2 4 2 4 2 4 2 4 2 4 2 4	o. E233 ame WIRE olor BLAC	ري ا	>
Connector Name	##S. H.S. Terminal No. 29 29 41 43	Connector No. Connector Color	Terminal No.	4
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סופים ואמווים		TO WIRE	Signal Name	1
Wire L		DE WIRE TO V ON BLACK	Color of Wire B	5
56	50 50 50 50 50 50 50 50 50 50 50 50 50 5	Connector No. E207 Connector Name WIRE TO WIRE Connector Color BLACK	al No.	4
[
WIRE TO WIRE WHITE	56 46 36 26 16 106 96 96 76 66 216 206 196 176 166 156 146 136 126 116 306 306 307 306 307 306 307 306 416 406 306 307 306 306 307 306 506 406 406 406 406 406 406 406 506 406 807 806 506 506 506 506 706 806 877 506 506 506 506 506 816 800 879 806 876 606 607 606 816 800 870 806 876 606 100 800 800 800 800 800 800 100 800 800 800 800 800 100 800 800 800 800 800 100 800 800 800 800 800 100 800 800 800 800 800 800 100 800 800 800 800 800 800 800 100 800	E200 IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) WHITE	Signal Name FR FOG LAMP RH	FR FOG LAMP LH
Connector Name WIRE T	21 G G G G G G G G G G G G G G G G G G G	Description of the property of	8>	5
ž č [O I	Connector No. Connector Name Connector Color	Terminal No. 78	62















Signal Name	-	I	
Color of Wire	В	9	
Terminal No.	3	4	

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

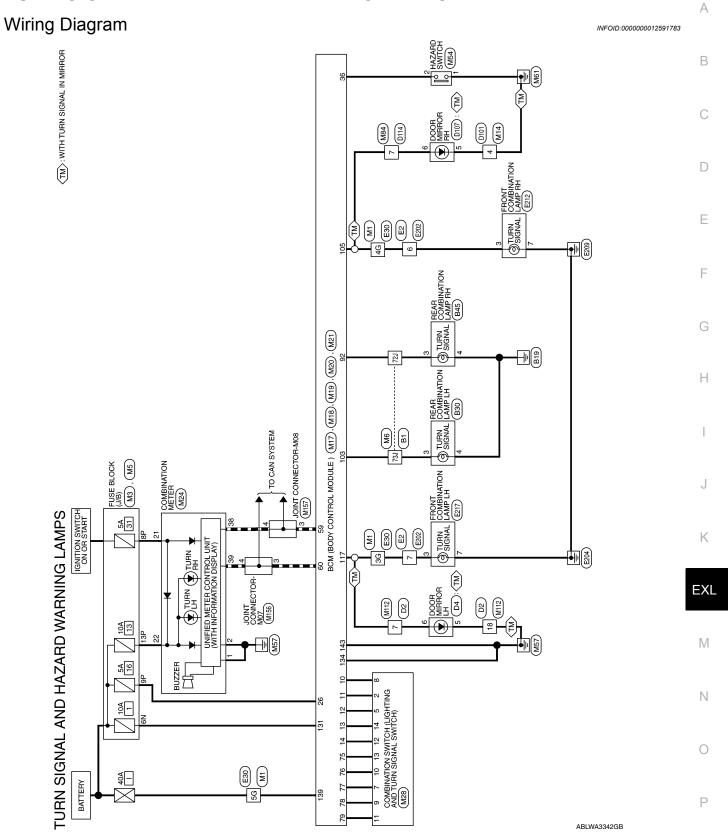


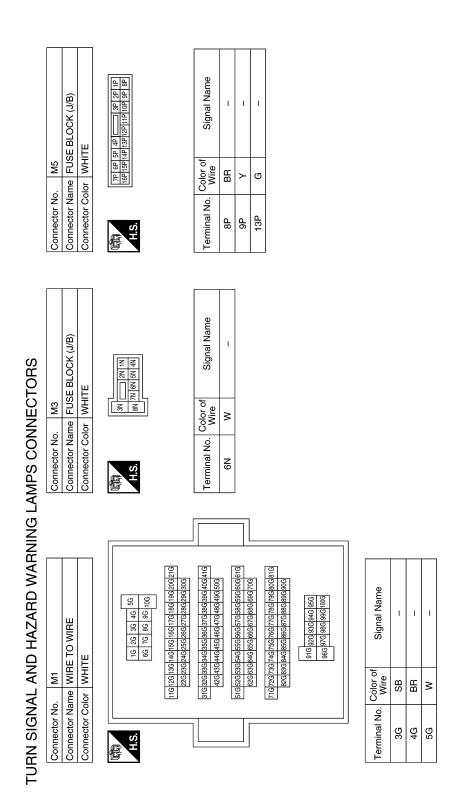


Signal Name	ı	_
Color of Wire	Μ	В
Terminal No.	-	2

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TURN SIGNAL AND HAZARD WARNING LAMPS





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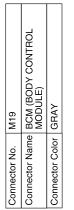
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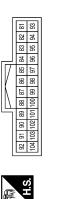
Connector No. M14 Connector Name WIRE TO WIRE Connector Color WHITE Terminal No. Wire Signal Name 4 GR -	
Signal Name	Signal Name COMBI SW IN 2 COMBI SW IN 1 SHORTING IN PIN INPUT HAZARD SW
Mire Value A	Mire of A Y
72J 73J 73J	Terminal No. (13 14 14 36 36 36
	-
M6	Connector No. M17 Connector Name BCM (BODY CONTROL MODULE) Connector Color GREEN ALS. Connector Color GREEN Connector Color of Signal Name 10 W COMBI SW IN 5 11 BG COMBI SW IN 3 12 W COMBI SW IN 3
0. M6 ame WIRE in its	Oolor GREEN Oolor GREEN Oolor GREEN Oolor Oolo
Connector No. M6 Connector Name WIRE TO WIRE Connector Color GRAY (1) 21 31 44 (1) 12 13 14 15 16 17 17 18 18 17 18 18 18 17 18 18 18 17 18 18 18 18 17 18 18 18 18 17 18 18 18 18 18 18 18 18 18 18 18 18 18	Connector No. M17 Connector Name BCM (MODU Connector Color GREE MODI MO
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Connector No.	M20
Connector Name	Connector Name BCM (BODY CONTROL MODULE)
Connector Color BLACK	BLACK



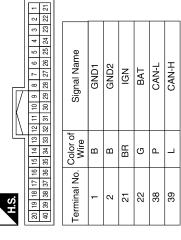




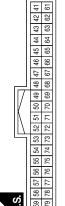


:	Signal Name	RR FLASHER	RL FLASHER
Color of	Wire	ГG	У
	Terminal No.	92	103

Connector No.	M24
Connector Name	Connector Name COMBINATION METER
Connector Color WHITE	WHITE



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



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	Д	T	BG	Μ	œ	Ь	В
Terminal No.	59	09	75	92	77	78	26

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



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

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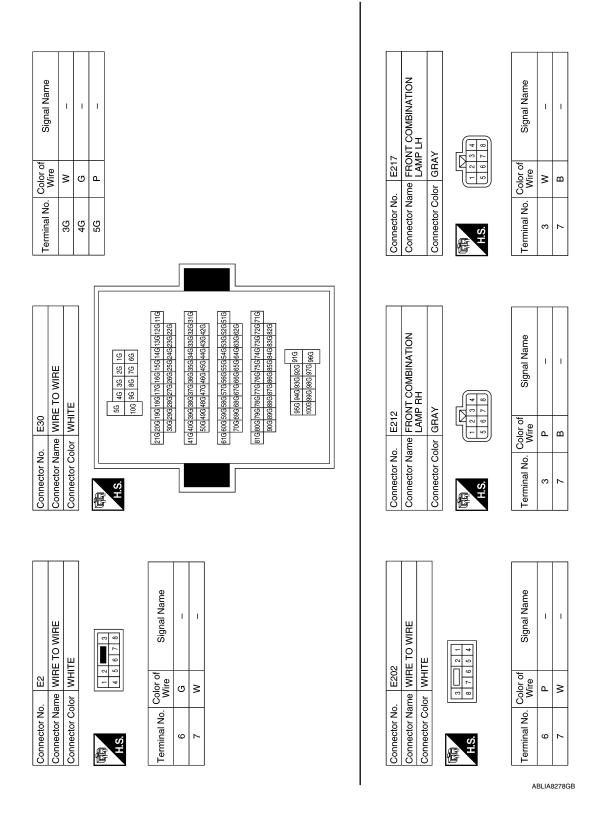
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VIRE	8 9 10 11 12 20 21 22 23 24	Signal Name	1									
Connector No. M84 Connector Name WIRE TO WIRE Connector Color WHITE	6 7 18 19	Terminal No. Color of Wire	2 FG									
Connector No. M54 Connector Name HAZARD SWITCH Connector Color WHITE	3 1 2 4	or of Signal Name	ı	1								
Connector No. M54 Connector Name HAZAR Connector Color WHITE	斯斯 H.S.	Terminal No. Color of Wire	1 GR	2								
Connector No. M28 Connector Name COMBINATION SWITCH Connector Color WHITE	11	Signal Name	1	1	ı	ı	ı	ı	ı	ı	ı	ı
. M28 .me COMB	7 8 9 3 10	Color of Wire	BG	8	æ	8	۵.	8	g	۵	BG	ŋ
Connector No. M28 Connector Name COMBI Connector Color WHITE	说. R.S.	Terminal No. Color of Wire	2	5	7	8	6	10	+	12	13	14

	Connector No. M112	Connector No. M156). M15	9		Connector No. M157	. M15	
ame	Connector Name WIRE TO WIRE	Connector Na	ame JOIN	Connector Name JOINT CONNECTOR-M07	<u> U</u>	Connector Na	me JOIN	Connector Name JOINT CONNECTOR-M08
Solor	Connector Color WHITE	Connector Color WHITE	olor WHI	TE	<u> </u>	Connector Color WHITE	lor WHI	E
<u>- 6</u>	2 3 4 5 6 7 8 9 10 11 12 14 15 16 17 18 19 20 21 22 23 24	「斯斯 H.S.	4	4 3 2 1 0		朝 H.S.	4 6	2 1 0
<u>ٽ</u> _	Terminal No. Color of Wire Signal Name	Terminal No. Wire	Color of Wire	Signal Name		Terminal No. Color of Wire	Color of Wire	Signal Name
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	В	4	7	ı		4	۵	ı
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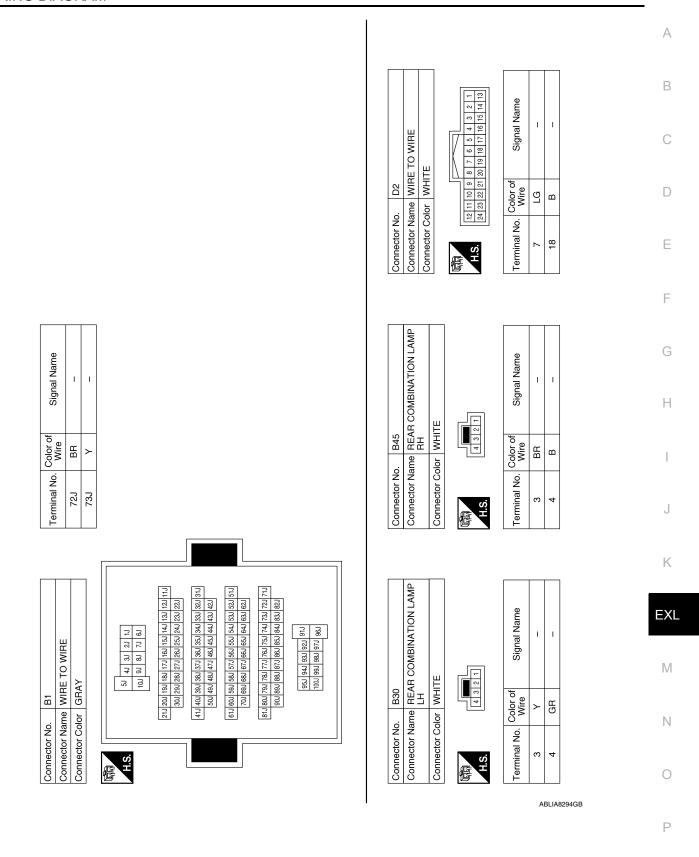
Revision: November 2015 EXL-59 2016 Altima Sedan



TURN SIGNAL AND HAZARD WARNING LAMPS

[HALOGEN HEADLAMP]

< WIRING DIAGRAM >



Revision: November 2015 EXL-61 2016 Altima Sedan

2	Connector Name DOOR MIRROR RH	ПЕ	6 5 1	Signal Name	-	=
. D107	me DOC	lor WHI	4 8 7	Color of Wire	В	ГG
Connector No.	Connector Na	Connector Color WHITE	H.S.	Terminal No. Wire	5	9
				ne		

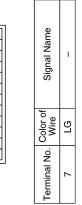
Connector No.	D101
Connector Name	Connector Name WIRE TO WIRE
Connector Color WHITE	WHITE
	3

Signal Name	1	
Color of Wire	В	
Terminal No.	4	

(4 8 2 1	D0OR MIRROR LH WHITE	Connector No. Connector Color Connector Color
	2 4 6 5	
	WHITE	Connector Color
Connector Color WHITE	DOOR MIRROR LH	Connector Name
Connector Name DOOR MIRROR LH Connector Color WHITE	D4	Connector No.

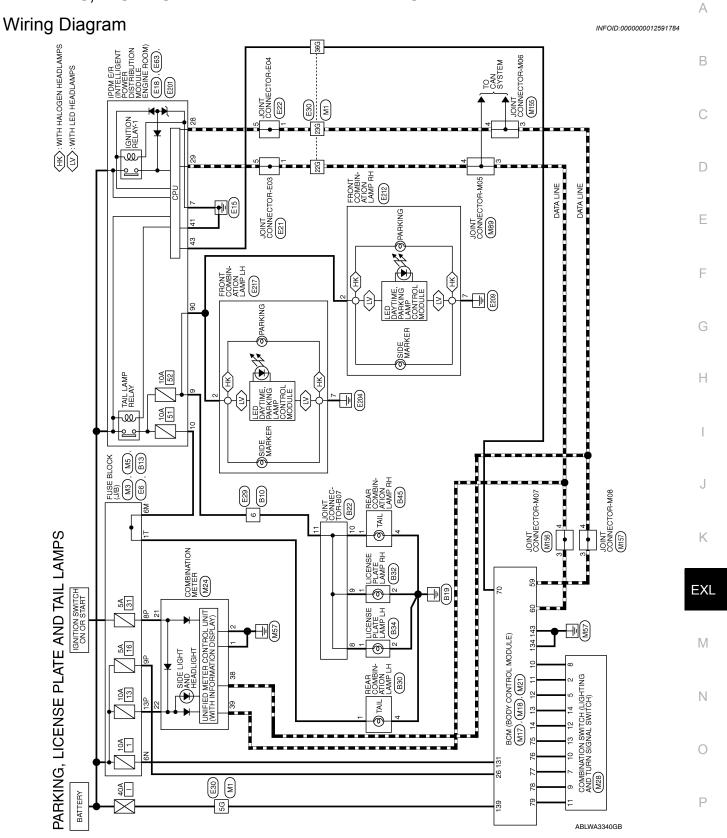
Signal Name	1	1
Color of Wire	В	LG
Terminal No.	5	9

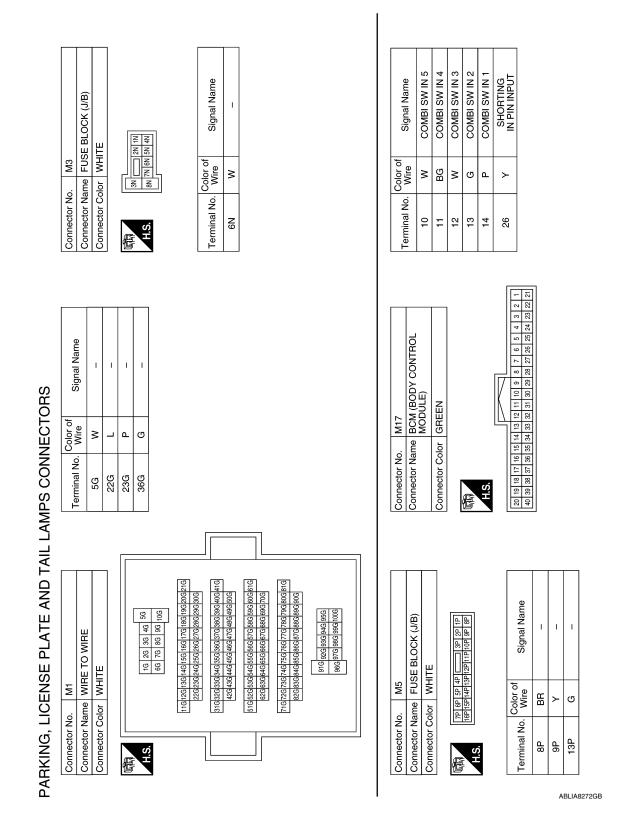
D114	WIRE TO WIRE	WHITE	
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	



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PARKING, LICENSE PLATE AND TAIL LAMPS





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Connector No. M24 Connector Name COMBINATION METER Connector Color WHITE	21 11 10 0 0 0 1 1 1 2 1 0 0 0 0 1 1 1 1	32 31 30 29 28 27 26 25 24 29 22 21	of Signal Name	GND1	GND2	NSI	BAT	CAN-L	CAN-H			M89	JOINT CONNECTOR-M05	WHITE	<u>[</u>	U 4 3 2 1 U			ار Signal Name	ı	1	
ame CK w	15 14	36 35 34 33	Color of Wire	В	a	ВВ	<u>ი</u>	۵	7							4			Color of Wire	_	_	
Connector Name Connector Color	H.S.	37	Terminal No.	٢	2	21	22	38	39			Connector No.	Connector Name	Connector Color	Ą		S		Terminal No.	က	4	
WZ1 BCM (BODY CONTROL MODULE) WHITE	138 138		Signal Name	BAT BCM FUSE	GND2	BAT POWER F/L	GND1					Signal Name		1 1	1		1	ı	1	1		
	137[136]135[134]133[132[13][130[123 142 141 140 139 138		Color of Wire	8	В	M	В					Color of	n de	r >	: 🗅	×	_o	<u>a</u>	Bg c	5		
Connector Name Connector Color	H.S.		Terminal No. V	131	134	139	143					Co Terminal No				t		12		<u> </u>		
	ſ	14 41																				
Connector Name BCM (BODY CONTROL MODULE) Connector Color BLACK		52 51 50 89 88 47 46 45 44 43 42 42 41 72 72 71 70 89 68 67 66 65 64 65 62 61	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		COMBINATION SWITCH	ITE		/ -	-		Signal Name	ı	ı	
me BCM (B MODUL		55 54 53 52 75 74 73 72	Color of Wire	Ъ	_	ŋ	BG	M	Œ	۵	σ		$\overline{}$	lor WHITE		\	ာ တ		Color of Wire	BG	>	
Connector Name	H.S.	80 79 78 77 76 75 74 73 72	Terminal No.	59	09	70	75	92	27	78	79	Connector No.	Connector Name	Connector Color	ą.		S	J	Terminal No.	2	5	

Revision: November 2015 **EXL-65** 2016 Altima Sedan

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4	4

	JOINT CONNECTOR-E03	\AY	2 2 1	Signal Name	1	ı
. E21		lor GF	<u> </u>	Color of Wire	_	_
Connector No.	Connector Name	Connector Color GRAY	H.S.	Terminal No.	-	5

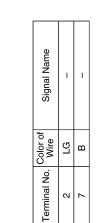
Connector No.	. E18	
Connector Name		IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color WHITE	lor WH	ПЕ
H.S.	12 1	7 8
Terminal No.	Color of Wire	Signal Name
7	В	GND (POWER)
6	SB	TAIL RH
10	>	H I IIVI

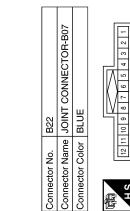
	FUSE BLOCK (J/B)	ITE	10M 9M 8M 7M 6M 5M	Signal Name	_
. E6		lor WHITE	4M 10M	Color of Wire	٨
Sonnector No.	Connector Name	Connector Color	咸 H.S.	Terminal No.	M9

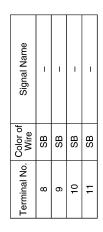
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Connector No. Connector Name Connector Color Terminal No. Color 28 41 41 43 L 43	Е
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Signal Name	G
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Connector No. Connector Name Connector Name Connector Color Terminal No. 6 56 226 236 366 L	J
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Signa	M
No. Color of No.	Ν
Connector No. Connector Color Terminal No. Color Connector No. Connector Name Connector Color H.S. H.S.	0
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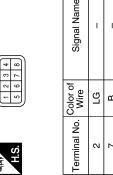
	NC	
E217	Connector Name FRONT COMBINATION LAMP LH	GRAY
Connector No. E217	Connector Name	Connector Color GRAY
	ATION	







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

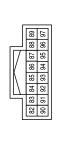


Signal Name	ı	1	
Color of Wire	LG	В	
ərminal No.	2	7	

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

ומומו	wire /	11
Signal Nam	Wire	lerminal No.

E201	Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM)	WHITE	
Connector No.	Connector Name	Connector Color WHITE	



Signal Name	CLEARANCE
Color of Wire	LG
Terminal No.	06
	Color of Wire

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

Signal Name	ı	
Color of Wire	SB	
Terminal No.	9	

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tor Color WHITE Tor Color WHITE A 3 2 1 No. Color of Signal Name	Connector Name LICENSE Connector Color BROWN H.S.	lor BROW 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1 1 2 1	Connector Name LICENSE PLATE LAMP RH Connector Color BROWN LLS Terminal No. Color of Wire Signal Name	Connec	Connector Name LICE Connector Color BRO LLS LLS Connector Color BRO Terminal No. Color of Wire of	Connector Name LICENSE PI Connector Color BROWN H.S. Terminal No. Color of Si	Connector Name LICENSE PLATE LAMP LH Connector Color BROWN H.S. Terminal No. Color of Wire Signal Name
	-	SB	1	_		SB	1
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	1 SB –

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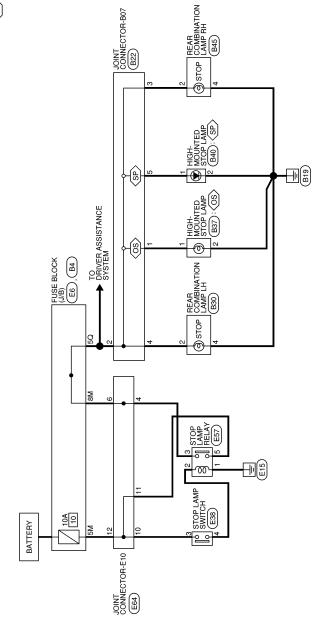
EXL-69 Revision: November 2015 2016 Altima Sedan

STOP LAMP

Wiring Diagram

INFOID:0000000012591785





STOP LAMP

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Connector No. E57	Connector Name STOP LA	Connector Color BLUE		Terminal No. Wire	1 B	2 R	3 W
Conne	Conne	Conne	原 用 S.H	Termi			
89	Connector Name STOP LAMP SWITCH	нте	2 4 1 C	ال Signal Name	ı	ı	
. E38	me ST	lor WI	0 4	Color o Wire	១	Œ	
Connector No.	Connector Na	Connector Color WHITE	研 H.S.	Terminal No. Wire	8	4	
	Connector Name FUSE BLOCK (J/B)	TE	10M 9M 8M 7M 6M 5M	Signal Name	I	ı	
E6	ne FUS	or WHI	4M 3M 10M 9M	Solor of Wire	В	M	
Connector No. E6	Connector Nar	Connector Color WHITE	南 H.S.	Terminal No. Wire	5M	8M	

Signal Name

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	Connector No. B22 Connector Name JOINT Connector Color BLUE H.S. Terminal No. Wire	lame JOIN Color BLU Color of Wire	Connector No. B22 Connector Name JOINT CONNECTOR-B07 Connector Color BLUE It it is strict to
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	2	L	ı
	3	Т	ı
	4	Τ	ı
1	2	٦	1

	Connector Name FUSE BLOCK (J/B)	ПЕ	30 2010 8070 80 80 40	Signal Nan	ı
B4	me FUS	lor WHI	30 70 80 70 80	Color of Wire	٦
Connector No.	Connector Nai	Connector Color WHITE	所 H.S.	Terminal No.	50
					

Connector No.	o. E64	4
Connector Name		JOINT CONNECTOR-E10
Connector Color BLUE	olor BLI	UE
H.S.	12 11 10 9	8 7 6 5 4 3 2 1
Terminal No.	Color of Wire	Signal Name
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9	≥	ı
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11	ŋ	ı
12	G	1

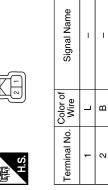
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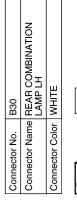
Revision: November 2015 **EXL-71** 2016 Altima Sedan

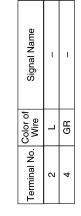
Connector No.	B40
Connector Name	HIGH-MOUNTED STOP LAMP (WITH REAR SPOILER)
Connector Color BROWN	BROWN
而 HS.	2 1



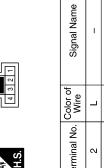












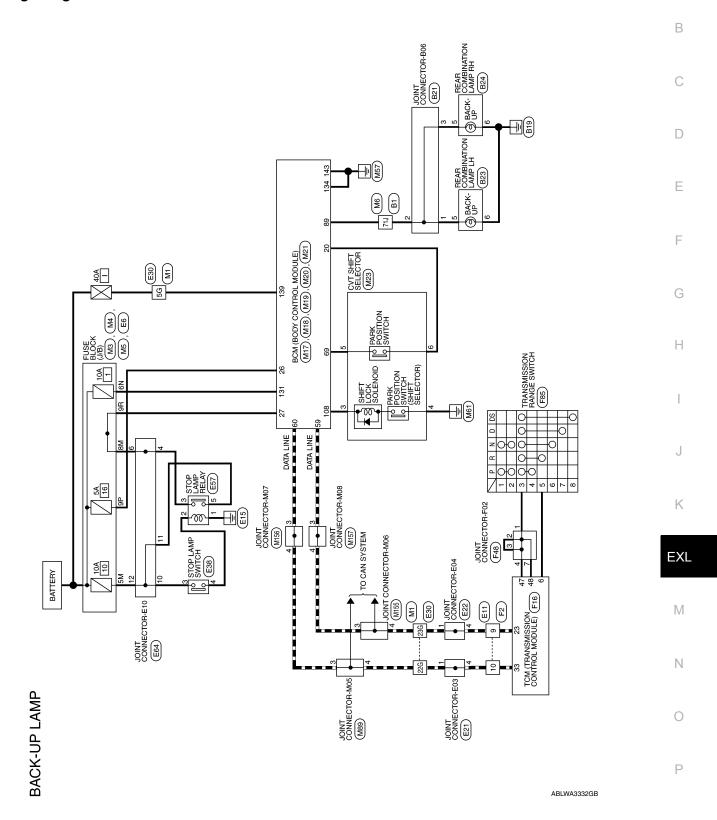
Signal Name	ı	I	
Color of Wire	٦	В	
Terminal No.	2	4	

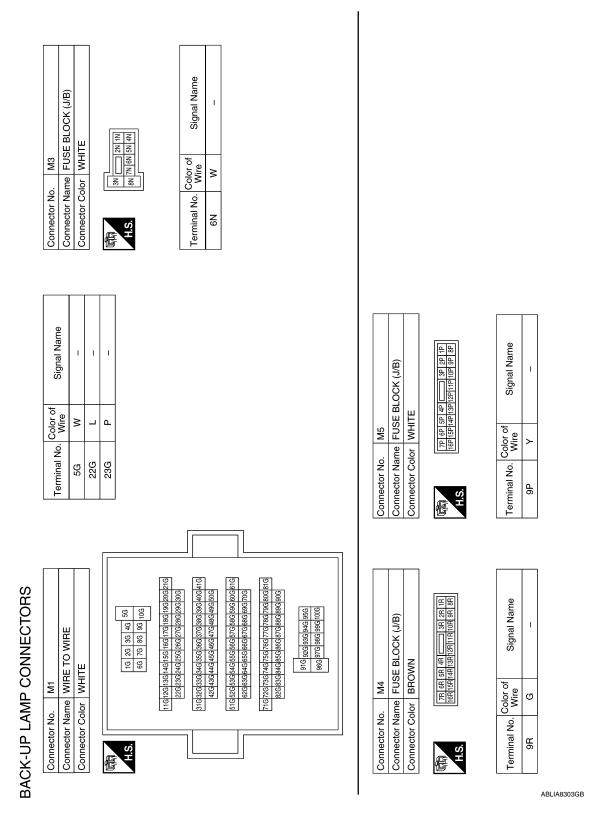
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BACK-UP LAMP

Wiring Diagram

NFOID:000000012591786





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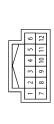
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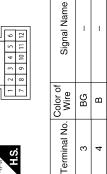
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Winder To Wind

nnector No.	M23	Connector No. M89	M89
nector Name	onnector Name CVT SHIFT SELECTOR	Connector Name	Connector Name JOINT CONNECTOR-M05
onnector Color WHITE	WHITE	Connector Color WHITE	WHITE

Signal Name	_	ı
Color of Wire	Т	L
Terminal No.	8	4

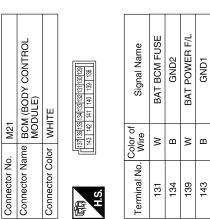


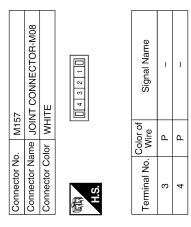


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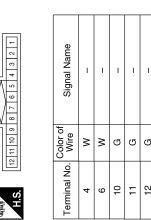
Connector No.	M156	99
Connector Name	IIOF ami	JOINT CONNECTOR-M07
Connector Color	olor WHITE	ITE
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Terminal No.	Color of Wire	Signal Name
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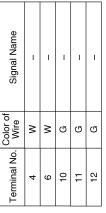
		1			
NT CONNECTOR-M06	ITE	043210	Signal Name	ı	ı
			Color of Wire	۵	۵
Connector Na	Connector Co	所.S.	Terminal No.	က	4
	Connector Name JOINT CONNECTOR-M06				

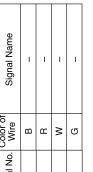
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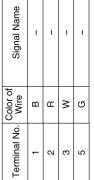
Connector No. Est Connector No			А
Connector No. E6 Connector No. E1 Connector No. E2 Connector Color Of Signal Name Signal Name Signal Name Connector No. E22 Connector No. E23	OR-E03	аш е	В
Connector No. E6 Connector No. E1 Connector No. E2 Connector Color Of Signal Name Signal Name Signal Name Connector No. E22 Connector No. E23	Signal N	Signal N 1 1 1 1 1 1 1 1 1	С
Connector Name Fuse BLOCK (UB)	Imme JOIN Idor GRAY Wire L	Mire Wire	D
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Connector No. Connec			F
Connector No. Connec	Name	66 46 36 16 66 66 46 36 16 66 46 36 16 66 46 36 16 66 46 36 36 36 36 36 3	G
Connector No. Connec	ITE TO WIRE Signal	56 46 36 26 10 10 10 10 10 10 10 10 10 10 10 10 10	Н
Connector No. E6 Connector Name FUSE BLOCK (J/B) Connector Name FUSE BLOCK (J/B) Connector Color WHITE Signal Name Signal Name Terminal No. Color of Signal Name 1 P P	Alame WIF	Color WHR Color WHR Color WHR Color WHR Color WHR Color WHR Color Color WHR Color Co	I
Connector No. E6 Connector Color WHITE Connector Color WHITE Signal Name Terminal No. Color of Signal Name Terminal Name Terminal Name Terminal Name Terminal Name Terminal No. Color of Signal Name Terminal N	Connector N Connector C Connector C Connector O H.S. 10	Connector N Connector C Connector C H.S.	J
Connector No. E6 Connector Name FUSE BLOCK (J/B) Connector Name FUSE BLOCK (J/B) Connector Color WHITE Signal Nam Signal Nam Terminal No. Oliver GRAY Connector Color of GRAY Terminal No. Wire Signal Nam 1 P P			K
ABLIA3720GB	BLOCK (J/B) Signal Name	CONNECTOR-E04	
ABLIA3720GB	or WHITI	Color of P P P P P P P P P P P P P P P P P P	NI
	Connector Na. Connector Col A.S. H.S. SM SM	Connector No. Connector Col Terminal No.	
		ABLIA3720GB	P











	STOP LAMP SWITCH	ПЕ	<u> </u>	Signal Name	ı	ı
. E38		lor WHITE	0 4	Color of Wire	g	В
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	8	4

Connector No.	F48
Connector Name	Connector Name JOINT CONNECTOR-F02
Connector Color BLACK	BLACK
S H	5 4 4 3 2 1

Connector Name John Connector Color BLAS. H.S. Color of Terminal No. Wire 1 Y 2 2 Y 3 Y 4 4 Y Y 4 4 Y Y Y Y Y Y Y Y Y Y Y	Connector Color BLACK	5 6 4 3 2 1 10 9 8 7 6	Signal Name	I	-	1	ı	I
Connector Na A.S. H.S. Terminal No. 2 2 2 3 3 4	Ior BL/		Color of Wire	>	>	\	>	>
	Connector Na	原 H.S.		٠	2	3	4	7

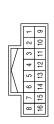
Connector No.	٠. ا	ш.	F16									
Connector Name	ame		55	YE	[뜬운	\[\bar{2}\]	88		lisi I	TCM (TRANSMISSION CONTROL MODULE)		
Connector Color	양		₫	BLACK								
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	11 12 13	14	15	16	17	8	19	20	43	4	
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Terminal No.	Color of Wire	o d			0)	ig	la	ž	Signal Name		
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- IN	5	5	l
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Connector No. F2
Connector Name WIRE TO WIRE

Connector Color WHITE



Signal Name	ı	-	
Color of Wire	۵	Г	
Ferminal No.	6	10	

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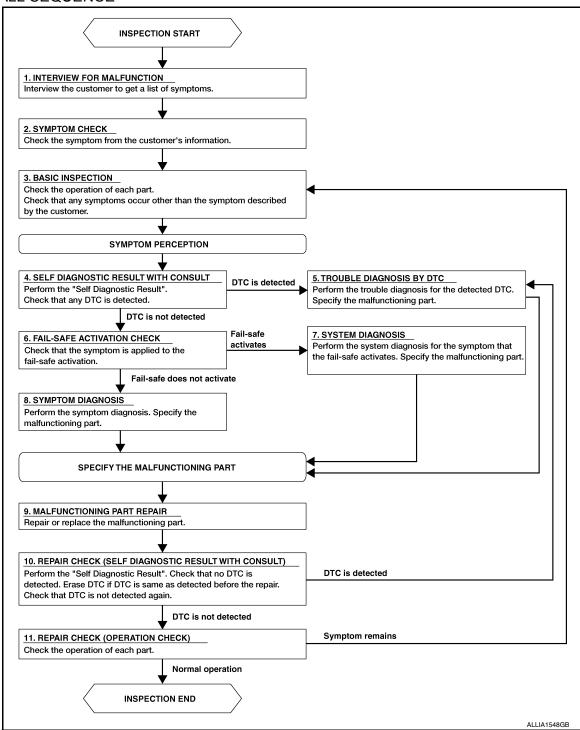
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ы	NO NO	еш	В
Signal Name	B24 REAR COMBINATION LAMP RH WHITE	Signal Name	С
Color of Wire SB		Color of Wire SB BB	D
Terminal No. 71J	Connector No. Connector Name Connector Color	Terminal No.	Е
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84 WIRE TO WIRE Su 4 3 2 13 10 3 8 72 8 22 20 20 20 20 20 20 20 20 20 20 20 20 30 20 20 20 20 20 20 20 20 20 20 20 41 40 30 30 30 30 37 36 50 34 30 30 30 50 480 481 47 480 46 44 481 423 420 70 60 50 50 50 50 50 50 50 50 50 50 50 10 60 50 50 50 50 50 50 50 50 50 50 10 60 50 50 50 50 50 50 50 50 50 10 60 50 50 50 50 50 50 50 50 50 10 60 50 50 50 50 50 50 50 50 50 10 60 50 50 50 50 50 50 50 50 50 10 60 50 50 50 50 50 50 50 50 50 10 60 50 50 50 50 50 50 50 50 10 60 50 50 50 50 50 50 50 10 60 50 50 50 50 50 50 50 10 60 50 50 50 50 50 50 50 10 60 50 50 50 50 50 50 50 10 60 50 50 50 50 50 50 10 60 50 50 50 50 50 10 60 50 50 50 50 50 10 60 50 50 50 50 50 10 60 50 50 50 50 50 10 60 50 50 50 50 10 60 50 50 50 50 10 60 50 50 50 50 10 60 50 50 50 50 10 60 50 50 50 50 10 60 50 50 50 50 10 60 50 50 50 50 10 60 50 50 50 50 10 60 50 50 50 50 10 60 50 50 50 50 10 60 50 50 50 50 10 60 50 50 50 50 10 60 50 50 50 50 10 60 50 50 50 50 10 60 50 50 50 50 10 60 50 50 50 50 10 60 50 50 50 50 10 60 50 50 50 50 10 60 50 50 50 10 60 50 50 50 10 60 50 50 50 10 60 50 50 50 10 60 50 50 50 10 60 50 50 50 10 60 50 50 50 10 60 50 50 50 10 60 50 50 50 10 60 50 50 50 10 60 50 50 50 10 60 50 50 50 10 60 50 50 50 10 60 50 50 50 10 60 50 50 50 10 60 50 50 50 10 60 50 50 50 10 60 50 50 50 10 60 50 50 10 60 50 50 50 10 60 50 50	965 944 954 952 952 974 958 952 954 954 955 955 955 955 955 955 955 955	Signal Name	G
Connector No. B1 Connector Name WIRE TO WIRE Connector Color GRAY Su 41 31 21 10 100 91 81 70 61 210 200 193 183 173 163 183 300 293 283 273 283 283 283 183 410 400 393 383 373 383 383 383 183 183 183 183 183 183 18	823 B23 REAR COMBINATION WHITE		Н
Connector No. Connector Color Lis. 81.	9 5	Color of Wire SB SB BB	I
Connector Nan Connector Cold	Connector No. Connector Col	Terminal No.	J
			K
Connector No. F85 Connector Name SWITCH Connector Color BLACK R 4 3 7 7 H.S. Signal Name 3 Y - 5 L -	B21 JOINT CONNECTOR-B06 WHITE	Signal Name	EXL
Switch Sw	b. B21 ame JOINT C	Color of Wire SB SB SB SB	N
Connector No. Connector Color Connector Color H.S. A.S. 3 3 5	Connector No. Connector Color Management	Terminal No. 1 2 2 3	0
	1	ABLIA8261GB	

BASIC INSPECTION

DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

OVERALL SEQUENCE



DETAILED FLOW

${f 1}$. INTERVIEW FOR MALFUNCTION

Find out what the customer's concerns are.

DIAGNOSIS AND REPAIR WORKFLOW

DIAGNOSIS AND REPAIR WORKFLOW	
< BASIC INSPECTION > [HALOGEN HEADLAN]	IP]
>> GO TO 2.	
2.SYMPTOM CHECK	
Verify the symptom from the customer's information.	
>> GO TO 3.	
3.BASIC INSPECTION	
	<u></u>
Check the operation of each part. Check that any concerns occur other than those mentioned in the custor interview.	ner
>> 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.	
T chom the trouble diagnosis for the detected DTO. Specify the manufictioning 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 pa	rt
T chomit the system diagnosis for the system in which the fair sale delivates. Specify the manufactoring pa	٠
>> 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.	
3 P	
>> 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. <u>Is any DTC detected?</u>	
YES >> GO TO 5.	
NO >> GO TO 11.	
11. REPAIR CHECK (OPERATION CHECK)	
Check the operation of each part.	
Does it operate normally?	

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DIAGNOSIS AND REPAIR WORKFLOW

< BASIC INSPECTION >

[HALOGEN HEADLAMP]

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

POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

DTC/CIRCUIT DIAGNOSIS

POWER SUPPLY AND GROUND CIRCUIT BCM (BODY CONTROL MODULE)

BCM (BODY CONTROL MODULE): Diagnosis Procedure

INFOID:0000000012866179

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

1. CHECK FUSE AND FUSIBLE LINK

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

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

Is the fuse or fusible link blown?

YES >> Replace the blown fuse or fusible link after repairing the affected circuit.

NO >> GO TO 2.

$2.\,$ CHECK POWER SUPPLY CIRCUIT

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

ВСМ		Ground	Voltage (Approx.)	
Connector	Connector Terminal			
M21	131		Pottoni voltago	
IVIZ I	139	_	Battery voltage	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3. CHECK GROUND CIRCUIT

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

BCM		Ground	Continuity	
Connector	Terminal	Ground	Continuity	
M21	134		Yes	
	143	_	165	

Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

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

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

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

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POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

1. CHECK FUSIBLE LINKS

Check that the following fusible links are not blown.

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

Is the fusible link blown?

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

NO >> GO TO 2.

2. CHECK POWER SUPPLY CIRCUIT

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

IPDM E/R		Ground	Voltage (Approx.)	
Connector	Terminal	Ground	(Approx.)	
E16	1			
E10	2	— Battery voltage	Battery voltage	
E17	3			

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connectors.

3. CHECK GROUND CIRCUIT

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

IPDM E/R		Ground	Continuity	
Connector	Terminal	Ground	Continuity	
E18	7		Yes	
E63	41	_	165	

Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors.

HEADLAMP (HI) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

HEADLAMP (HI) CIRCUIT

Description INFOID:0000000012591790

The IPDM E/R (intelligent power distribution module engine room) controls the headlamp high relay based on inputs from the BCM over the CAN communication lines. When the headlamp high relay is energized, power flows through fuses 34 and 35, located in the IPDM E/R. Power then flows to the front combination lamps to the headlamp high beam.

Component Function Check

INFOID:0000000012591791

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1. CHECK HEADLAMP (HI) OPERATION

MWITHOUT CONSULT

- Start IPDM E/R auto active test. Refer to PCS-9, "Diagnosis Description".
- Check that the headlamp switches to the high beam.

NOTE:

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

CONSULT

- Select "EXTERNAL LAMPS" in "Active Test" of "IPDM E/R".
- While operating the test items, check that the headlamp switches to the high beam.

: Headlamp switches to the high beam. ΗΙ

OFF : Headlamp OFF

Is the inspection result normal?

YFS >> Headlamp (HI) circuit is normal.

NO >> Refer to EXL-85, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012591792

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

1. CHECK HEADLAMP (HI) FUSES

Turn the ignition switch OFF.

Check that the following fuses are not blown:

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

Is the fuse blown?

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

NO >> GO TO 2.

2.CHECK HEADLAMP (HI) OUTPUT VOLTAGE

(P)CONSULT ACTIVE TEST

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

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

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HEADLAMP (HI) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

RH	E212	4	Ground	Rattery voltage
LH	E217	-	Ground	Battery voltage

Is the inspection result normal?

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

3.CHECK HEADLAMP (HI) CIRCUIT FOR OPEN

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

IPDM E/R		Front combination la	Continuity		
Conr	nector	Terminal	Connector	Terminal	Continuity
RH	E200	80	E212	4	Yes
LH	E200	81	E217	4	165

Is the inspection result normal?

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

NO >> Repair or replace the harness or connector.

4. CHECK FRONT COMBINATION LAMP (HI) GROUND CIRCUIT

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

	Connector	Terminal	-	Continuity
RH	E212	Q	Ground	Yes
LH	E217	0	Ground	165

Is the inspection result normal?

YES >> Inspect the headlamp bulb.

NO >> Repair or replace the harness or connector.

HEADLAMP (LO) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

HEADLAMP (LO) CIRCUIT

HEADLAMP

HEADLAMP: Description

INFOID:0000000012591793

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

HEADLAMP: Component Function Check

INFOID:0000000012591794

1. CHECK HEADLAMP (LO) OPERATION

NWITHOUT CONSULT

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

Check that the headlamp is turned ON.

NOTE:

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

(E)CONSULT

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

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LO : Headlamp ON OFF : Headlamp OFF

Is the inspection result normal?

YES >> Headlamp (LO) is normal.

NO >> Refer to EXL-87, "HEADLAMP : Diagnosis Procedure".

HEADLAMP: Diagnosis Procedure

INFOID:0000000012591795

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

1. CHECK HEADLAMP (LO) FUSES

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

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Unit	Location	Fuse No.	Capacity
Headlamp LO (RH)	IPDM E/R	36	15A
Headlamp LO (LH)	IFDIVI E/R	37	15A

Is the fuse blown?

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

NO >> GO TO 2.

2.CHECK HEADLAMP (LO) OUTPUT VOLTAGE

(P)CONSULT

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

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

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HEADLAMP (LO) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

RH	E212	1	Ground	Battery voltage
LH	E217		Glound	battery voltage

Is the inspection result normal?

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

3.check headlamp (LO) circuit for open

- 1. Turn the ignition switch OFF.
- 2. Disconnect IPDM E/R connector E200.
- 3. Check continuity between the IPDM E/R harness connector E200 and the front combination lamp harness connector E217 or E212.

IPDM E/R		Front combina	Continuity		
Conr	nector	Terminal	Connector	Terminal	Continuity
RH	E200	75	E212	1	Yes
LH	L200	76	E217	'	165

Is the inspection result normal?

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

NO >> Repair or replace the harness or connector.

4. CHECK FRONT COMBINATION LAMP (LO) GROUND CIRCUIT

Check continuity between the front combination lamp harness connector E217 or E212 terminal 5 and ground.

Conr	nector	Terminal	-	Continuity
RH	E212	Ę.	Ground	Yes
LH	E217	3	Ground	165

Is the inspection result normal?

YES >> Inspect the headlamp bulb.

NO >> Repair or replace the harness or connector.

DAYTIME RUNNING LIGHT RELAY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

INFOID:0000000012591802

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DAYTIME RUNNING LIGHT RELAY CIRCUIT

Description INFOID:0000000012591801

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

Diagnosis Procedure

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

1. CHECK DAYTIME RUNNING LIGHT RELAY VOLTAGE SUPPLY

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

Daytime run	ning light relay	()	Voltage	
Connector	Terminal	(-)	Voltage	
E228	2	Ground	Pattory voltage	
£220	5	Giouna	Battery voltage	

Is the inspection result normal?

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

$oldsymbol{2}.$ CHECK DAYTIME RUNNING LIGHT RELAY CIRCUIT

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

Daytime running light relay		IPDM E/R		Continuity
Connector	Terminal	Connector	Terminal	Continuity
E228	2	E18	14	Yes
	5	L10	17	

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

Connector	Terminal	-	Continuity
E18	14	Ground	No

Is the inspection result normal?

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

NO >> Repair or replace the harness or connector.

3.check daytime running light relay control circuit

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

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

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DAYTIME RUNNING LIGHT RELAY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

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

Connector	Terminal	-	Continuity
E228	1	Ground	No

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace the harness or connector.

4. CHECK DAYTIME RUNNING LIGHT RELAY

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

Is the inspection result normal?

YES >> GO TO 5.

NO >> Replace relay.

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

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

Daytime runni	ng light relay	Front fog lamp			Continuity	
Connector	Terminal		Connector	Terminal	Continuity	
E228	2	LH	E307	2	Yes	
E220	3	RH	E354	3	165	

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

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

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace the harness or connector.

6. CHECK DAYTIME RUNNING LIGHT GROUND CIRCUIT FOR OPEN

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

Connector	Terminal	-	Continuity
LH E307	4	Ground	Yes
RH E354		Cidulia	163

Is the inspection result normal?

YES >> Inspect daytime running light bulb.

NO >> Repair or replace the harness or connector.

Component Inspection

INFOID:0000000012591803

1. CHECK DAYTIME RUNNING LIGHT RELAY

- 1. Turn ignition switch OFF.
- Remove daytime running light relay.
- 3. Check the continuity between daytime running light relay terminals 3 and 5 when voltage is supplied between terminals 1 and 2.

DAYTIME RUNNING LIGHT RELAY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

Terminals	Condition	Continuity
3 and 5	12V direct current supply between terminals 1 and 2	Yes
3 and 5	No current supply	No

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Is the inspection result normal?

YES	>> Inspection End.
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NO >> Replace daytime running light relay.

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FRONT FOG LAMP CIRCUIT

Description INFOID:000000012591804

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

Component Function Check

INFOID:0000000012591805

1. CHECK FRONT FOG LAMP OPERATION

NWITHOUT CONSULT

- Activate IPDM E/R auto active test. Refer to PCS-10, "CONSULT Function (IPDM E/R)".
- Check that the front fog lamp is turned ON.

(P)WITH CONSULT

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

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

Is the inspection result normal?

YES >> Front fog lamp circuit is normal.

NO >> Refer to EXL-92, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012591806

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

1. CHECK FRONT FOG LAMP FUSE

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

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

Is the fuse blown?

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

NO >> GO TO 2.

2.CHECK FRONT FOG LAMP OUTPUT VOLTAGE

CONSULT

- 1. Disconnect the front fog lamp harness connector E308 or E353 in question.
- 2. Turn the ignition switch ON.
- Turn the front fog lamps ON.
- Check the voltage between the front fog lamp harness connector E308 or E353 terminal 1 and ground.

(+)			(-)	Voltage	
Connector Terminal		(-)			
LH	E308	1	Ground	Ratteny voltage	
RH	E353	I	Ground 	Battery voltage	

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 3.

FRONT FOG LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

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3.CHECK FRONT FOG LAMP OPEN CIRCUIT

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

	IPDM E/R		Front fog lamp		Continuity
Coni	nector	Terminal	Connector	Terminal	Continuity
RH	E200	78	E353	1	Yes
LH	L200	79	E308	ı	163

Is the inspection result normal?

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

NO >> Repair or replace the harness or connector.

4. CHECK FRONT FOG LAMP GROUND CIRCUIT

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

Conr	nector	Terminal	-	Continuity
RH	E353	2	Ground	Yes
LH	E308	2	Ground	165

Is the inspection result normal?

YES >> Inspect the fog lamp bulb.

NO >> Repair or replace the harness or connector.

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PARKING LAMP CIRCUIT

Description INFOID:000000012591807

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

Component Function Check

INFOID:0000000012591808

1. CHECK PARKING LAMP OPERATION

NWITHOUT CONSULT

- 1. Activate IPDM E/R auto active test. Refer to PCS-9, "Diagnosis Description".
- 2. Check that the parking lamp is turned ON.

(P)WITH CONSULT

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

TAIL : Parking lamp ON
OFF : Parking lamp OFF

Is the inspection result normal?

YES >> Parking lamp circuit is normal.

NO >> Refer to EXL-94, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012591809

Regarding Wiring Diagram information, refer to EXL-63, "Wiring Diagram".

1. CHECK PARKING LAMP FUSES

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

Unit	Location	Fuse No.	Capacity
Darking lamps	IPDM E/R	51	10A
Parking lamps	IPDIVI E/R	52	10A

Is the fuse blown?

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

NO >> GO TO 2.

2.CHECK TAIL LAMP RELAY OUTPUT (VOLTAGE)

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

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

PARKING LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

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

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

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

(+)		(-)	Voltage (Approx.)	
	Connector	Terminal	(-)	(Approx.)
LH	B30	1	Ground	Pottony voltago
RH	B45	1	Giodila	Battery voltage

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

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

Are the inspection results normal?

YES >> GO TO 4.

NO >> GO TO 3.

3.CHECK PARKING LAMP CIRCUIT (OPEN)

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

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

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

	IPE	DM E/R	Front combination	lamp (side marker)	Continuity	
Со	nnector	Terminal	Connector Terminal		Continuity	
LH	E201	90	E217	2	Voc	
RH	E201	90	E212	2	Yes	

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

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

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PARKING LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

LH	E10	10	B30	1	Voc
RH	E10	9	B45	1	165

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

	IPDM E/R		License plate lamp Continuity		Continuity	
	Connector	Terminal	Connector Terminal		Continuity	
LH	E18	0	B34	1	Yes	
RH	E10	9	B32	'	165	

Are the inspection results normal?

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

NO >> Repair or replace the harness or connector.

4. CHECK PARKING LAMP GROUND CIRCUITS

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

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

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

(+)		(-)	Continuity		
	Connector	Terminal	(-)	Continuity	
LH	E217	7	Ground	Yes	
RH	E212	,	Giodila		

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

(+)			()	Continuity	
	Connector	Terminal	(-)	Continuity	
LH	B30	1	Ground	Yes	
RH	B45	4	Giouria		

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

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

Are the inspection results normal?

YES >> Inspect the parking lamp bulb.

NO >> Repair or replace the harness or connector.

TURN SIGNAL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

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TURN SIGNAL LAMP CIRCUIT

Description INFOID:0000000012591810

The BCM monitors inputs from the combination switch to determine when to activate the turn signals. The BCM outputs voltage direction to the left and right turn signals during turn signal operation or both during hazard warning operation. The BCM sends a turn signal indicator request to the combination meter via the CAN communication lines.

The BCM performs the fast flasher operation (fail-safe) if any bulb or harness of the turn signal lamp circuit is

NOTE:

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

Component Function Check

1.CHECK TURN SIGNAL LAMP

(P)CONSULT

1. Select "FLASHER" in "Active Test" of "BCM (FLASHER)".

2. With operating the test items, check that the turn signal lamp blinks.

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

Does the turn signal lamp blink?

YES >> Turn signal lamp circuit is normal.

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

Diagnosis Procedure

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

1. CHECK TURN SIGNAL LAMP BULB

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

Is the bulb OK?

YES >> GO TO 2.

NO >> Replace the bulb.

2.CHECK TURN SIGNAL LAMP OUTPUT VOLTAGE

Turn the ignition switch OFF.

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

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

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< DTC/CIRCUIT DIAGNOSIS >

RH	E212			
LH	E217	3	Ground	(V) 15 10 5 0 1 s

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

	(+)		(_)	Voltage (Approx.)	
	Connector	Terminal	(-)	(Approx.)	
RH	B45				
LH	B30	3	Ground	(V) 15 10 5 0 1 s	

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

	(+)		()	Voltage	
	Connector	Terminal	(-)	Voltage (Approx.)	
RH	D107				
LH	D4	6	Ground	(V) 15 10 5 0 1 s	

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 3.

3.check turn signal lamp circuit for open

- 1. Turn the ignition switch OFF.
- 2. Disconnect BCM harness connector M19 or M20 in question.
- Check continuity between the BCM harness connector M20 and the front combination lamp harness connector.

	BCM Front combination lamp		amp	Continuity	
Cor	nnector	Terminal	Connector	Terminal	Continuity
LH	M20	117	E217	3	Yes
RH	IVIZU	105	E212	- 3	165

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

BCM		Rear combination lamp		Continuity
Connector	Terminal	Connector	Terminal	Continuity

TURN SIGNAL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

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LH	M19	103	B30	3	Voc
RH	IVITS	92	B45	3	Yes

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

BCM		Door mirror		Continuity	
Cor	nnector	Terminal	Connector Terminal		Continuity
LH	M20	117	D4	6	Yes
RH	IVIZU	105	D107	0	165

Is the inspection results normal?

YES >> GO TO 4.

NO >> Repair or replace the harness or connectors.

4. CHECK TURN SIGNAL LAMP SHORT CIRCUIT

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

	BCM		Continuity	
Connector	Terminal			
M10	92	Ground		
M19	103		No	
M20	105		NO	
	117			

Are the inspection results normal?

YES >> Replace BCM. Refer to BCS-81, "Removal and Installation".

NO >> Repair or replace the harness or connectors.

5. CHECK TURN SIGNAL LAMP GROUND CIRCUIT

1. Turn the ignition switch OFF.

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

Front combination lamp			(_)	Continuity
Connector		Terminal	(-)	Continuity
LH	E217	7	Ground	Yes
RH	E212	1	Ground	163

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

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

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

Door mirror			()	Continuity
Connector		Terminal	(-)	Continuity
LH	D4	E	Ground	Yes
RH	D107	3	Giouria	165

Are the inspection results normal?

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TURN SIGNAL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

YES >> Replace the malfunctioning lamp.

NO >> Repair or replace the harness or connectors.

OPTICAL SENSOR

Description INFOID:0000000012591813

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

Component Function Check

INFOID:0000000012591814

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1. CHECK OPTICAL SENSOR SIGNAL BY CONSULT

(P)CONSULT

- Turn the ignition switch ON.
- Select "OPTI SEN (DTCT)" in "Data Monitor" of "BCM (HEAD LAMP)".
- Turn the lighting switch to AUTO.

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

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

Is the inspection result normal?

YES >> Optical sensor is normal.

NO >> Refer to EXL-101, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012591815

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

1. CHECK OPTICAL SENSOR POWER SUPPLY INPUT

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

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> GO TO 3.

2.CHECK OPTICAL SENSOR GROUND CIRCUIT

- Turn the ignition switch OFF.
- Check continuity between the optical sensor harness connector M66 and ground.

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

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 5.

3.CHECK OPTICAL SENSOR POWER SUPPLY FOR OPEN CIRCUIT

- Turn the ignition switch OFF.
- Disconnect the BCM harness connector M17.

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OPTICAL SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

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

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

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

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

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-81, "Removal and Installation".

NO >> Repair or replace the harness or connectors.

4. CHECK OPTICAL SENSOR SIGNAL OPEN CIRCUIT

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

Optica	Optical sensor		ВСМ	
Connector	Terminal	Connector	Terminal	Continuity
M66	2	M17	4	Yes

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

Connector	Terminal	(-)	Continuity
M66	2	Ground	No

Is the inspection result normal?

YES >> Replace the optical sensor. Refer to EXL-131, "Removal and Installation".

NO >> Repair or replace harness or connectors.

${f 5}$.CHECK OPTICAL SENSOR GROUND FOR OPEN CIRCUIT

- Disconnect the BCM harness connector M17.
- Check continuity between optical sensor harness connector M66 terminal 3 and BCM harness connector M17 terminal 17.

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

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-81, "Removal and Installation".

NO >> Repair or replace harness or connector.

HAZARD SWITCH

Component Function Check

INFOID:0000000012591816

1. CHECK HAZARD SWITCH SIGNAL BY CONSULT

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(E)CONSULT DATA MONITOR

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

Monitor item	Con	Monitor status	
HAZARD SW	HAZARD SW Hazard switch	ON	On
TIAZAND SW		OFF	Off

Is the inspection result normal?

YES >> Hazard switch circuit is normal.

NO >> Refer to EXL-103, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012591817

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

1. CHECK HAZARD SWITCH SIGNAL INPUT

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

	(+) Hazard switch		Voltage (Approx.)
Connector	Terminal		
M54	2	Ground	(V) 15 10 5 010ms JPMIA0154GB

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 2.

2.check hazard switch signal open circuit

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

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

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness or connector.

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HAZARD SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[HALOGEN HEADLAMP]

3. CHECK HAZARD SWITCH SIGNAL SHORT CIRCUIT

Check continuity between hazard switch harness connector and ground.

Hazard switch			Continuity
Connector	Terminal	Ground	Continuity
M54	2		No

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-81, "Removal and Installation".

NO >> Repair or replace harness or connector.

4. CHECK HAZARD SWITCH GROUND OPEN CIRCUIT

Check continuity between hazard switch harness connector and ground.

Hazard switch			Continuity
Connector	Terminal	Ground	Continuity
M54	1		Yes

Is the inspection result normal?

YES >> Replace hazard switch. Refer to EXL-130, "Removal and Installation".

NO >> Repair or replace harness or connector.

EXTERIOR LIGHTING SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[HALOGEN HEADLAMP]

SYMPTOM DIAGNOSIS

EXTERIOR LIGHTING SYSTEM SYMPTOMS

Symptom Table

CAUTION:

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

Symptom		Possible cause	Inspection item
Headlamp does not switch to the high beam.	One side	Bulb Fuse Harness between IPDM E/R and the front combination lamp Harness between the front combination lamp and ground IPDM E/R	Headlamp (HI) circuit Refer to <u>EXL-85</u> .
	Both sides	_	Symptom diagnosis "BOTH SIDE HEADLAMPS DO NOT SWITCH TO HIGH BEAM" Refer to EXL-108.
High beam indicator lamp is not turned ON. (Headlamp switches to the high beam.)		Combination meter BCM	Combination meter. "Data Monitor" "HI-BEAM IND" BCM (HEAD LAMP) "Active Test" "HEADLAMP"
Headlamp does not switch to the low beam.		Combination switch (lighting and turn signal switch) Harness between the combination switch (lighting and turn signal switch) and BCM BCM	Combination switch (lighting and turn signal switch) Refer to BCS-79.
		High beam request signal BCM IPDM E/R	IPDM E/R "Data Monitor" "HL HI REQ"
Headlamp does not turn ON.	One side	Fuse Bulb Harness between IPDM E/R and the front combination lamp Harness between the front combination lamp and ground IPDM E/R	Headlamp (LO) circuit Halogen, refer to <u>EXL-87</u> .
	Both sides	_	Symptom diagnosis "BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON" Refer to EXL-110.
Headlamp does not turn OFF.	When the ignition switch is turned ON	BCM Combination switch (lighting and turn signal switch)	Combination switch (lighting and turn signal switch) Refer to BCS-9.
	The ignition switch is turned OFF (After activating the battery saver).	IPDM E/R	_

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EXTERIOR LIGHTING SYSTEM SYMPTOMS

[HALOGEN HEADLAMP]

Symptom		Possible cause	Inspection item
Headlamp is not turned ON/OFF with the lighting switch AUTO.		Combination switch (lighting and turn signal switch) Harness between the combination switch (lighting and turn signal switch) and BCM BCM IPDM E/R	Combination switch (lighting and turn signal switch) Refer to BCS-79.
		Optical sensor Harness between the optical sensor and BCM BCM	Optical sensor Refer to <u>EXL-101</u> .
Daytime running light system does not activate.		_	Symptom diagnosis "DAYTIME RUNNING LIGHT SYS TEM INOPERATIVE" Refer to EXL-109.
Front fog lamp is not turned ON.	One side	Front fog lamp bulb Harness between IPDM E/R and the front fog lamp Harness between the front fog lamp and ground IPDM E/R	Front fog lamp circuit Refer to EXL-92.
	Both side	_	Symptom diagnosis "BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON" Refer to EXL-112.
Parking lamp is not turned ON.	One side	Fuse Parking lamp bulb Harness between IPDM E/R and the front/rear combination lamp Harness between the front/rear combination lamp and ground IPDM E/R	Parking lamp circuit Refer to <u>EXL-94</u> .
	Both sides	_	Symptom diagnosis "PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON" Refer to EXL-111.
Turn signal lamp does not blink.	Indicator lamp is normal. (The applicable side performs the high flasher activation).	Harness between BCM and each turn signal lamp Turn signal lamp bulb Door mirror (if equipped with turn signals in the door mirrors)	Turn signal lamp circuit Refer to EXL-97.
Turn signal indicator lamp does not blink.	One side Both sides (Always)	Combination meter Turn signal indicator lamp signal Combination meter BCM	Combination meter. "Data Monitor" "TURN IND" BCM (FLASHER) "Active Test" "FLASHER"
	Both sides (Does blink when activating the hazard warning lamp with the ignition switch OFF)	The combination meter power supply and the ground circuit Combination meter	Combination meter Power supply and the ground circu Refer to MWI-59.
 Hazard warning lamp does not activate. Hazard warning lamp continues activating. (Turn signal is normal) 		Hazard switch Harness between the hazard switch and BCM BCM	Hazard switch Refer to <u>EXL-103</u> .

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[HALOGEN HEADLAMP]

NORMAL OPERATING CONDITION

Description INFOID:0000000012591819

AUTO LIGHT SYSTEM

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

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BOTH SIDE HEADLAMPS DO NOT SWITCH TO HIGH BEAM

< SYMPTOM DIAGNOSIS >

[HALOGEN HEADLAMP]

BOTH SIDE HEADLAMPS DO NOT SWITCH TO HIGH BEAM

Description INFOID:000000012591820

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

Diagnosis Procedure

INFOID:0000000012591821

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

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

Is the inspection results normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

2.CHECK HEADLAMP (HI) REQUEST SIGNAL INPUT

©CONSULT DATA MONITOR

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

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

Is the inspection results normal?

YES >> GO TO 3.

NO >> Replace BCM. Refer to BCS-81, "Removal and Installation".

3. HEADLAMP (HI) CIRCUIT INSPECTION

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

Is the inspection results normal?

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

NO >> Repair or replace the malfunctioning part.

DAYTIME LIGHT SYSTEM INOPERATIVE

< SYMPTOM DIAGNOSIS >

[HALOGEN HEADLAMP]

DAYTIME LIGHT SYSTEM INOPERATIVE

Description INFOID:0000000012591822

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

Diagnosis Procedure

INFOID:0000000012591823

1.check daytime running light operation

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

Is the inspection results normal?

>> Replace BCM. Refer to BCS-81, "Removal and Installation". YES

NO

2.CHECK DAYTIME RUNNING LIGHT RELAY FUSE

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

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

Is the fuse blown?

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

NO >> GO TO 3.

3.CHECK DAYTIME RUNNING LIGHT BULBS

Check the daytime running light bulbs are not open.

Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace the bulbs.

$oldsymbol{4}.$ PERFORM DAYTIME RUNNING LIGHT CIRCUIT INSPECTION

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

Is the inspection results normal?

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

>> Repair or replace the malfunctioning part. NO

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BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

[HALOGEN HEADLAMP]

BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

Description INFOID:000000012591824

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

Diagnosis Procedure

INFOID:0000000012591825

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

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

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

2.CHECK HEADLAMP (LO) REQUEST SIGNAL INPUT

(P)CONSULT DATA MONITOR

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

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

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace BCM. Refer to BCS-81, "Removal and Installation".

3.HEADLAMP (LO) CIRCUIT INSPECTION

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

Is the inspection result normal?

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

NO >> Repair or replace the malfunctioning part.

PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

[HALOGEN HEADLAMP]

PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON

Description INFOID-000000012591826

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

Diagnosis Procedure

INFOID:0000000012591827

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

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

Is the inspection results normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

2.CHECK TAIL LAMP RELAY REQUEST SIGNAL INPUT

(P)CONSULT DATA MONITOR

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

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

Is the inspection results normal?

YES >> GO TO 3.

NO >> Replace BCM. Refer to <u>BCS-81, "Removal and Installation"</u>.

3.PARK LAMP CIRCUIT INSPECTION

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

Is the inspection results normal?

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

NO >> Repair or replace the malfunctioning part.

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BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

[HALOGEN HEADLAMP]

BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

Description INFOID:000000012591828

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

Diagnosis Procedure

INFOID:0000000012591829

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

Check the combination switch (lighting and turn signal switch). Refer to <u>BCS-79</u>, "Symptom Table". Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

2.CHECK FRONT FOG LAMP REQUEST SIGNAL INPUT

(P)CONSULT DATA MONITOR

- 1. Select "FR FOG REQ" in "Data Monitor" of "IPDM E/R".
- 2. While operating the front fog lamp switch, check the monitor status.

Monitor item	Condition		Monitor status
FR FOG REQ	Front fog lamp switch	ON	ON
FR FOG REQ	(Lighting switch 1st)	OFF	OFF

Is the inspection result normal?

YES >> GO TO 3.

NO >> Replace BCM. Refer to BCS-81, "Removal and Installation".

3. FRONT FOG LAMP CIRCUIT INSPECTION

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

Is the inspection result normal?

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

NO >> Repair or replace the malfunctioning part.

INFOID:0000000012591830

PERIODIC MAINTENANCE

HEADLAMP

Aiming Adjustment

PREPARATION BEFORE ADJUSTING

Before performing aiming adjustment, check the following:

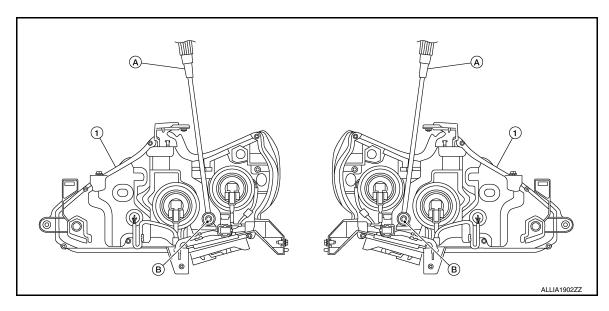
- Ensure all tires are inflated to correct pressure.
- Place vehicle and screen on level surface.
- Ensure there is no load in vehicle other than the driver (or equivalent weight placed in driver's position).
- Coolant and engine oil filled to correct level, and fuel tank full.
- Remove cargo and/or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

CAUTION:

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

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

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



Front combination lamp

Suitable tool (for aiming adjustment) B. Adjusting screw

Aiming Adjustment procedure

1. Position the screen.

NOTE:

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

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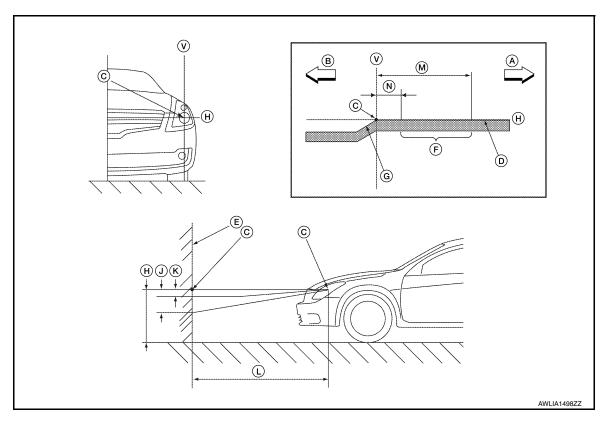
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CAUTION:

Do not cover the lens surface with tape, etc. The lens is made of resin. NOTE:

- Aim each headlamp individually and ensure other headlamp beam pattern is blocked from screen.
- For horizontal aiming, adjust headlamp until beam pattern is at horizontal center point.



- A. Right
- B. Left
- D. Cutoff line
- G. Step K. -13.3 mm (-0.52 in)
- N. 133 mm (5.24 in)
- E. Screen
- H. Horizontal center line of head lamp
- 10 m (33 ft)
- V. Vertical center line of headlamp
- Center of headlamp bulb (H-V point)
- Aim evaluation segment
- 53.2 mm (2.09 in)
- M. 399 mm (15.71 in)
- · Basic illuminating area for adjustment should be within the range shown on the aiming chart. Adjust headlamps accordingly.

FRONT FOG LAMP

Aiming Adjustment

INFOID:0000000012591831

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PREPARATION BEFORE ADJUSTING

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

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

CAUTION:

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

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

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.

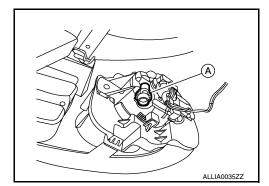
NOTE:

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).



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FRONT FOG LAMP

< PERIODIC MAINTENANCE >

[HALOGEN HEADLAMP]

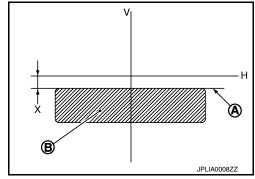
5. Adjust the cutoff line height (A) with the aiming adjustment screw so that the distance (X) between the horizontal center line of front fog lamp (H) and (A) becomes 100 mm (4 in).

A : Cutoff line

B : High illuminance area

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

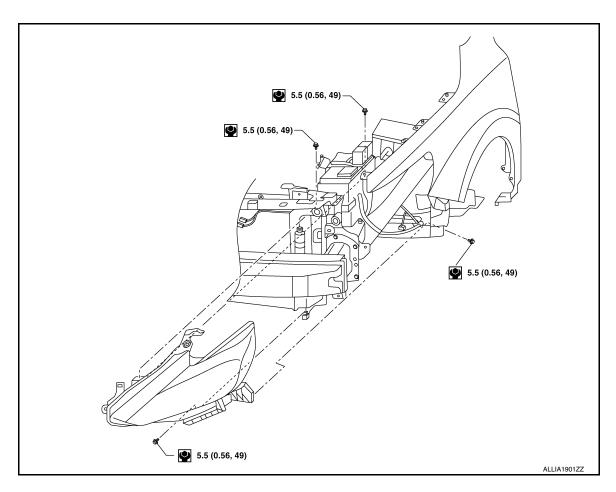
X : Cutoff line height



REMOVAL AND INSTALLATION

FRONT COMBINATION LAMP

Exploded View INFOID:0000000012591832



Front combination lamp

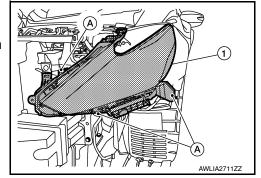
Removal and Installation

INFOID:0000000012591835

FRONT COMBINATION LAMP

Removal

- 1. Remove the front bumper fascia. Refer to EXT-25, "Removal and Installation".
- Ensure the lighting switch is OFF.
- 3. Remove the front combination lamp bolts (A).
- 4. Pull the front combination lamp (1) forward.
- Disconnect the harness connectors from the front combination lamp and remove.



Installation

Installation is in the reverse order of removal.

EXL-117 Revision: November 2015 2016 Altima Sedan Е

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FRONT COMBINATION LAMP

< REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]

NOTE:

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

Bulb Replacement

INFOID:0000000012591836

WARNING:

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

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

HEADLAMP HIGH BEAM

Removal

- Position the front fender protector aside. Refer to <u>EXT-36</u>, "<u>FENDER PROTECTOR</u>: <u>Removal and Installation</u>".
- Rotate the headlamp high beam socket counterclockwise and remove from front combination lamp.
- 3. Remove the headlamp high beam bulb from harness connector.

Installation

Installation is in the reverse order of removal.

CAUTION:

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

HEADLAMP LOW BEAM

Removal

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

Installation

Installation is in the reverse order of removal.

CAUTION:

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

SIDE MARKER LAMP

Removal

- Position the front fender protector aside. Refer to <u>EXT-36</u>, "<u>FENDER PROTECTOR</u>: <u>Removal and Installation</u>".
- 2. Rotate the side marker lamp bulb socket counterclockwise and remove.
- 3. Remove the side marker bulb from the front combination lamp.

Installation

Installation is in the reverse order of removal.

CAUTION:

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

FRONT FOG LAMP

Removal and Installation

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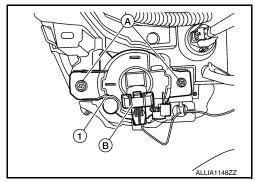
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REMOVAL

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



INSTALLATION

Installation is in the reverse order of removal.

NOTE:

After installing, perform fog lamp aiming adjustment. Refer to EXL-115, "Aiming Adjustment".

Bulb Replacement

INFOID:0000000012591840

WARNING:

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

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

FRONT FOG LAMP BULB

Removal

- Remove the front under cover. Refer to <u>EXT-38</u>, "FRONT UNDER COVER: Removal and Installation"
- Remove the front fender protector side cover. <u>EXT-36</u>, "<u>FENDER PROTECTOR</u>: <u>Exploded View</u>".
- 3. Position the front fender protector aside. Refer to EXT-36, "FENDER PROTECTOR: Removal and Installation".
- 4. Disconnect the harness connector from the front fog lamp bulb.
- 5. Rotate the front fog lamp bulb socket counterclockwise and remove.

Installation

Installation is in the reverse order of removal.

CAUTION:

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

DAYTIME LIGHT BULB (CANADA ONLY)

Removal

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

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FRONT FOG LAMP

< REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]

5. Release the pawls and remove the daytime light lamp bulb.

Installation

Installation is in the reverse order of removal.

CAUTION:

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

DOOR MIRROR TURN SIGNAL LAMP

< REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]

DOOR MIRROR TURN SIGNAL LAMP

Removal and Installation

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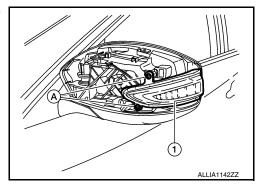
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REMOVAL

- 1. Remove the door mirror rear finisher. Refer to MIR-20, "Removal and Installation".
- 2. Remove the screws (A) and door mirror side turn signal lamp (1).



3. Disconnect the harness connector from the door mirror side turn signal lamp and remove.

INSTALLATION

Installation is in the reverse order of removal.

Bulb Replacement

INFOID:0000000012591842

DOOR MIRROR SIDE TURN SIGNAL LAMP

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

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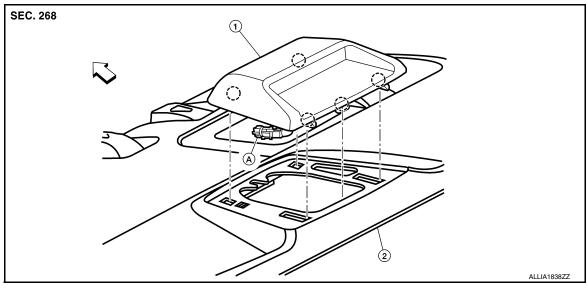
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HIGH-MOUNTED STOP LAMP

Exploded View

PARCEL SHELF MOUNTED



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

(_) Pawl

← Front

Removal and Installation

INFOID:0000000012591843

REMOVAL

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

INSTALLATION

Installation is in the reverse order of removal.

Bulb Replacement

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HIGH-MOUNTED STOP LAMP BULB

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

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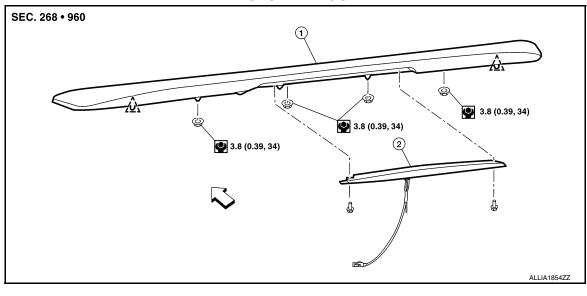
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Exploded View

REAR SPOILER MOUNTED



1. Rear air spoiler

2. High-mounted stop lamp

,^ Clip

← Front

Removal and Installation

REMOVAL

Remove rear spoiler. Refer to <u>EXT-47</u>, "Removal and Installation".

2. Remove nuts and remove high-mounted stop lamp.

INSTALLATION

Installation is in the reverse order of removal.

Bulb Replacement

INFOID:0000000012851423

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HIGH-MOUNTED STOP LAMP BULB

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

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LICENSE PLATE LAMP

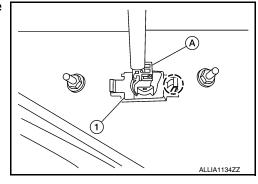
Removal and Installation

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REMOVAL

- 1. Remove the license lamp finisher. Refer to EXT-46, "Removal and Installation".
- 2. Disconnect the harness connector (A) from the license plate lamp (1).
- 3. Release pawl and remove.

(): Pawl



INSTALLATION

Installation is in the reverse order of removal.

Bulb Replacement

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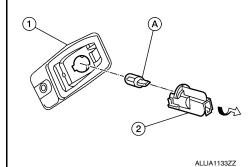
WARNING:

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

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

REMOVAL

- 1. Position trunk lid finisher (if equipped) aside. Refer to INT-33, "Exploded View".
- 2. Rotate license plate lamp bulb socket (2) counterclockwise and remove from license plate lamp (1).
- 3. Remove license plate lamp bulb (A) from license plate lamp bulb socket (2).

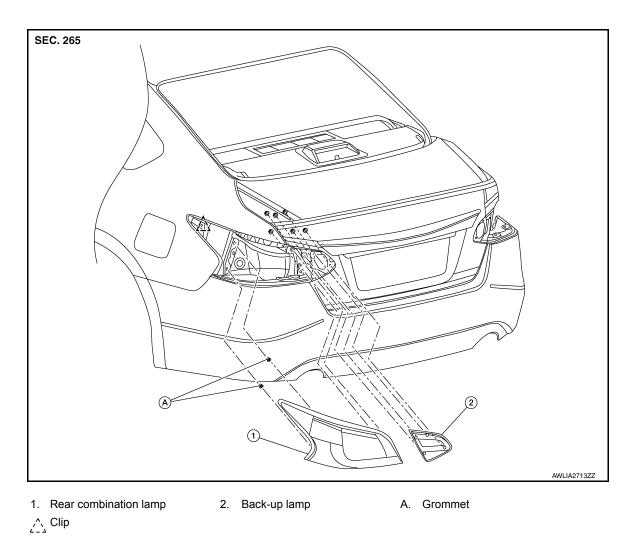


INSTALLATION

Installation is in the reverse order of removal.

REAR COMBINATION LAMP

Exploded View

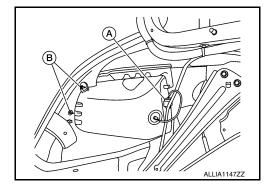


Removal and Installation

INFOID:0000000012591848

Removal

- Remove trunk rear finisher. Refer to <u>INT-34</u>, "TRUNK REAR FINISHER: Removal and Installation".
- 2. Partially remove trunk side finisher. Refer to INT-34, "TRUNK SIDE FINISHER: Removal and Installation".
- 3. Remove the rear combination lamp nuts (B).
- Disconnect the harness connector (A).



5. Pull the rear combination lamp rearward and remove.

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REAR COMBINATION LAMP

< REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]

Installation

Installation is the reverse order of removal.

Bulb Replacement

INFOID:0000000012591849

WARNING:

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

CAUTION:

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

REAR TURN SIGNAL LAMP BULB

Removal

- Remove the rear combination lamp. Refer to <u>EXL-125, "Removal and Installation"</u>.
- Rotate the rear turn signal lamp bulb socket counterclockwise and remove.
- 3. Remove the rear turn signal lamp bulb from the bulb socket.

Installation

Installation is in the reverse order of removal.

CAUTION:

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

STOP/TAIL LAMP BULB

Removal

- Remove the rear combination lamp. Refer to <u>EXL-125, "Removal and Installation"</u>.
- 2. Rotate the stop/tail lamp bulb socket counterclockwise and remove.
- 3. Remove the stop/tail lamp bulb from the bulb socket.

Installation

Installation is in the reverse order of removal.

CAUTION:

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

SIDE MARKER LAMP BULB

Removal

- Remove the rear combination lamp. Refer to <u>EXL-125, "Removal and Installation"</u>.
- 2. Rotate the side marker lamp bulb socket counterclockwise and remove.
- 3. Remove the side marker lamp bulb from the bulb socket.

Installation

Installation is in the reverse order of removal.

CAUTION:

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

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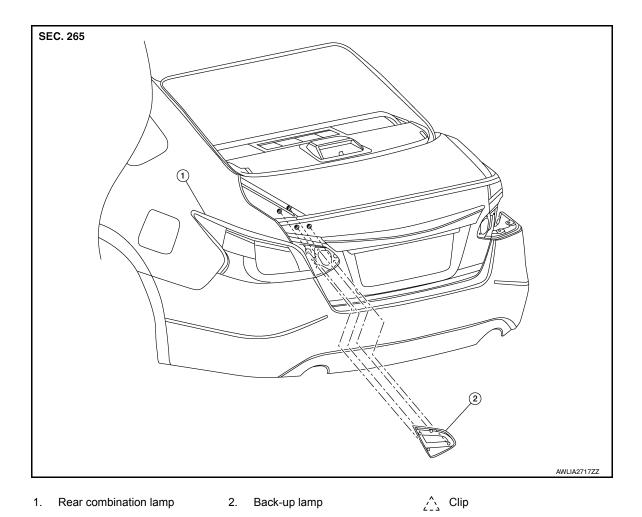
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BACK-UP LAMP

Exploded View INFOID:0000000012855651



Removal and Installation

REMOVAL

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

- Remove back-up lamp assembly nuts.
- Disconnect the harness connector from the back-up lamp assembly 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.
- After installing bulb, install bulb socket securely for watertightness.

REMOVAL

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

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BACK-UP LAMP

< REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]

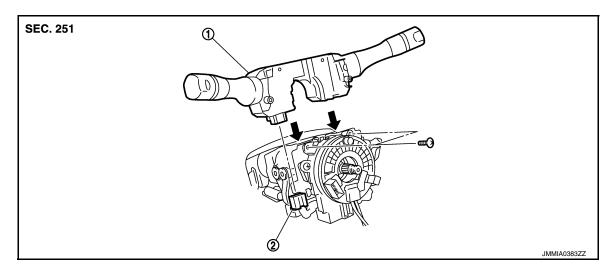
- 2. Rotate back-up lamp bulb socket counterclockwise and remove.
- 3. Remove back-up lamp bulb from bulb socket.

INSTALLATION

Installation is in the reverse order of removal.

COMBINATION SWITCH

Exploded View



Combination switch

2. Combination switch harness connector

NOTE

Shown with the steering wheel removed for clarity only.

Removal and Installation

REMOVAL

CAUTION:

- Before servicing, turn the ignition switch OFF, disconnect both battery terminals and wait at least three minutes.
- Do not use air tools or electric tools for servicing.
- 1. Disconnect both the negative and positive battery terminals, then wait at least three minutes. Refer to <u>PG-</u>78, "Removal and Installation".
- 2. Remove the steering column covers. Refer to IP-17, "Removal and Installation".
- 3. Rotate steering wheel clockwise to access first combination switch bolt and remove.
- 4. Rotate steering wheel counter-clockwise to access second combination switch bolt and remove.
- 5. Disconnect the harness connector from the combination switch and remove.

INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

- After the work is completed, make sure no system malfunction is detected by air bag warning lamp.
- In case a malfunction is detected by the air bag warning lamp, reset with the self-diagnosis function and delete the memory with CONSULT.
- If a malfunction is still detected after the above operation, perform self-diagnosis to repair malfunctions. Refer to SRC-16, "SRS Final Check".

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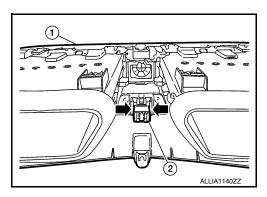
HAZARD SWITCH

Removal and Installation

INFOID:0000000012591852

REMOVAL

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



INSTALLATION

Installation is in the reverse order of removal.

OPTICAL SENSOR

< REMOVAL AND INSTALLATION >

[HALOGEN HEADLAMP]

OPTICAL SENSOR

Removal and Installation

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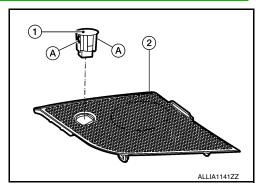
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REMOVAL

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



INSTALLATION

Installation is in the reverse order of removal.

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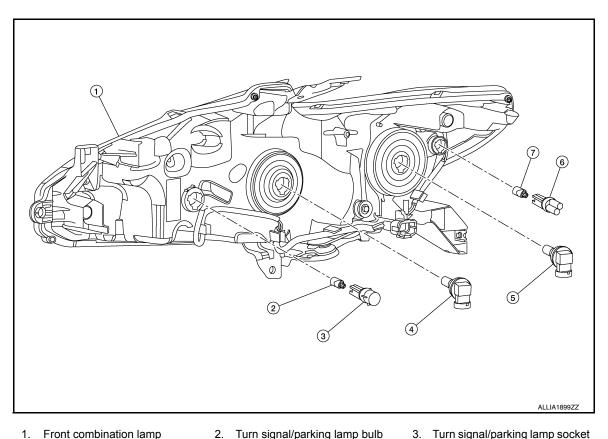
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UNIT DISASSEMBLY AND ASSEMBLY

FRONT COMBINATION LAMP

Exploded View INFOID:0000000012591856



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

Side marker bulb

Disassembly and Assembly

INFOID:0000000012591857

FRONT COMBINATION LAMP

WARNING:

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

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

Disassembly

- Remove front combination lamp. Refer to EXL-117, "Removal and Installation".
- 2. Rotate the halogen lamp bulb (low beam) counterclockwise and remove.
- 3. Rotate the halogen lamp bulb (high beam) counterclockwise and remove.
- Rotate the side marker bulb socket counterclockwise and remove.
- 5. Remove the side marker bulb from the side marker bulb socket.
- Rotate the turn signal/parking bulb socket counterclockwise and remove.
- Remove the turn signal/parking bulb from the turn signal/parking bulb socket.

Assembly

FRONT COMBINATION LAMP

< UNIT DISASSEMBLY AND ASSEMBLY >

[HALOGEN HEADLAMP]

CAUTION:

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

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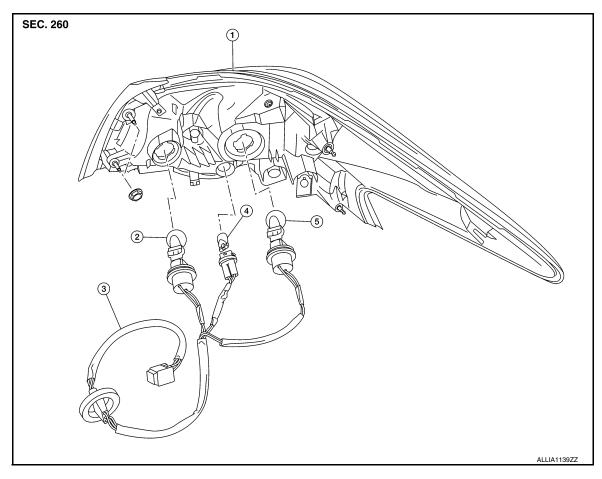
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REAR COMBINATION LAMP

Exploded View INFOID:0000000012591858



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

Disassembly and Assembly

INFOID:0000000012591859

REAR COMBINATION LAMP

WARNING:

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

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

Disassembly

- Remove rear combination lamp. Refer to EXL-125, "Removal and Installation".
- Rotate rear turn signal lamp bulb socket counterclockwise to remove from rear combination lamp.
- 3. Remove the rear turn signal lamp bulb from bulb socket.
- Rotate side marker lamp bulb socket counterclockwise to remove from rear combination lamp.
- 5. Remove the side marker lamp bulb from bulb socket.
- Rotate stop/tail lamp bulb socket counterclockwise to remove from rear combination lamp.
- 7. Remove the stop/tail lamp bulb from bulb socket.

Assembly

REAR COMBINATION LAMP

< UNIT DISASSEMBLY AND ASSEMBLY >

[HALOGEN HEADLAMP]

Assembly	/ is in	the	reverse o	order of	disassembly.
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CAUTION:

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

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SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

[HALOGEN HEADLAMP]

SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Bulb Specifications

INFOID:0000000012591862

Item		Wattage (W)*	
	Low beam	55	
	High beam	65	
Front combination lamp	Side marker lamp	5	
	Turn signal/Park lamp	5	
Door mirror side turn signal	lamp (if equipped)	_	
Rear combination lamp	Stop/Tail lamp	21/5	
	Turn signal lamp	21	
	Side marker lamp	5	
Back-up lamp		16	
Fog lamp (if equipped)		55	
Daytime running lamp built	in fog lamp (Canada only)	19	
License plate lamp		5	
High mounted standams	Parcel shelf mounted	_	
High-mounted stop lamp	Rear spoiler mounted	_	

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

PRECAUTIONS

< PRECAUTION > [LED HEADLAMP]

PRECAUTION

PRECAUTIONS

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

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

WARNING:

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

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

WARNING:

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

Precaution for Work

- When removing or disassembling each component, be careful not to damage or deform it. If a component
 may be subject to interference, be sure to protect it with a shop cloth.
- When removing (disengaging) components with a screwdriver or similar tool, be sure to wrap the component with a shop cloth or vinyl tape to protect it.
- Protect the removed parts with a shop cloth and prevent them from being dropped.
- Replace a deformed or damaged clip.
- If a part is specified as a non-reusable part, always replace it with a new one.
- Be sure to tighten bolts and nuts securely to the specified torque.
- After installation is complete, be sure to check that each part works properly.
- Follow the steps below to clean components:
- Water soluble dirt:
- Dip a soft cloth into lukewarm water, wring the water out of the cloth and wipe the dirty area.
- Then rub with a soft, dry cloth.
- Oily dirt:
- Dip a soft cloth into lukewarm water with mild detergent (concentration: within 2 to 3%) and wipe the dirty area.
- Then dip a cloth into fresh water, wring the water out of the cloth and wipe the detergent off.
- Then rub with a soft, dry cloth.
- Do not use organic solvent such as thinner, benzene, alcohol or gasoline.
- For genuine leather seats, use a genuine leather seat cleaner.

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Revision: November 2015 EXL-137 2016 Altima Sedan

PREPARATION

< PREPARATION > [LED HEADLAMP]

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PREPARATION

PREPARATION

Special Service Tool

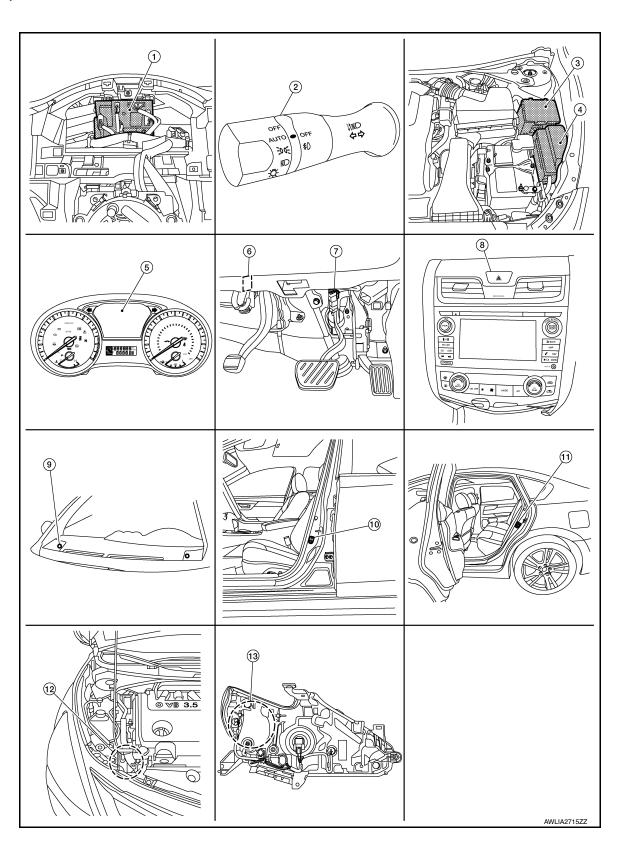
The actual shape of the tools may	y differ from those illustrated here.	
Tool number (TechMate No.) Tool name		Description
— (J-46534) Trim Tool Set	AWJIA0483ZZ	Removing trim components

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SYSTEM DESCRIPTION

COMPONENT PARTS

Component Parts Location



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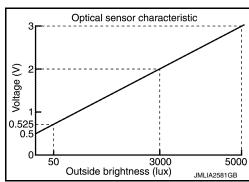
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No.	Part	Function
1.	BCM (view with combination meter re- moved)	 Detects each switch condition by the combination switch reading function. Judges that the exterior lamps are turned ON according to the vehicle condition. Requests the headlamp (HI/LO),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

Optical Sensor

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



COMPONENT PARTS

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

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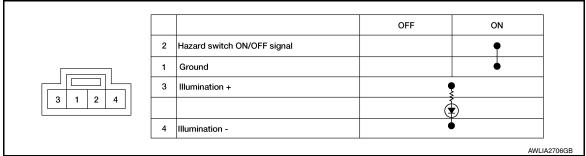
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Hazard Switch

Inputs the hazard switch ON/OFF signal to BCM.



Daytime Running Light Relay

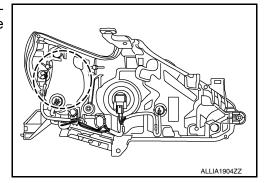
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Power is provided to the daytime running light relay according to request from IPDM E/R.

LED Headlamp Control Module

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



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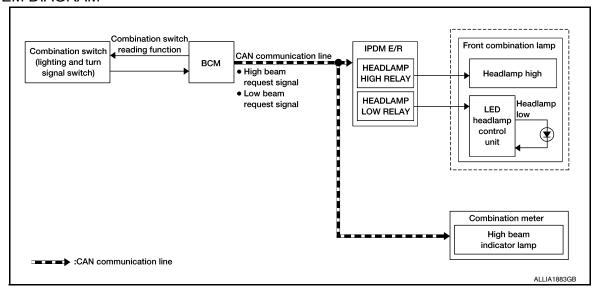
SYSTEM

HEADLAMP SYSTEM

HEADLAMP SYSTEM: System Description

INFOID:0000000012830896

SYSTEM DIAGRAM



OUTLINE

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

HEADLAMP (LO) OPERATION

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

Headlamp (LO) ON condition:

- Lighting switch 2ND
- Lighting switch AUTO with the ignition switch ON (Only when the illumination judgment by auto light system is ON. For details, refer to EXL-143, "AUTO LIGHT SYSTEM: System Description".)
- Lighting switch PASS
- IPDM E/R turns the integrated headlamp low relay ON according to low beam request signal and supplies power supply to LED headlamp control unit.
- LED headlamp control unit turns the headlamp (LO) ON according to the power supply from IPDM E/R.

HEADLAMP (HI) OPERATION

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

Headlamp (HI) ON condition:

- Lighting switch HI with the lighting switch 2ND
- Lighting switch HI with the lighting switch AUTO and ignition switch ON (Only when the illumination judgment by auto light system is ON and the illumination judgment by high beam assist system is ON. For details, refer to <u>EXL-143</u>, "AUTO LIGHT SYSTEM: System Description".)
- Lighting switch PASS
- Combination meter turns the high beam indicator lamp ON according to the high beam request signal.
- IPDM E/R turns the integrated headlamp high relay ON according to high beam request signal.

EXTERIOR LAMP BATTERY SAVER CONTROL

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

Under this condition, the headlamps remain illuminated for a period of time unless the lighting switch position is changed. If the lighting switch position is changed, then the headlamps are turned off.

HEADLAMP WARNING OPERATION

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

HEADLAMP SYSTEM: Fail-safe

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CAN COMMUNICATION CONTROL

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

If No CAN Communication Is Available With BCM

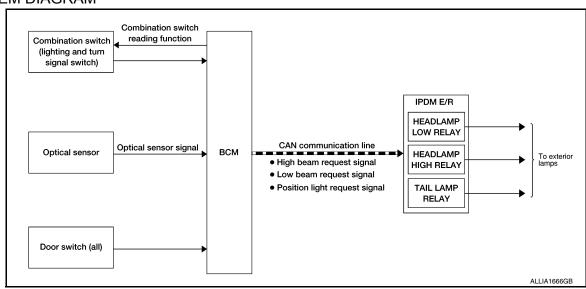
Control part Fail-safe operation	
Headlamp	 Turns ON the headlamp low relay when the ignition switch is turned ON Turns OFF the headlamp low relay when the ignition switch is turned OFF Headlamp high relay OFF

AUTO LIGHT SYSTEM

AUTO LIGHT SYSTEM: System Description

INFOID:0000000012830898

SYSTEM DIAGRAM



OUTLINE

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

Control by BCM:

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

Control by IPDM E/R:

- Relay control function
- Auto light system has the auto light function and delay timer function.
- Auto light function automatically turns ON/OFF the exterior lamps* and each illumination automatically, depending on the outside brightness.
- When auto light system turns the exterior lamps ON with the ignition switch OFF, delay timer function turns
 the exterior lamps OFF, depending on the vehicle condition with the auto light function after a certain period
 of time.
- *: Headlamps (LO/HI), parking lamps, side marker lamps and tail lamps. Headlamp (HI) depends on the combination switch (lighting and turn signal switch) condition.

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tion switch (lighting and turn signal switch) condition.

AUTO LIGHT FUNCTION

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

NOTE:

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

AUTO LIGHT ADJUSTMENT SYSTEM

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

DELAY TIMER FUNCTION

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

- Turns the exterior lamp OFF 5 minutes after detecting that any door opens (Door switch ON).
- Turns the exterior lamp OFF a certain period of time* after closing all doors (Door switch ON→OFF).
- Turns the exterior lamp OFF with the ignition switch to ACC or the light switch OFF.
- *: The preset time is 45 seconds. The timer operating time can be set by CONSULT. Refer to <u>BCS-20, "HEAD-LAMP : CONSULT Function (BCM HEADLAMP)"</u>.

NOTF:

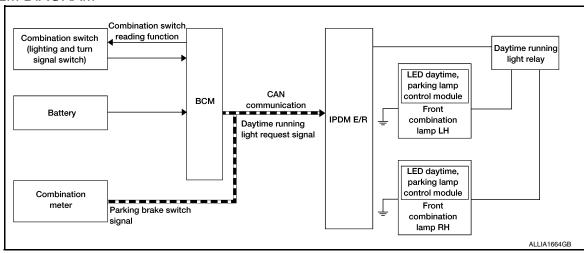
When any position other than the light switch AUTO is set, the auto light system function switches to the exterior lamp battery saver function.

DAYTIME RUNNING LIGHT SYSTEM

DAYTIME RUNNING LIGHT SYSTEM: System Description

INFOID:0000000012830899

SYSTEM DIAGRAM



OUTLINE

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

DAYTIME RUNNING LIGHT OPERATION

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

[LED HEADLAMP]

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

Daytime running light ON condition:

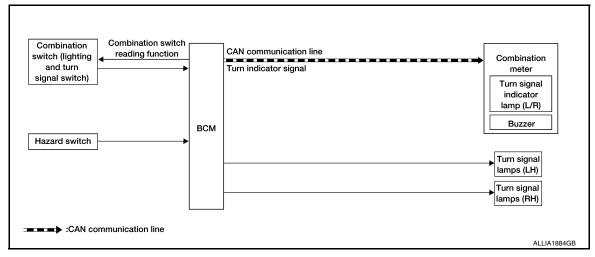
- Vehicle condition READY
- Lighting switch OFF or 1ST
- Lighting switch AUTO and the auto light function OFF judgment
- Parking brake switch OFF
- IPDM E/R controls the daytime running light relay (ground-side) to turn ON according to the daytime running light request signal.
- · Power is supplied from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

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM: System Description

INFOID:0000000012830900

SYSTEM DIAGRAM



OUTLINE

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

TURN SIGNAL LAMP OPERATION

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

HAZARD WARNING LAMP OPERATION

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

TURN SIGNAL INDICATOR LAMP AND TURN SIGNAL OPERATION

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

3-TIME FLASH FUNCTION

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

HIGH FLASHER OPERATION

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[LED HEADLAMP]

- 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.

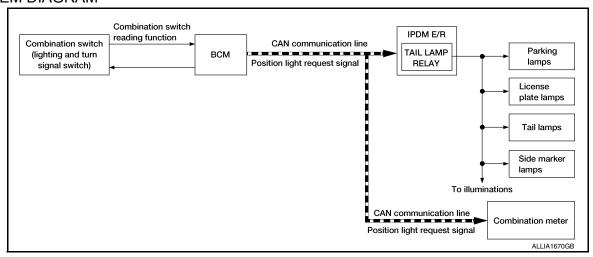
NOTE:

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 LAMP OPERATION

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

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

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

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

INFOID:0000000012830902

CAN COMMUNICATION CONTROL

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

If No CAN Communication Is Available With BCM

Control part	Fail-safe operation
Parking lampsLicense plate lampsIlluminationTail lampsSide marker lamps	Turns ON the tail lamp relay when the ignition switch is turned ON Turns OFF the tail lamp relay when the ignition switch is turned OFF

BACK-UP LAMP SYSTEM

BACK-UP LAMP SYSTEM: System Description

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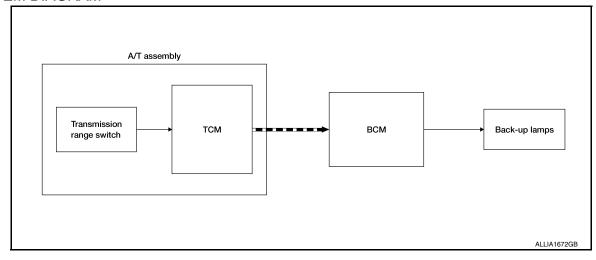
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SYSTEM DIAGRAM



OUTLINE

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

BACK-UP LAMP OPERATION

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

Back-up lamp ON condition:

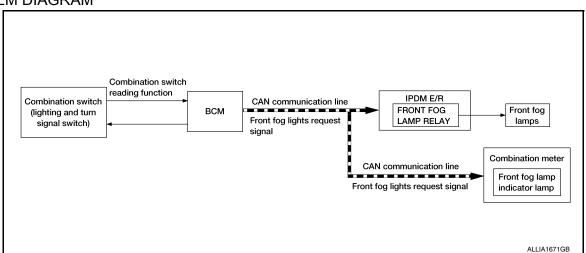
- Ignition switch ON
- Shift selector lever position R

FRONT FOG LAMP SYSTEM

FRONT FOG LAMP SYSTEM: System Description

INFOID:0000000012830904

SYSTEM DIAGRAM



[LED HEADLAMP]

OUTLINE

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

FRONT FOG LAMP OPERATION

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

Front fog lamp ON condition:

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

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

Combination meter turns the front fog lamp indicator lamp ON according to the front fog lights request signal.

FRONT FOG LAMP SYSTEM: Fail-Safe

INFOID:0000000012830905

CAN COMMUNICATION CONTROL

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

If No CAN Communication Is Available With BCM

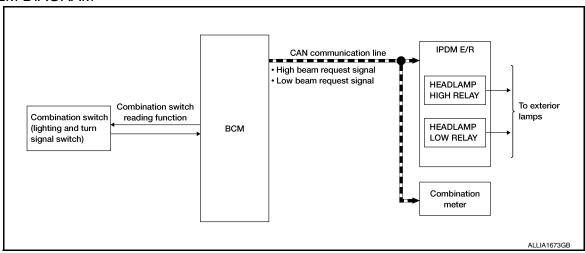
Control part	Fail-safe operation
Front fog lamp	Front fog lamp relay OFF

EXTERIOR LAMP BATTERY SAVER SYSTEM

EXTERIOR LAMP BATTERY SAVER SYSTEM : System Description

INFOID:0000000012830906

SYSTEM DIAGRAM



OUTLINE

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

Control by BCM:

- Combination switch (lighting and turn signal switch) reading function
- Exterior lamp battery saver function

Control by IPDM E/R:

- Relay control function
- BCM turns the exterior lamp OFF* according to the vehicle status when ignition switch is turned OFF while exterior lamp is ON to prevent battery discharge.
- *: Headlamp (HI/LO).

SYSTEM

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

EXTERIOR LAMP BATTERY SAVER ACTIVATION

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

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[LED HEADLAMP]

DIAGNOSIS SYSTEM (BCM)

COMMON ITEM

COMMON ITEM: CONSULT Function (BCM - COMMON ITEM)

INFOID:0000000012868574

CAUTION:

After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF \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.

APPLICATION ITEM

CONSULT performs the following functions via CAN communication with BCM.

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

SYSTEM APPLICATION

BCM can perform the following functions.

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

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

HEAD LAMP

HEAD LAMP: CONSULT Function (BCM - HEADLAMP)

INFOID:0000000012868575

CAUTION:

After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF \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.

DATA MONITOR

Monitor Item [Unit]	Description
PUSH SW [On/Off]	Indicates condition of push-button ignition switch.
ENGINE STATE [STOP/STALL/CRANK/RUN]	Indicates engine status received from ECM on CAN communication line.
VEH SPEED 1 [km/h]	Indicates vehicle speed signal received from ABS on CAN communication line.
TURN SIGNAL R [On/Off]	
TURN SIGNAL L [On/Off]	
TAIL LAMP SW [On/Off]	
HI BEAM SW [On/Off]	
HEAD LAMP SW 1 [On/Off]	Indicates condition of combination switch.
HEAD LAMP SW 2 [On/Off]	
PASSING SW [On/Off]	
AUTO LIGHT SW [On/Off]	
FR FOG SW [On/Off]	
DOOR SW-DR [On/Off]	Indicates condition of front door switch LH.
DOOR SW-AS [On/Off]	Indicates condition of front door switch RH.
DOOR SW-RR [On/Off]	Indicates condition of rear door switch RH.
DOOR SW-RL [On/Off]	Indicates condition of rear door switch LH.
DOOR SW-BK [On/Off]	Indicates condition of trunk switch.
OPTI SEN (DTCT) [V]	Indicates outside brightness voltage signal from optical sensor.
OPTI SEN (FILT) [V]	Indicates outside brightness voltage signal from optical sensor filtered by BCM.
OPTICAL SENSOR [On/Off]	Indicates condition of optical sensor.

ACTIVE TEST

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

WORK SUPPORT

Support Item	Setting	Description
TWILIGHT On	MODE2*	Autolamp function ON.
TWILIGHT ON	MODE1	Autolamp function OFF.
	MODE4	This mode is not used.
WIPER LINK	MODE3*	Wiper link function operates in INT, LOW and HI.
WIF LIX LINK	MODE2	Wiper link function operates in LOW and HI.
	MODE1	Wiper link function OFF.
CUSTOM A/LIGHT SETTING	MODE4	Less sensitive than normal setting (turns ON later).
	MODE3	More sensitive than MODE2.
COSTONI A/LIGHT SETTING	MODE2	More sensitive than normal setting (turns ON earlier).
	MODE1*	Normal setting.
	MODE 8	
	MODE 7	
	MODE 6	
ILL DELAY SET	MODE 4	Autoloma dolov timor
ILL DELAT SET	MODE 5	Autolamp delay timer.
	MODE 3	
	MODE 2	
	MODE 1*	

^{* :} Initial setting

FLASHER

FLASHER: CONSULT Function (BCM - FLASHER)

INFOID:0000000012868747

CAUTION:

After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF \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.

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].

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

WORK SUPPORT

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

*: Initial setting

INT LAMP

INT LAMP : CONSULT Function (BCM - INT LAMP)

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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.

DATA MONITOR

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

ACTIVE TEST

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

WORK SUPPORT

NOTE:

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

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

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

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

^{* :} Initial setting

DOOR LOCK

DOOR LOCK: CONSULT Function (BCM - DOOR LOCK)

INFOID:0000000012868749

CAUTION:

After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF \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.

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

DATA MONITOR

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

ACTIVE TEST

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

WORK SUPPORT

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

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

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

^{* :} Initial setting

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DIAGNOSIS SYSTEM (IPDM E/R)

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

DIAGNOSIS SYSTEM (IPDM E/R)

Diagnosis Description

INFOID:0000000012868750

AUTO ACTIVE TEST

Description

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

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

Operation Procedure

CAUTION:

Do not start the engine.

NOTE:

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

NOTE:

- If auto active test mode cannot be actuated, check door switch system. Refer to <u>DLK-99</u>, "Component Function Check".
- When auto active test mode has to be cancelled halfway through test, turn ignition switch OFF.
- 1. Close the hood and lift the wiper arms from the windshield. (Prevent windshield damage due to wiper operation)
- 2. Turn ignition switch OFF.
- 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.
- After a series of the following operations is repeated 3 times, auto active test is completed.

Inspection in Auto Active Test Mode

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

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

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

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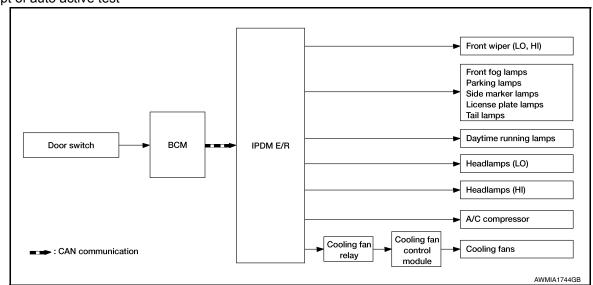
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Concept of auto active test



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

Diagnosis chart in auto active test mode

Symptom	Inspection contents		Possible cause
Any of the following components do not operate		YES	BCM signal input circuit
 Front fog lamps (if equipped) Parking lamps Side marker lamps License plate lamps Tail lamps Daytime running lamps Headlamp (HI, LO) Front wiper 	Perform auto active test. Does the applicable system operate?	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 between cooling fans and cooling fan control module Cooling fan control module Harness or connectors between cooling fan relay and cooling fan control module Cooling fan relay Harness or connectors between IPDM E/R and cooling fan relay IPDM E/R

CONSULT Function (IPDM E/R)

INFOID:0000000012868751

CAUTION:

After disconnecting the CONSULT vehicle interface (VI) from the data link connector, the ignition must be cycled OFF \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 >

[LED HEADLAMP]

APPLICATION ITEM

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

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

ECU IDENTIFICATION

The IPDM E/R part number is displayed.

SELF DIAGNOSTIC RESULT

Refer to PCS-21, "DTC Index".

DATA MONITOR

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

DIAGNOSIS SYSTEM (IPDM E/R)

< SYSTEM DESCRIPTION >

[LED HEADLAMP]

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

ACTIVE TEST

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

CAN DIAG SUPPORT MNTR

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

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ECU DIAGNOSIS INFORMATION

BCM, IPDM E/R

List of ECU Reference

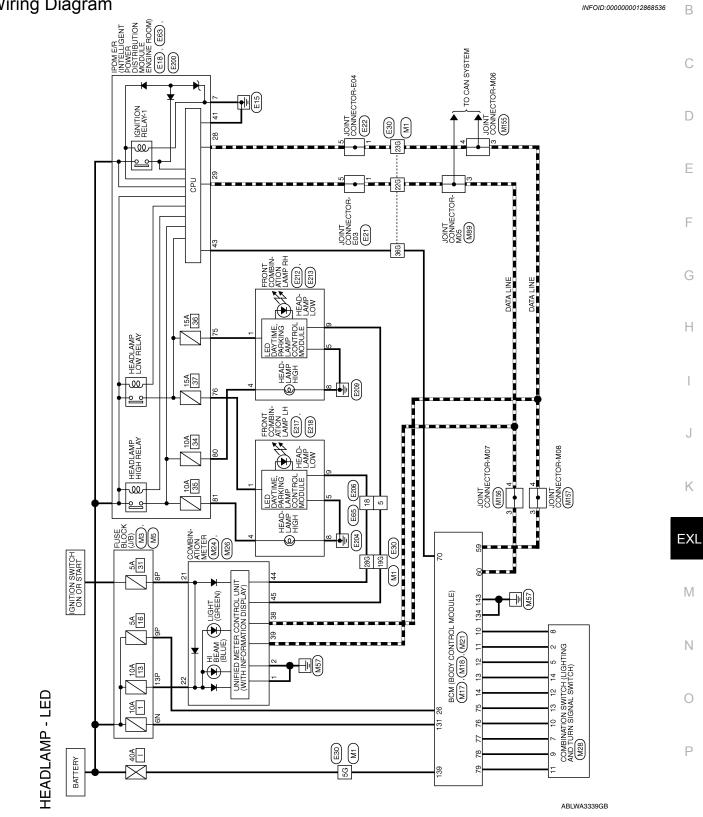
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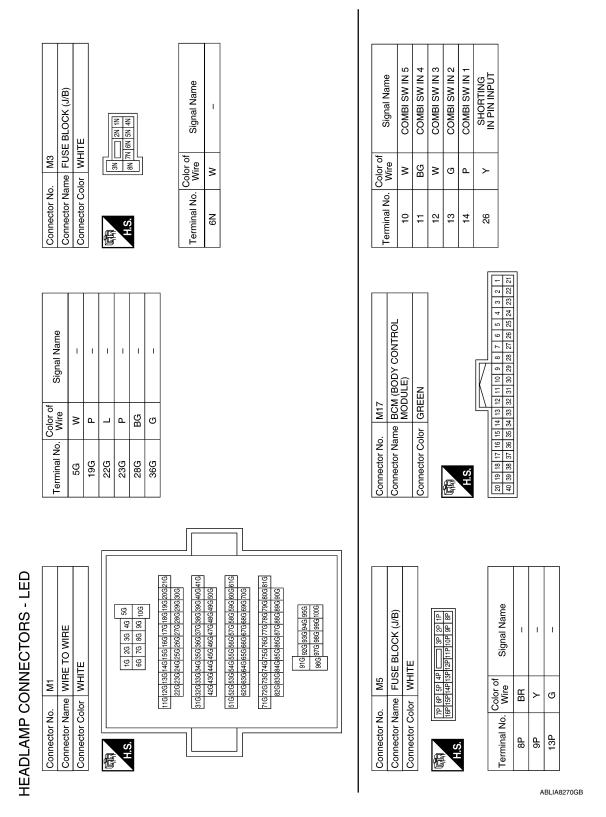
ECU	Reference
	BCS-31, "Reference Value"
BCM	BCS-50, "Fail Safe"
всм	BCS-51, "DTC Inspection Priority Chart"
	BCS-52, "DTC Index"
	PCS-13, "Reference Value"
IPDM E/R	PCS-20, "Fail Safe"
	PCS-21, "DTC_Index"

WIRING DIAGRAM

HEADLAMP

Wiring Diagram





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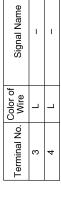
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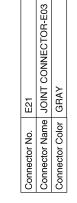
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Color of Wire Signal Name P CAN-L L CAN-H G IGN USM OUT 1 BG COMBI SW OUT 5 W COMBI SW OUT 2 P COMBI SW OUT 2		Signal Name BAT BCM FUSE GND2 BAT POWER F/L GND1		Color of Wire BB BB CG	Signal Name GND1 GND2 IGN BAT
P CAN-L L CAN-H G IGN USM OUT 1 BG COMBI SW OUT 5 W COMBI SW OUT 3 P COMBI SW OUT 2		BAT BCM FUSE GND2 BAT POWER F/L GND1	2 22 22 38 39	B B B B C	GND2 GND2 IGN BAT
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G COMBISW OUT 1					
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Connector Color WHITE Conne	Connector Color WHITE	Щ	\ c	r }	1
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BG LED FAIL COT BH DETECTOR RH					

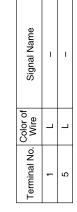
Revision: November 2015 EXL-163 2016 Altima Sedan

155	Connector No.	M156
INT CONNECTOR-M06	Connector Name	Connector Name JOINT CONNECTOR-M07
НТЕ	Connector Color WHITE	WHITE

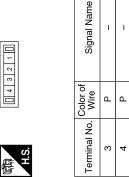
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	Color of Wire	_	_
H.S.	erminal No.	က	4







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

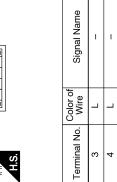


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E18	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)	WHITE	
Connector No.	Connector Name	Connector Color WHITE	4

	Signal Name	GND (POWER)	
	Color of Wire	В	
l	erminal No.	7	





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

Signal Name	-	ı	
Color of Wire	Ь	Ь	
Terminal No.	3	4	

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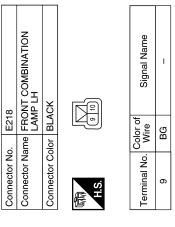
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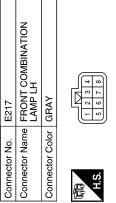
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Connector Name WIRE TO WIRE	Connector Color WHITE		い, いいい, 5g	96 86 76		210200119611061701166115914413942011109 300329602802702869259240[230]220	416 406 396 396 376 366 356 346 336 316	50G49G48G47G48G43G44G43G42G	61.0 600 380 380 370 380 380 380 380 380 380 380 380 380 38	81G800G79G770G76G75G74G73G72G71G 90G89G88C87G86G85G85G85G85G	956 946 996 926 916	Connector No. E65	Connector Name WIRE TO WIRE Connector Color WHITE		H.S. 12 12 12 12 12 13 18 17 16 15 14 13	-	Terminal No. Color of Signal Name	- L	18 BG –		
JOINT CONNECTOR-E04	AY		4 4			Signal Name	ı						IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)	İTE		23 24 25 26 27 28 29 30 31 32 33 34 39 40 41 42 43 44 45 46 47 48 49 50	Signal Name	CAN-L	CAN-H	GND (SIGNAL)	IGN SIGNAL
JOINT	GRAY		6		Color of	Wire	<u>a</u>					Connector No. E63	Connector Name POV MOE	Connector Color WHITE		19 20 21 22 23 35 36 37 38 39	Color of Wire	۵	Г	В	PT

Revision: November 2015 EXL-165 2016 Altima Sedan

13	Connector Name FRONT COMBINATION LAMP RH	4CK	§ 100	Signal Name
. E213	me FR(lor BL/		Color of Wire
Connector No.	Connector Na	Connector Color BLACK	峤 H.S.	Terminal No. Wire
	INATION			al Name

Connector No.	Connector Nar	Connector Col	原 H.S.	Terminal No.	0			
2	Connector Name FRONT COMBINATION LAMP RH	ΑΥ	2 2 8 4 8 4 8 4 8 8 8 8 8 8 8 8 8 8 8 8	Signal Name	ı	ı	ı	ı
. E21	me FRC	lor GR	- 10	Color of Wire	۳	_	В	В
Connector No. E212	Connector Na	Connector Color GRAY	咸南 H.S.	Terminal No. Wire	-	4	2	8
	O WIRE		6 6 10 10 10 10 10 10 10 10 10 10 10 10 10	Signal Name	1	1		
E206	WIRET		24 22 22 21 20 19 18 17 16 5 4 4 29 22 21 20 19 18 17 16 5 4 4 5 4 5 4 5 4 5 4 5 4 5 4 5 4 5 4	or of /ire	<u> </u>	BG		
Connector No.	Connector Name WIRE TO WIRE		H.S. 24 23	Terminal No. Wire	2	18 E		



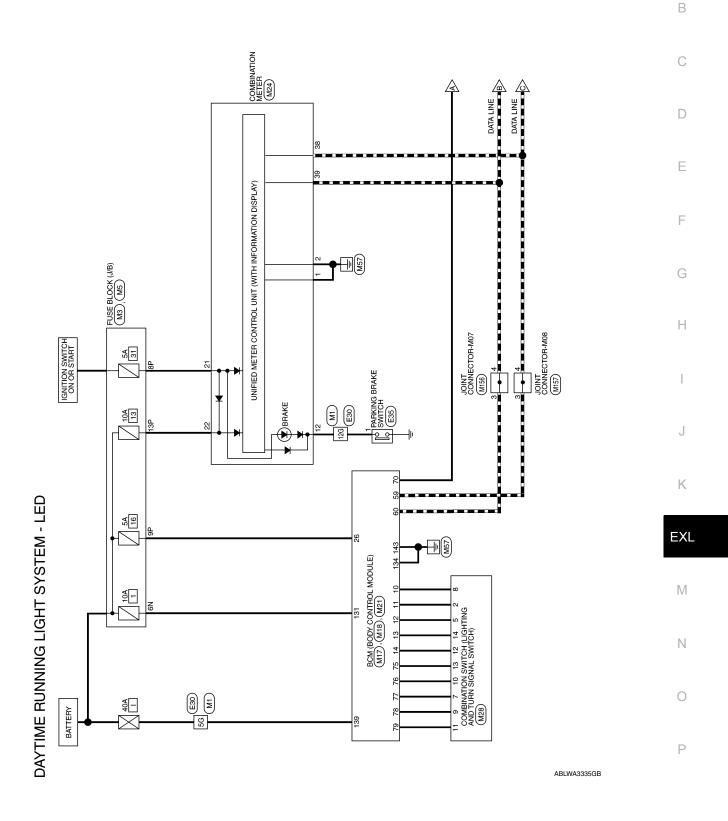


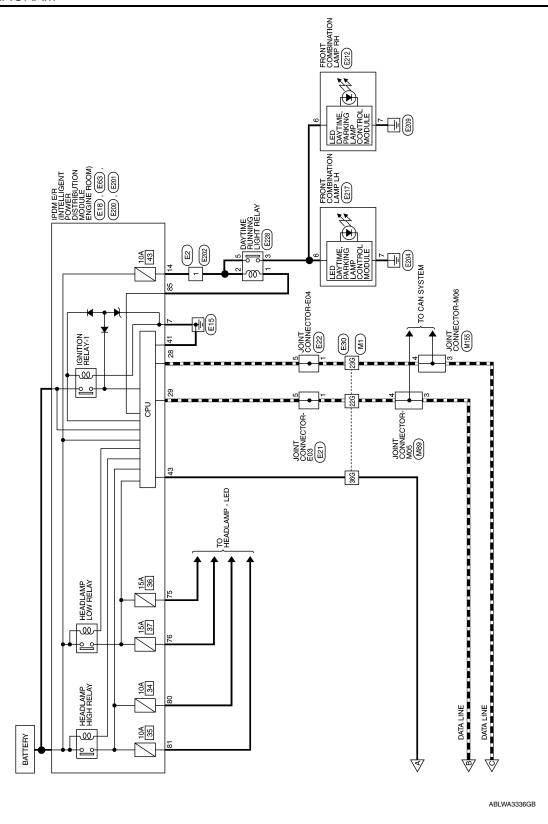
Signal Name	ı	-	-	1
Color of Wire	۵	Υ	В	В
Terminal No.	-	4	2	8

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Wiring Diagram

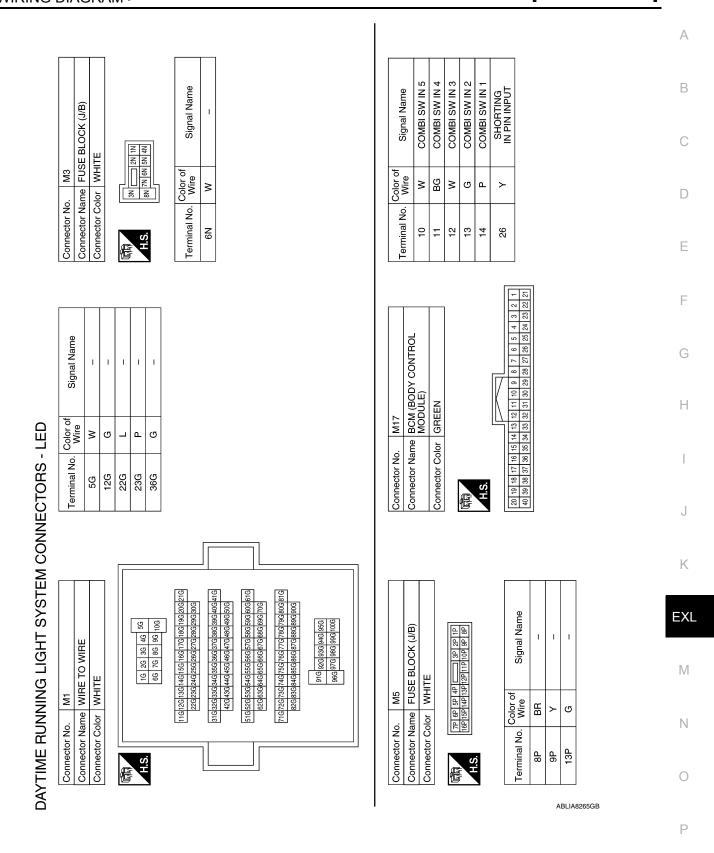
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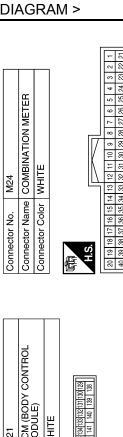


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[LED HEADLAMP]



[LED HEADLAMP]



Signal Name	GND1	GND2	PKB	IGN	BAT	CAN-L	CAN-H
Color of Wire	В	В	თ	BB	G	Ь	7
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	JOINT CONNECTOR-M05	ITE	2 1 0	Signal Name	ı	ı
		lor WHITE	1 4 3 2 1	Color of Wire	7	
COLLIGORO 140.	Connector Name	Connector Color	原 H.S.	Terminal No.	8	4

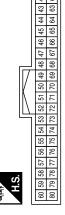
M21	Connector Name BCM (BODY CONTROI MODULE)	WHITE	
Connector No.	Connector Name	Connector Color WHITE	



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

Signal Name	1	ı	ı	ı	ı	1	ı	_
Color of Wire	В	M	Ь	8	9	Ь	BG	G
Terminal No.	2	8	6	10	11	12	13	14

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



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	Ь	_	g	BG	>	æ	۵	В
Terminal No.	29	09	70	75	92	22	2/8	6/

8	COMBINATION SWITCH	ITE	10 11 12 13 14	Signal Name	ı	ı
. M28	ı	lor WHITE	8 2 3 8 6 9 9 9	Color of Wire	BG	Χ
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	2	2

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[LED HEADLAMP]

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Connector No. M155	N
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Connector Color WHITE	Connector Color GRAY Connector Color WHITE Signal Name Connector Color WHITE Signal Name Connector Name C	Connector No. E22 Connector Name JOINT CONNECTOR-E04	Connector No. E30 Connector Name WIRE TO WIRE	Terminal No.	Color of Wire	Signal Name	
126 LG	126 LG	GRAY	connector Color WHITE	5G	۵	ı	
Solution Size		_	12G	ГG	1		
Find	Signature			22G		1	
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Productive Pro	Take SWITCH Connector No. Es3 Connector Color WHITE Connector Color WHITE Connector Color WHITE Connector Color WHITE England Same and all set of set		100 96 86 76	36G	ΓG	1	
POMPET SWITCH Connector No. E63 POMPET STRIBUTION Wire Connector Name POWER DISTRIBUTION Wire 28 P	Connector No. E63 PDM E/R (INTELLIGENT 28 P	Color of Wire P	21G20G19G18G17G18G15G14G13G12G11G 30G29G28G27G26G32G2G2G2G2G2G2G31G 41G40G39G38G37G36G32G3G3G33G2G31G 50G49G48G47G47G48G45G44G43G42G3G2G 61G80G59G57G36G55G5G5G5G5G3G2G31G 81G80G57G57G56G55G5G5G5G2G2G2G1G 81G80G57G57G57G57G57G77G77G77G77G77G77G77G77G				
Connector No. E63 Terminal No. Wire	Connector No. E63 Terminal No. Color of						
Connector Name POWER DIVINITION 28 P	Connector Name POWER DIVINER ROOM) Connector Color WHITE Connector Color WHITE A1 B 43 LG A3 LG Connector Name (35 6 77 28 28 44 45 46 47 48 48 50)	AKE SWITCH		Terminal No.	Color of Wire	Signal Name	
Connector Color WHITE 41 B	Connector Color WHITE 41 B 43 LG			28	۵	CAN-L	
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ector No.). E200		Connector No.	o. E201		Connector No.). E202	
ector Na	IPDN Ime POW MOC	ector Name POWER DISTRIBUTION MODULE ENGINE ROOM)	Connector Ne	ame PO MC	Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM)	Connector Name WIRE TO WIRE Connector Color WHITE	ume WIRE	TO WIRE
ector Co	ector Color WHITE	TE	Connector Color WHITE	olor WF	IITE	Ą		
							3 7 6	6 5 4
	7 7 7	77 78 79 80 81	H.S.	90 91	82 88 84 85 86 87 88 89 90 91 92 93 94 95 96 97			
nal No.	Color of Wire	Signal Name	Terminal No. Color of Wire	Color of Wire	Signal Name	Terminal No. Wire	Color of Wire	Signal Name
5	н	HEADLAMP LO RH	85	>	DTRL RLY	-	SB	1
9	Д	HEADLAMP LO LH						
0	_	HEADLAMP HI RH						
_	>	HEADLAMP HI LH						

Connector No.). E228	8
Connector Name		DAYTIME RUNNING LIGHT RELAY
Connector Color	lor BLUE	E
H.S.		
Terminal No.	Color of Wire	Signal Name
-	^	-
5	SB	1
8	БЛ	1
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7	FRONT COMBINATION LAMP LH	AY	6 2 3 4 7 8 8 4	Signal Name	_	-	
. E217		lor GRAY	- 6	Color of Wire	ГG	В	
Connector No.	Connector Name	Connector Color	所.S.	Terminal No.	9	7	

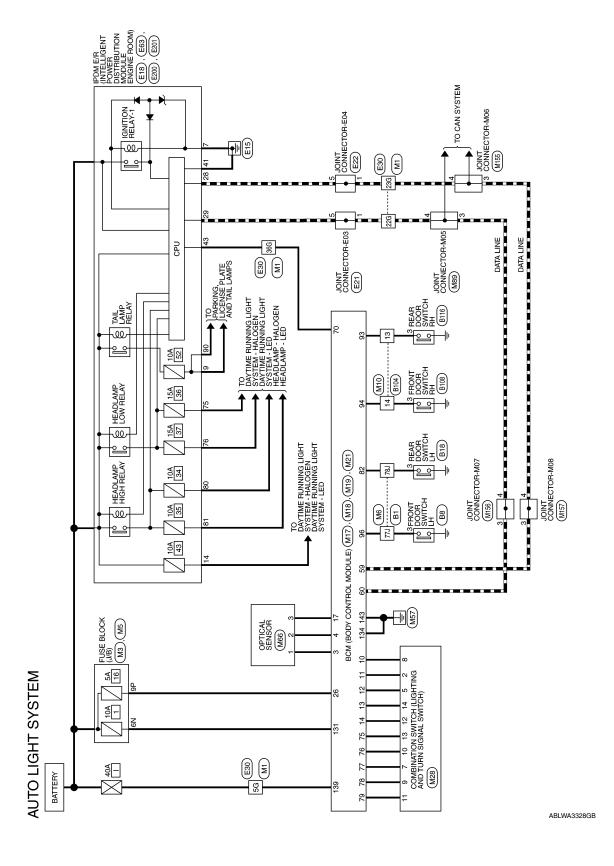
Connector No.). E212	2
Connector Name		FRONT COMBINATION LAMP RH
Connector Color	olor GRAY	АҮ
原 H.S.	- 49	2 3 4 6 7 8 8
Terminal No.	Color of Wire	Signal Name
9	ยา	ı
7	۵	

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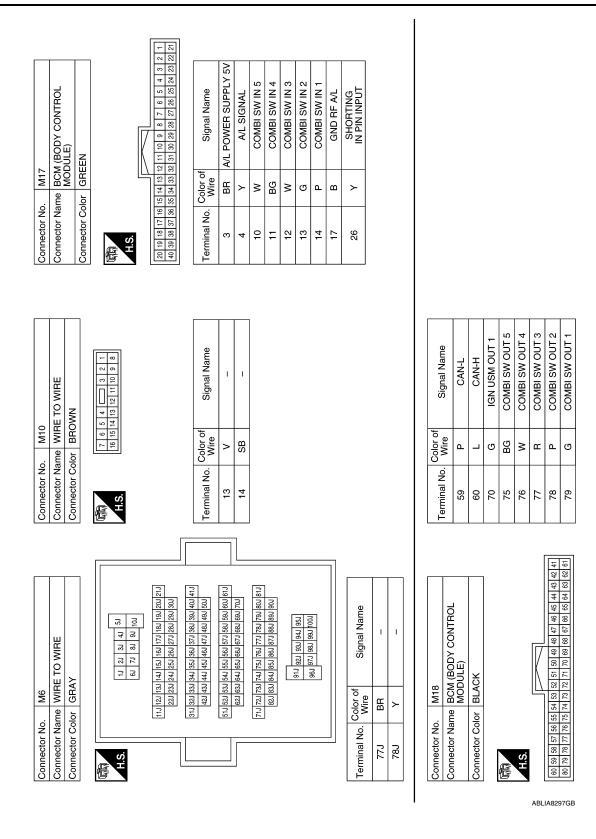
AUTO LIGHT SYSTEM

Wiring Diagram



													Α
	(B)		3P 2P 1P 10P 9P 8P	Signal Name									В
	Connector No. M5 Connector Name FLISE BLOCK (J/R)	ITE	7P 6P 5P 4P										С
	No. M5	Connector Color WHITE	7P 6P 5I	lo. Color of Wire	>								D
	Connector No.	Connector	H.S.	Terminal No.	96								Е
													F
	K (.I/B)			Signal Name	1								G
	M3 FLISE RLOC	MITE	3N 2N 1N 8N 7N 6N 5N 4N										Н
	9	Connector Color WHITE	<u> </u>	Il No. Color of Wire									I
	Connector No.	Connect	原列 H.S.	Terminal No.	N9								J
ORS]					К
AUTO LIGHT SYSTEM CONNECTORS			96 106	17G18G19G20G21G 27G28G29G30G 37G38G39G40G41G	47G48G49G50G 57G58G59G60G61G 57G68G69G70G	77G78G79G80G81G 87G88G89G90G	3 99G 100G	Signal Name		1	ı		EXL
STEM C	Connector No. M1	WHITE	16 26 36 46 56 66 76 86 96 106	11G 12G 13G 14G 15G 16G 17G 18G 12G 23G 24G 25G 26G 27G 28G 31G 32G 33G 34G 35G 36G 37G 38G 31G 32G 33G 34G 35G 36G 37G 38G 34G 35G 36G 37G 37G 37G 37G 37G 37G 37G 37	42G 43G 44G 45G 46G 47G 48G 51G 52G 53G 54G 55G 56G 57G 58G 62G 63G 64G 65G 66G 67G 68G	71G72G73G74G75G76G77G78G 82G83G84G85G86G87G88G	916 926 936 946 956 966 976 980 996 1006						M
GHT S\	tor No.	Connector Color WHITE		316	51652	71672		al No. Color of Wire			o o		N
UTO LI	Connector No.	Connect	原 H.S.					Terminal No.	5G 22G	23G	36G		0
⋖												ABLIA8296GB	

Revision: November 2015 EXL-175 2016 Altima Sedan



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		_												
	Connector Name COMBINATION SWITCH	<u>.</u>	01 01 12 12 12 14 6 6 14 14 14 14 14 14 14 14 14 14 14 14 14	Signal Name	ı	1	1	ı	ı	-	_	1	1	-
M28	ne CON	5	7 1 8 9 3	Color of Wire	BG	8	œ	>	۵	×	Э	۵	BG	ნ
Connector No.	Connector Name COMBII		原动 H.S.	Terminal No. Color of Wire	2	2	7	8	ō	10	11	12	13	41
	ı		ı		T				1					
	Connector Name BCM (BODY CONTROL MODULE)	TE .	142 142 141 140 138 138 138	Signal Name	BAT BCM FUSE	GND2	BAT POWER F/L	GND1						
M21	ne BCM MOC	or WHI	137 138 138 139 139 138	Color of Wire	>	В	>	В						
Connector No.	Connector Nar	Connector Color WHITE	H.S.	Terminal No.	131	134	139	143						
	ı								1					
	Connector Name BCM (BODY CONTROL MODULE)	λ.	87 86 85 84 83 82 81 89 89 97 96 99 99 99	Signal Name	RL DOOR SW	RR DOOR SW	AS DOOR SW	DR DOOR SW						
M19	me BCM MOD	or GRA	92 91 90 88 87 86 85 104 109 109 109 109 99 97	Color of Wire	>	>	SB	BB						
Connector No.	Connector Na	Connector Color GRAY	H.S.	Terminal No. Wire	82	93	94	96						

Connector Color WHITE	Connector Name OPTICAL SENSOR Connector Color WHITE	ENSOR	Connec	Connector Name Connector Color Connector Color An	Connector No. M89 Connector Name JOINT (Connector Color WHITE	Connector No. M89 Connector Name JOINT CONNECTOR-M05 Connector Color WHITE	Connector No. M155 Connector Name JOINT (Connector Color WHITE	No. Name JC Color WI	Connector No. M155 Connector Name JOINT CONNECTOR-M06 Connector Color WHITE
Terminal No. Color of Wire		Signal Name	Termin	Terminal No.	Color of Wire	Signal Name	Terminal No. Wire	Color Wire	f Signal Name
BR		ı	ю		_	ı	ო	<u> </u>	ı
>		ı	4		_	1	4	۵	1
В		1							-

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





Signal Name

Color of Wire Ф ۵

Terminal No. က 4



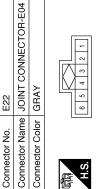






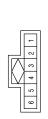


Signal Name	ı	ı	
Color of Wire		7	
Terminal No.	8	4	











Connector Name JOINT CONNECTOR-E03

E21

Connector No.

Signal Name	I	I
Color of Wire	Ъ	Ь
Terminal No.	1	5

Signal Name	ı	I
Color of Wire	٦	Г
Terminal No.	-	5

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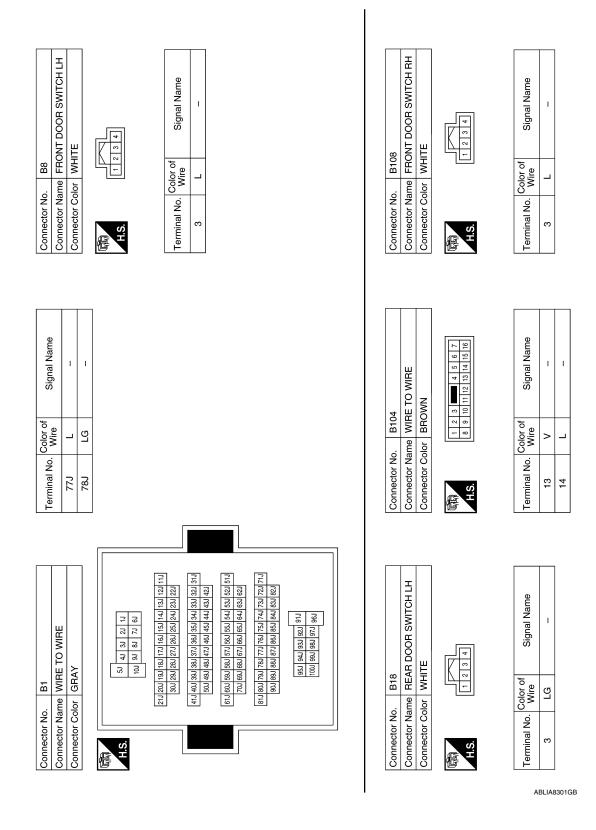
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Section Mile TO Wire Mile To Mile Mile To Mile Mile To Mile Mile Mile Mile Mile Mile Mile Mile	Connector No. E63 Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM) Connector Color WHITE	⊣	H.S. 78 38 37 38 39 40 41 42 43 44 45 46 47 48 48 59 50 71 89 39 34 45 46 47 48 48 59 50 71 8	Color of Siç	28 P CAN-L 29 L CAN-H	41 B GND (SIGNAL)	43 LG IGN SIGNAL							
WIRE TO WIRE	Signal Name -	1 1							E/R (INTELLIGENT ER DISTRIBUTION JLE ENGINE ROOM)	98 88 88 88 88	Signal Name	CLEARANCE		
WINE TO WIRE WINE TO WIRE WINE TO WIRE WINE TO WIRE 10g 36g	³	٦ S									_	re		
State	5G 22G	36G						Connector N	Connector N	H.S.	Terminal No	06		
Sonnec So	Connector No. E30 Connector Name WIRE TO WIRE Connector Color WHITE	56 46 36 26	21GP0G19G18G17G18G15G14G13G 30G2SG2SG27G28G2SG24G2G3	41 G440 G396 G396 G37 G306 G350 G44 G350 G22 G31 G 50 G496 G486 G47 G466 G59 G41 G43 G42 G4 61 G600 G396 G396 G37 G306 G550 G41 G30 G51 G51 G3	700,690,680,670,660,650,640,630,620	81680G79G77676G776776776776776776	95G 94G 93G 92G 91G 100G 99G 98G 97G 96G	Connector No. E200	Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM)	74 77 78 79		HEADLAMP LO	HEADLAMP LO	HEADLAMP HI

Revision: November 2015 EXL-179 2016 Altima Sedan



AUTO LIGHT SYSTEM

[LED HEADLAMP] < WIRING DIAGRAM >

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Connector No. B116	Connector Name REAR DOOR SWITCH RH	Connector Color WHITE	1 2 3 4
Connecto	Connecto	Connecto	南 H.S.

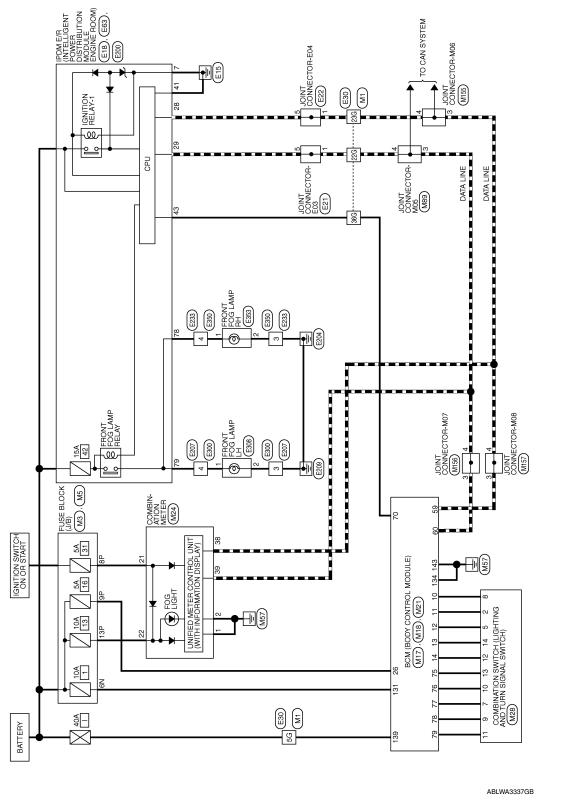
1 2 3 4	
H.S.	

Signal Name	1
Color of Wire	^
Terminal No.	3

FRONT FOG LAMP

FRONT FOG LAMP

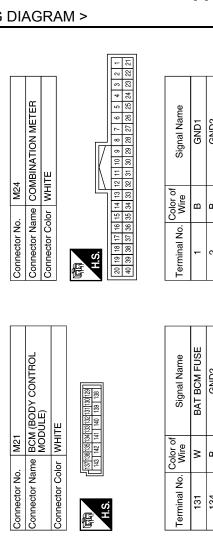
Wiring Diagram



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			А
	LOCK (J/B) Signal Name	Signal Name COMBI SW IN 5 COMBI SW IN 4 COMBI SW IN 2 COMBI SW IN 2 COMBI SW IN 1 SHORTING IN PIN INPUT	В
	3 JSE BLOCK HITE Signal Signal Signa	Signa COMB COMB COMB COMB SHC SHC	С
	Name FUS	Color of Wire BG W W W	D
	Connector No. M3 Connector Name FUSE BLOCK (J/B) Connector Color WHITE M.S. No. No. No. No. No. No. No. No. No. No	Terminal No. 10 11 11 13 14 26	Е
		24 3 2 1 24 23 22 21	F
	Signal Name		G
		(BODY 11 10 9 31 30 29 31 30 29 31 30 29 31 30 29 31 30 29 31 30 29 31 30 29 31 30 29 31 30 30 31 30 30 30 30 30 30 30 30 30 30 30 30 30	Н
	Color of Col	1121811	1
	7 Terminal No. 5G 22G 23G 36G 36G	Connector No. Connector Color Connector Color H.S. 20 19 18 17 16 15 1 40 39 38 37 38 58 3	J
			K
ORS	2006 2006 2006 2006 2006 2006 2006 2006		
FRONT FOG LAMP CONNECT	90 000 0	M5 FUSE BLOCK (J/B) WHITE SPI 4P SPI 1P S	EXL
LAMP (16 WIRE T WHIRE T WH		
T FOG	nector No.	nector N nector C nector C S. S. S. 13P	N
FRON		ABLIA8304GB	0
			D

Connector No. M18



Signal Name	GND1	GND2	NSI	BAT	CAN-L	CAN-H
Color of Wire	В	В	BB	В	Ь	_
Terminal No. Wire	-	2	21	22	38	33

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

	-	
Connector Name		BOM (BODY CONTROL MODULE)
Connector Color	or BLACK	X
H.S.		
60 59 58 57 56 5 80 79 78 77 76 7	55 54 53 52 75 74 73 72	2 51 50 49 48 47 46 45 44 43 42 41 2 71 70 69 68 67 66 65 64 63 62 61
Terminal No.	Color of Wire	Signal Name
59	۵	CAN-L
09	_	CAN-H
20	ŋ	IGN USM OUT 1
75	BG	COMBI SW OUT 5
9/	>	COMBI SW OUT 4
77	œ	COMBI SW OUT 3
28	۵	COMBI SW OUT 2
62	g	COMBI SW OUT 1

o	JOINT CONNECTOR-M05	IITE	4 3 2 1 0	Signal Name	-	1
. M89	$\overline{}$	lor WHITE	1 4 3	Color of Wire	_	_
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	8	4

Signal Name	-	I	-	I	I	_	1	_
Color of Wire	н	≯	Ь	>	g	Ь	BG	Б
Terminal No. Wire	7	8	6	10	1	12	13	14

wo wo	COMBINATION SWITCH	WHITE	3 10 11 12 13 14	Signal Name	ı	ı
. M28			2 B 8 C 8 D	Color of Wire	BG	>
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	2	5

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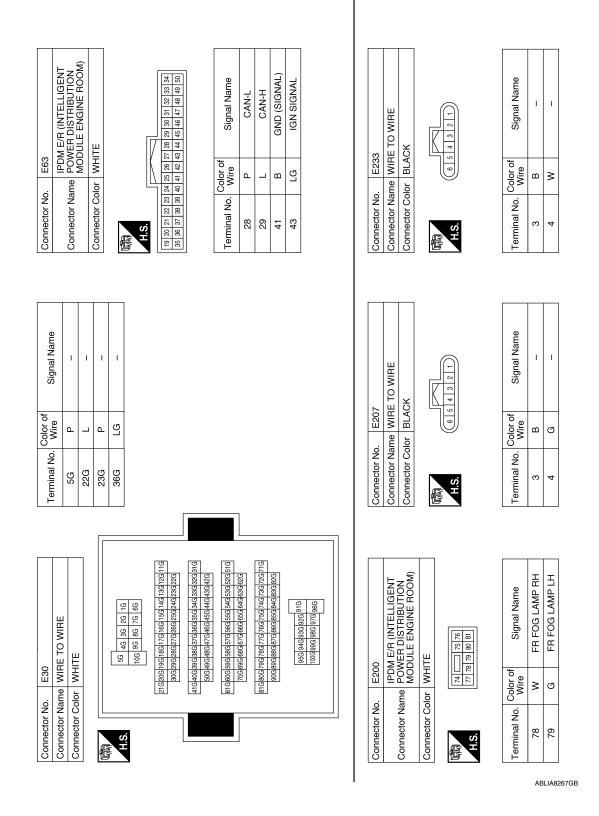
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Connector No. M155	. M15£		Connector No. M156	. M156		Conne	Connector No. M157	M157	
Connector Name JOINT C	ame JOIN	Connector Name JOINT CONNECTOR-M06 Connector Color WHITE	Connector Name JOINT C	me JOIN lor WHIT	Connector Name JOINT CONNECTOR-M07 Connector Color WHITE	Conne	Connector Name JOINT (e JOINT	Connector Name JOINT CONNECTOR-M08 Connector Color WHITE
H.S.	4	3 2 1	H.S.	4	<u> </u>	(国) H.S.		4	3 2 1 1
Terminal No. Color of Wire	Color of Wire	Signal Name	Terminal No. Wire	Color of Wire	Signal Name	Termir	Terminal No. Wire	olor of Wire	Signal Name
က	۵	ı	ဇ	_	1		3	۵	1
4	۵	1	4		1	4	4	۵	I

÷.	Connector No. E18		Connector No. E21	o. E21		Connector No.	No. E22	
	IPDM	1 E/R (INTELLIGENT	Connector N	ame JOII	Connector Name JOINT CONNECTOR-E03	Connector I	Vame JOII	Connector Name JOINT CONNECTOR-E04
am	MOD	Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM)	Connector Color GRAY	olor GR/	4	Connector Color GRAY	Solor GR/	٩٧
양	Connector Color WHITE	Щ.	E					
	7 8 12 13	9 10 11	H.S.	9	0 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	H.S.	ω	2 S S T T T T T T T T T T T T T T T T T
87	Terminal No. Wire	Signal Name	Terminal No. Wire	Color of Wire	Signal Name	Terminal No. Wire	Color of Wire	Signal Name
	m m	GND (POWER)	-	_	ı	-	۵	-
			L	-		L	٥	

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Connector No. E350		Connector Color BLACK	H.S. (123456)
E308	FRONT FOG LAM	Connector Color BLACK	
Connector No. E308	Connector Name	Connector Color	H.S.

Connector Name WIRE TO WIRE

Connector No. E300

Connector Color BLACK

			1
Signal Name	1	I	
Color of Wire	В	9	
Terminal No.	3	4	

Signal Name

Terminal No. Wire

Signal Name

Terminal No. Wire

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

Signal Name	1	_
Color of Wire	Μ	В
Terminal No.	-	2

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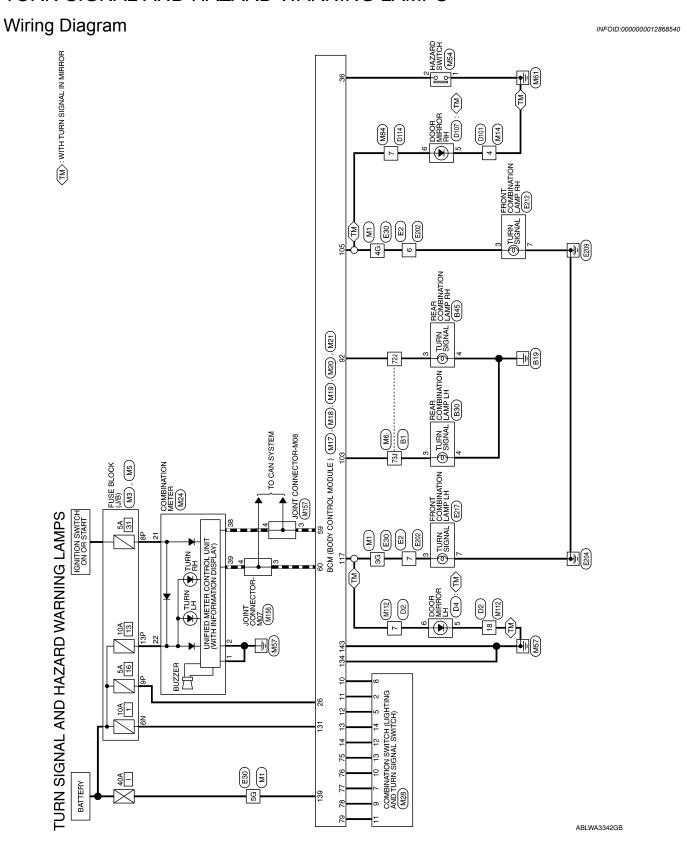
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TURN SIGNAL AND HAZARD WARNING LAMPS

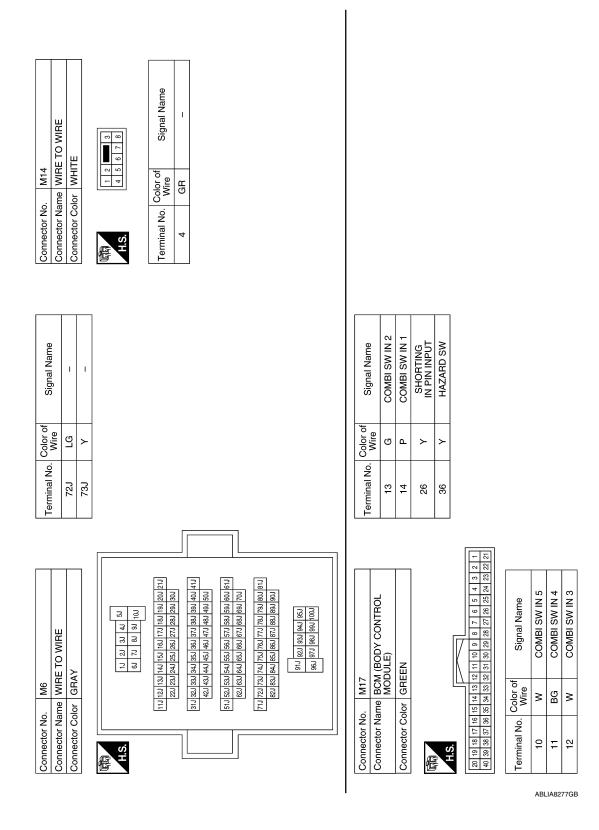


TURN SIGNAL AND HAZARD WARNING LAMPS

< WIRING DIAGRAM > [LED HEADLAMP]

									Α
(8)	45 de	Vame							В
Connector No. M5 Connector Name FUSE BLOCK (J/B) Connector Color WHITE	7P 6P 5P 4P 3P 1SP 1SP 11P 10P 10P 10P 10P 10P 10P 10P 10P 10	Signal Name	1 1						С
o. M5 ame FUSE E	7P 6P (Color of Wire BR	> 0						D
Connector No. Connector Name Connector Color	是 H.S.	Terminal No. 8P	9P 13P						Е
									F
SS OCK (J/B)	N N N N N N N N N N N N N N N N N N N	Signal Name							G
MPS CONNECTORS Connector No. M3 Connector Name FUSE BLOCK (J/B) Connector Color WHITE	3N C 2N 1N 8N 7N 6N 5N 4N	r of							Н
CONNE or Name		No. Color of Wire							I
D WARNING LAMPS CONNECTORS Connector No. M3 Connector Name FUSE BLOCK Connector Color WHITE	A.S.	Terminal No. 6N							J
SNING NING					7				K
ZARD WAR	16 26 36 46 56 66 76 86 96 100 100 100 100 100 100 100 100 100 10	337G38G39G40G41G 347G48G49G50G	357G58G59G60G61G 367G68G69G70G	746 756 756 756 756 756 756 756	Signal Name	1 1	1		EXL
ND HA	16 26 36 46 50 10 10 10 10 10 10 10 10 10 10 10 10 10	3163263363463556366376386 426436446456466476486	51G52G53G54G55G56G57G58G 62G63G64G65G66G67G68G	7197297307740775978097707807 8208308408508608709809 910 920 930 940 950 960 990 96					M
TURN SIGNAL AND HAZAR Connector No. M1 Connector Name WIRE TO WIRE Connector Color WHITE	1161261:	3163263	5165265	82G8 82G8	al No. Color of Wire	SB RB	H		N
JRN SIGNA Connector No. Connector Nan Connector Colc	H.S.				Terminal No.	36	56		0
≓								ABLIA8276GB	

Revision: November 2015 **EXL-189** 2016 Altima Sedan



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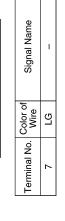
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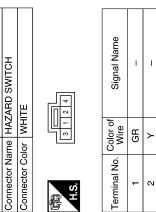
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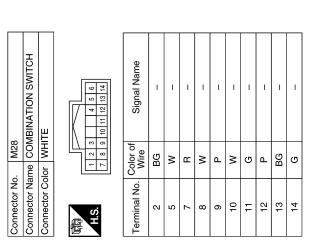
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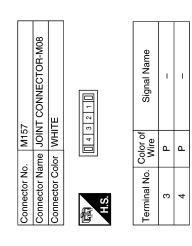
EXL-191 Revision: November 2015 2016 Altima Sedan

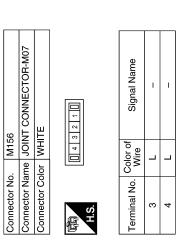




Connector No. M54







2	WIRE TO WIRE	11	2 3 4 5 6 7 8 9 10 11 12 14 15 16 17 18 19 20 21 22 23 24	Signal Name	ı	ı
. M112		lor WH	13 14 15 16	Color of Wire	SB	В
Connector No.	Connector Name	Connector Color WHITE	H.S.	Terminal No. Color of Wire	7	18

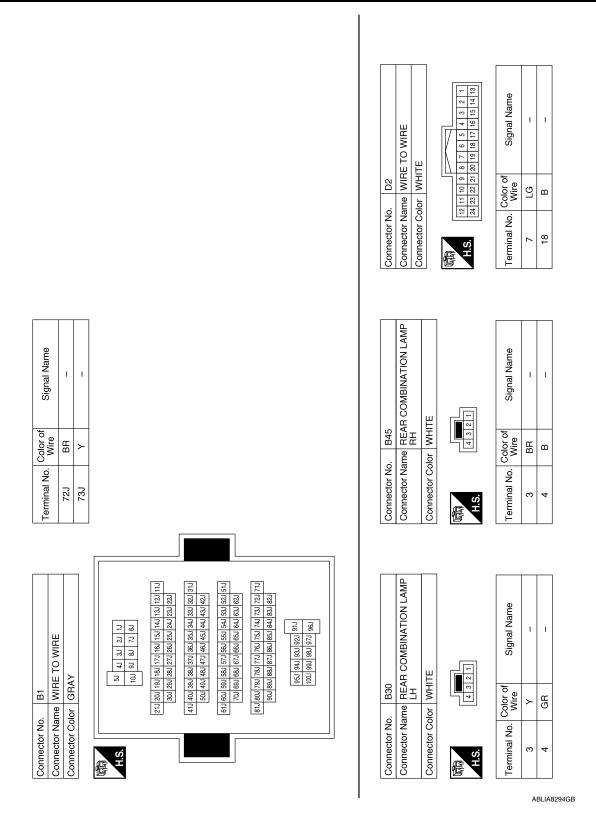
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TURN SIGNAL AND HAZARD WARNING LAMPS

< WIRING DIAGRAM > [LED HEADLAMP]

Connector No. E202	L	Connector No.	tor No. E212	TACIF ALGUATOR FIRE	Connector No.). E217	TA CITATION CO.
Connector Name WIRE TO WIRE Connector Color WHITE	#	Connect	Connector Name FRON LAMP Connector Color GRAY 1 2 3 1 2 3 5 6 7	FRONT COMBINATION LAMP RH GRAY 1 2 3 4 4 5 6 7 8	Connector Name Connector Color	LAMP LL LAMP LL CAMP L	Connector Name FRONT COMBINATION LAMP LH Connector Color GRAY LIZ 8 4 LIZ 8 4 LIZ 8 4
Terminal No. Color of Sig 6 P 7 Wire 7 W	Signal Name	Terminal No.	No. Color of Wire P	Signal Name	Terminal No.	Color of Wire W	Signal Name
M	EX						

Revision: November 2015 EXL-193 2016 Altima Sedan



TURN SIGNAL AND HAZARD WARNING LAMPS

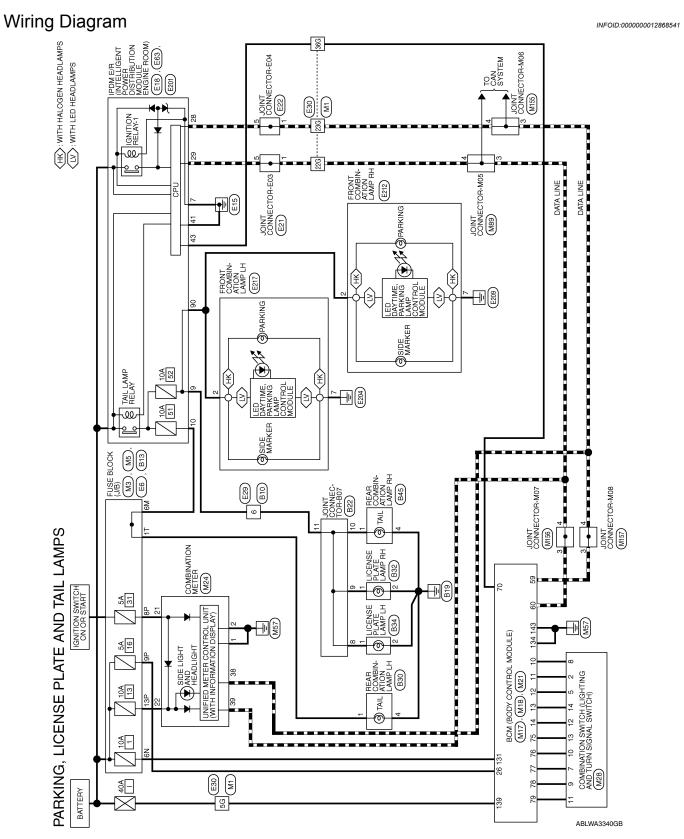
< WIRING DIAGRAM > [LED HEADLAMP]

	A
H	В
Connector No. D107 Connector Name DOOR MIRROR RH Connector Color WHITE # 3 2 1 # 3 2 1 # 3 2 1 # 3 2 1 # 3 2 1 # 3 2 1 # 3 2 1 # 4 3 2 1 # 5 5 # 7 6 5 # 7 6 5 # 7 6 5 # 7 6 5 # 7 6 5 # 7 6 5 # 7 6 5 # 7 6 5 # 7 6 5 # 7 6 5 # 7 6 5 # 7 6 5 # 7 6 5 # 7 6 5 # 7 6 5 # 7 6 6 # 7 6 6 # 7 6 6 # 7 6 6 # 7 6 6 # 7 6 6 # 7 6 6 # 7 6 6 # 7 6 6 # 7 6 6 # 7 6 6 # 7 6 6 # 7 6 6 # 7 6 6 # 7 6 6 # 7 6 6 # 7 6 6 # 7 7 6 # 7 7 6 # 7 7 6 # 7 7 6 # 7 7 6 # 7 7 6 # 7 7 6 # 7 7 6 # 7 7 6 # 7 7 6 # 7 7 6 # 7 7 6 # 7 7 6 # 7 7 6 # 7 7 7 6 # 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	C
Connector No. D107 Connector Name D00R1 Connector Color WHITE H.S. 8 7 6 Terminal No. Color of Wire 5 B	D
Connector No. Connector Collector Co	E
	F
WIRE	G
1 TE TO 1	Н
r Name WIRE TI r Color WHITE r Color of 8 7 6	
Connector Name Connector Color Connector Color H.S. H.S. 4	J
	κ 1 ΠΠ
ROR LH Signal Name	Signal Name
	No. D114 Name WIRE TO WIRE Color WHITE 24 23 22 21 29 19 17 16 15 14 19 19 17 16 15 14 19 19 17 16 15 14 19 19 17 16 15 14 19 19 17 16 15 14 19 19 10 10 10 10 10 10
Connector No. D4 Connector Name DOOR MIRROR LH Connector Color WHITE H.S. A 2 1 R. A 2 1 R. A 3 2 1 R. A 3 2 1 R. A 4 3 2 1 R. A 5 6 5 R. A 6 6 R. A 6 7 6 5 R. A 7 6 5 R. A 7 6 6 R. A 7 6 R. A 7 6 R. A 7 6 R. A 7 6 6	Connector No. D114 Connector Name WIRE TO WIRE Connector Color WHITE Terminal No. Color of Signa 7 LG Signa
Connector No. Connector Col. Connector Col. H.S. Terminal No. 5	Connector No. Connector Nam Connector Nam Connector Nam Terminal No. 7

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Revision: November 2015 **EXL-195** 2016 Altima Sedan

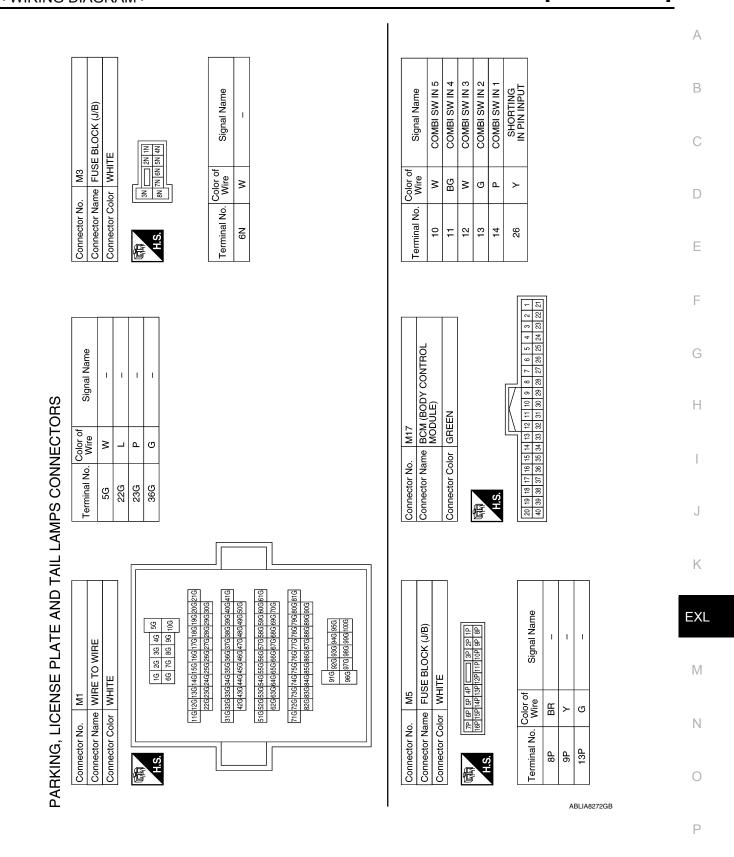
PARKING, LICENSE PLATE AND TAIL LAMPS



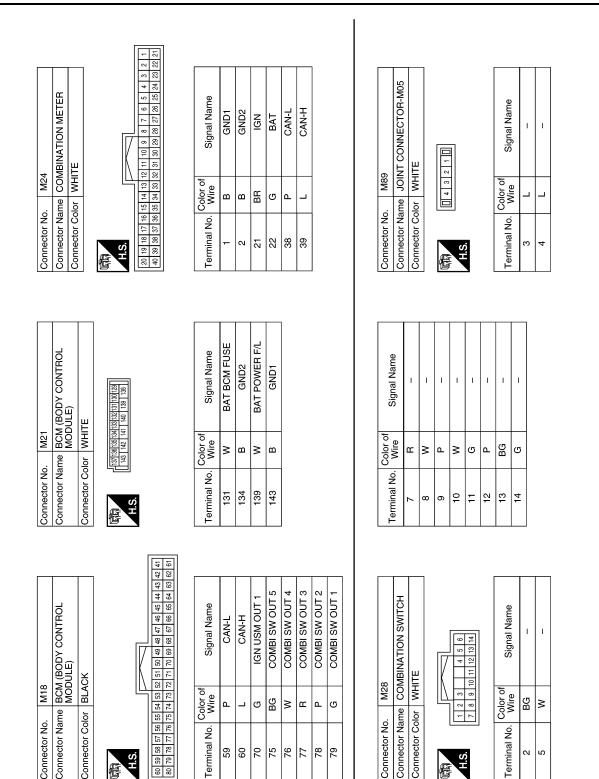
PARKING, LICENSE PLATE AND TAIL LAMPS

< WIRING DIAGRAM >

[LED HEADLAMP]



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PARKING, LICENSE PLATE AND TAIL LAMPS

< WIRING DIAGRAM >

[LED HEADLAMP]

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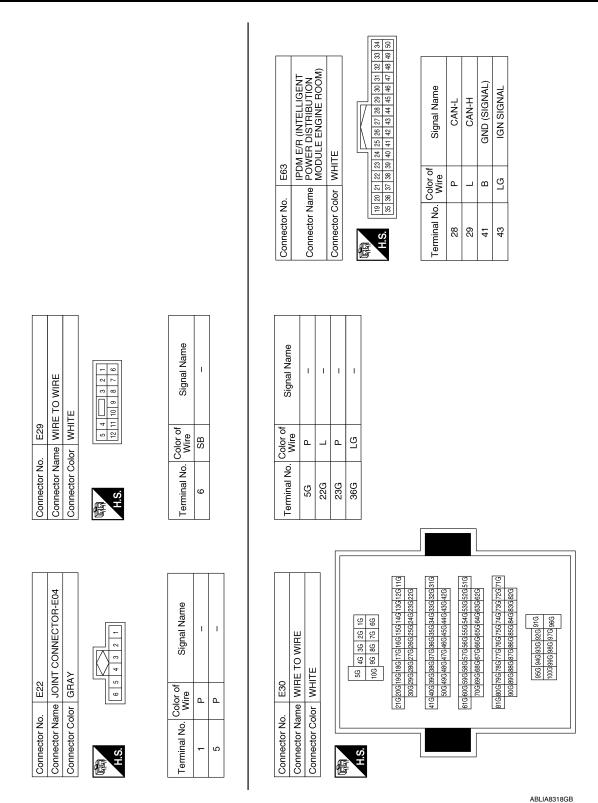
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Connector Name POWEE Connector Name POWEE Connector Color of WHITE Connector Color WHITE To a feet and the color of the feet and the color white the color	Signal Name	Terminal No. Was 3 4 4 A Connector No. Connector Name Connector Color Mane Connector Name Connector Color Mane Col	or of Signal Name
No.	Signal Name GND (POWER) TAIL RH	al No.	r of Signa
9S 6	TAIL RH	2	-
C W 4	Signature (Color Color Marie Color C	Color of Wire L L L	Color of Wire Signal Name Terminal No. Signal Name

Revision: November 2015 **EXL-199** 2016 Altima Sedan



PARKING, LICENSE PLATE AND TAIL LAMPS

< WIRING DIAGRAM >

[LED HEADLAMP]

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	Connector Name FRONT COMBINATION LAMP LH	,	8 4 8 4 8 4 8 8 8 8 8 8 8 8 8 8 8 8 8 8		Signal Name	ı	ı	
E217	ne FRON LAMF	or GRA)	0 0 0		Solor of Wire	LG	В	
Connector No.	Connector Nar	Connector Color GRAY	H.S.		Terminal No. Wire	2	7	
	Connector Name FRONT COMBINATION LAMP RH	>	4 8 8 P		Signal Name	1	ı	
E212	ne FROI LAME	or GRA	2 3 2 2 2 3		Solor of Wire	ГG	В	
Connector No.	Connector Na	Connector Color GRAY	所 H.S.		Terminal No. Wire	2	7	
	E/R (INTELLIGENT ER DISTRIBUTION	JLE ENGINE ROOM)	86 87 88 89 97		Signal Name	CLEARANCE		
. E201	me POWE	lor WHIT	82 83 84 85 90 91 92 93		Color of Wire	LG		
Connector No.	Connector Name POWER DISTRIBU	Connector Color WHITE	H.S.	J	Terminal No. Wire	06		

Connector No. B22 Connector Name JOINT CONNECTOR-B07		8 7 6 5 4 3 2 1 1	Signal Name	I	-	ı	ı
DIN JOIN	or BLUI	12 11 10 9	Color of Wire	SB	SB	SB	SB
Connector Nam	Connector Color BLUE	H.S.	Terminal No. Color of Wire	8	6	10	11
Connector No. B13 Connector Name FUSE BLOCK (J/B)	WHITE	डा बरा जा	or of Signal Name				
Connector Name	Connector Color WHITE	H.S.	Terminal No. Wire	11			
					1		

Terminal No. Wire Signal Name 6 SB -

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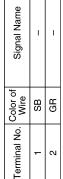
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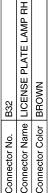
Connector Name WIRE TO WIRE Connector Color WHITE

Connector No. B10

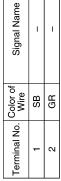
Connector Color BROWN	Connector Name LICENSE PLATE LAMP LH	Connector No. B34	No. B34 Name LICENSE PLATE LAMP LH Color BROWN
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Connector Name REAR COMBINATION LAMP LH

B30

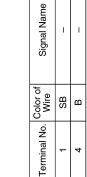
Connector No.

Connector Color WHITE



Signal Name	1	1
Color of Wire	^	GR
Terminal No.	1	4





Connector No. B4 Connector Name RE Connector Color WI	<u>ات</u> :	臣
o a		
e e	⋝	Connector Color
	22	Connector Name
	8	Connector No.

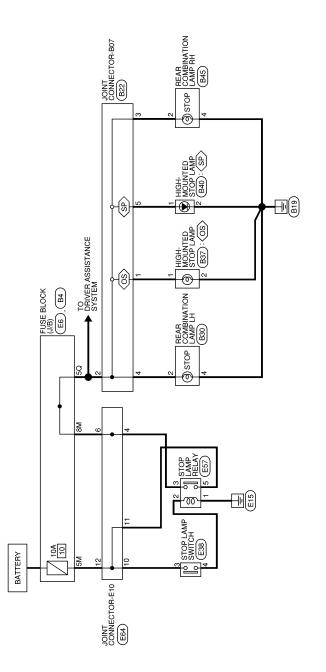
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STOP LAMP

Wiring Diagram

(OS): WITHOUT REAR SPOILER (SP): WITH REAR SPOILER

STOP LAMP



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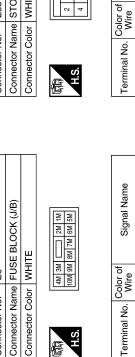
Connector Name STOP LAMP RELAY
Connector Color BLUE

E57

Connector No.

STOP LAMP CONNECTORS

E38	nnector Name STOP LAMP SWITCH	WHITE
Connector No.	Connector Name	Connector Color
E6	FUSE BLOCK (J/B)	WHITE
Connector No.	Connector Name F	Connector Color



Signal Name	I	I	ı	I
Color of Wire	В	ч	>	ŋ
Terminal No. Wire	ļ	2	3	2

Signal Name

Q œ

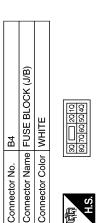
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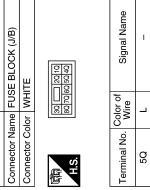
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-	I	I			Connector Name JOINT CONNECTOR-B07	JE
Ж	8	១		B22	<u></u>	BLL
				lo.	lame	olor
2	3	2		Connector No.	Connector N	Connector Color BLUE





Signal Name

Color of Wire

Terminal No.

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Connector Name	Connector Name JOINT CONNECTOR-E10
Connector Color BLUE	BLUE
(12 11 10 H.S.	12 11 10 9 8 7 6 5 4 3 2 1

E64

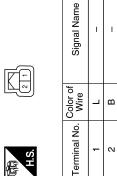
Connector No.

Signal Name	_	_	ı	-	_
Color of Wire	Μ	Μ	ŋ	ŋ	9
Terminal No. Wire	4	9	10	11	12

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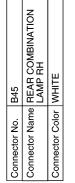
B40	HIGH-MOUNTED STOP LAMP (WITH REAR SPOILER)	ROWN	<u> </u>	of Signal Name	
(MIGH-MC me LAMP (M SPOILER	or BROWN	[2] T	Color of Wire	
Connector No.	Connector Name	Connector Color	南 H.S.	Terminal No. Wire	

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



B30	Connector Name REAR COMBINATION LAMP LH	WHITE	4 3 2 1
Connector No.	Connector Name	Connector Color WHITE	

Signal Name	-	1	
Color of Wire	٦	GR	
Terminal No.	2	4	







Signal Name	1	1	
Color of Wire	٦	В	
Terminal No.	2	4	

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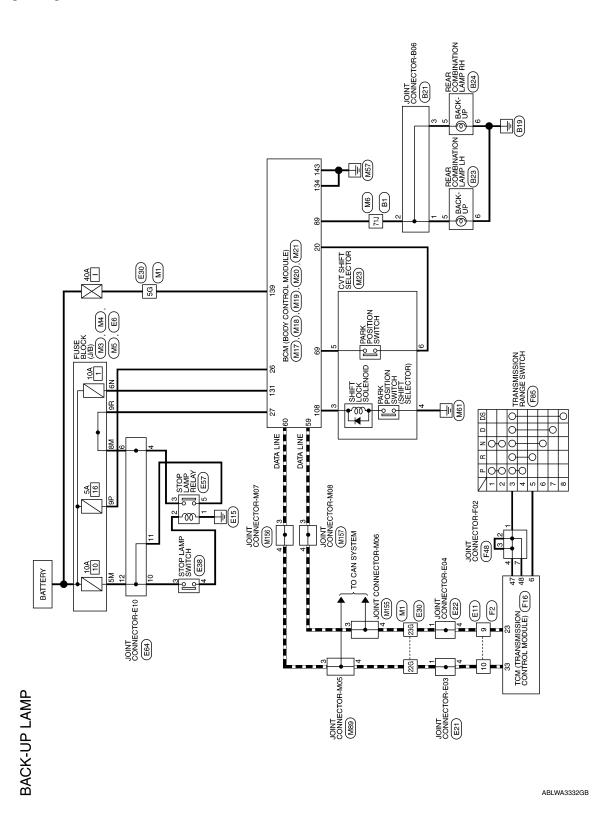
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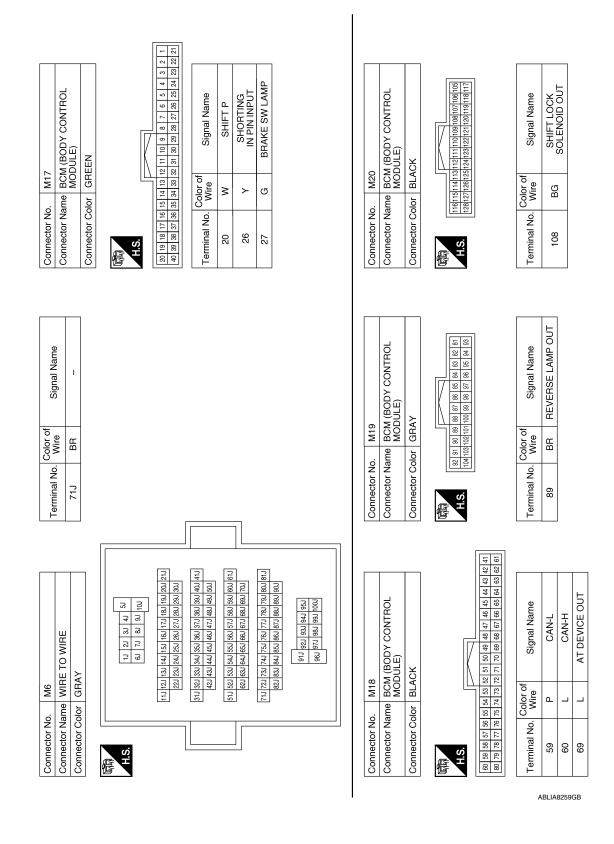
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BACK-UP LAMP

Wiring Diagram



Connector No. M3 Connector Name FUSE BLOCK (J/B) Connector Color WHITE A.S. Signal Name Signal Name Signal Name Signal Name Signal Name		A B C D
Signal Name	CK (J/B) Signal Name CK (J/B)	F
Terminal No. Color of Signature Si	M5 M5 M5 M1 M1 M1 M1 M1	H
	Connector Na. Connector Col. Connector Col. Terminal No. 9P	J K
MP CONNECTORS M1 me WIRE TO WIRE	M4 FUSE BLOCK (J/B) BROWN SIR IR SIR IR IR SIR IR IR SIR IR I	EXL
Connector No. M1	Connector Name FUSE BLOCK (J/B) Connector Color BROWN This is a far an	N
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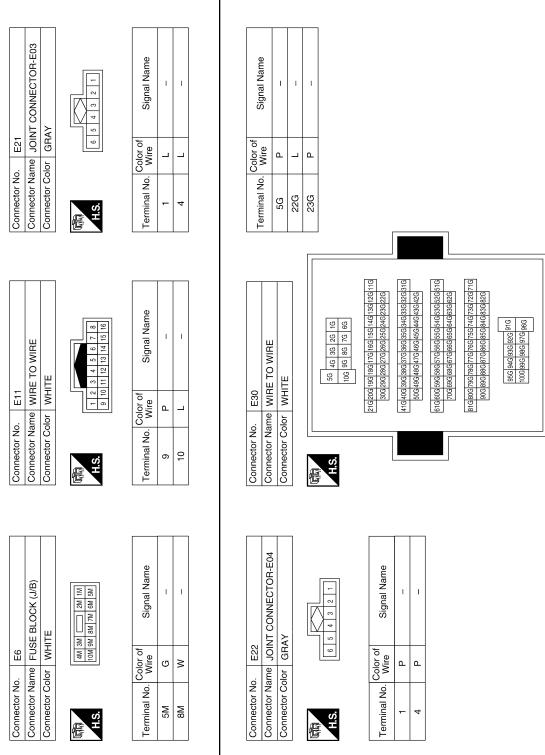
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		7			ī		1		
	Connector Name JOINT CONNECTOR-M05 Connector Color MHITE	١	3210	Signal Name	1	I			
M89	ne JOIN		1 4 3	Color of Wire	_	_			
Connector No.	Connector Name JOINT C		明.S.	Terminal No.	ဇ	4			
	Connector Name CVT SHIFT SELECTOR Connector Color WHITE	J	12 0 1 2 0 0 3 0 0 3	Signal Name	1	I	ı	ı	
M23	ne CVT		8	Solor of Wire	BG	В	_	8	
Connector No.	Connector Name CVT SH Connector Color WHITE		雨 H.S.	Terminal No. Wire	က	4	2	9	
	BCM (BODY CONTROL MODULE)	2	137 138 134 134 138	Signal Name	BAT BCM FUSE	GND2	BAT POWER F/L	GND1	
. M21	me BCM MOC	or WHI	1371381351	Color of Wire	*	В	>	В	
Connector No.	Connector Name BCM (BODY CON MODULE)	Connector Color WHITE	所 H.S.	Terminal No. Wire	131	134	139	143	

Connector No.		M156	Connector No.	M157
Connector Na	ome JC	Connector Name JOINT CONNECTOR-M07	Connector Na	Connector Name JOINT CONNECTOR-M08
Connector Color WHITE	olor W	HITE	Connector Color WHITE	or WHITE
所 H.S.		043210	画 H.S.	
Terminal No. Wire	Color c Wire	of Signal Name	Terminal No. Wire	Solor of Signal Name
е	_	1	က	П
4	_	ı	4	1

Connector No.). M155	55
Connector Name		JOINT CONNECTOR-M06
Connector Color		WHITE
是 H.S.		1 3 2 1
Terminal No.	Color of Wire	Signal Name
ဗ	۵	1
4	۵	1

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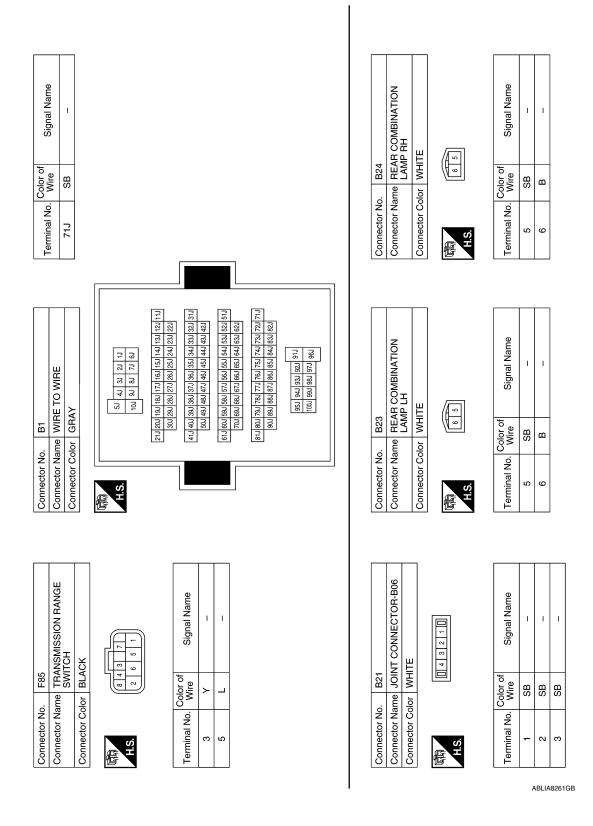
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	Connector Name JOINT CONNECTOR-E10	111	8 V V V V V V V V V V V V V V V V V V V		Signal Name	ı	ı	1	ı	1
E64	JOIN	ır BLUI	12 11 10 9		color of Wire	>	>	G	G	g
Connector No.	Connector Nam	Connector Color BLUE			Terminal No. Wire	4	9	10	=	12
E57	Connector Name STOP LAMP RELAY	LUE	2 3		of Signal Name	ı	ı	ı	ı	
	ame S	olor B			Color	В	۳	≥	თ	
Connector No.	Connector N	Connector Color BLUE		Ö	Terminal No. Wire	-	2	ო	2	
]		
	Connector Name STOP LAMP SWITCH	ITE		8	Signal Name	ı	ı			
E38	ne STC	or WHI		4	Solor of Wire	g	<u>~</u>			
Connector No.	ector Nan	Connector Color WHITE		ć.	Terminal No. Wire	3	4			

Connector No. F48	Connector Name JOINT CONNECTOR-F02 Connector Color BLACK	F.S. (10 9 8 7 6)	Terminal No. Wire Signal Name	7	2 Y -	3 Y	- Y	7 Y -
F16	Connector Name TCM (TRANSMISSION CONTROL MODULE) Connector Color BLACK	33 34 35 38 37 38 39 40 47 48 22 34 25 26 27 28 29 30 45 46 13 14 15 16 17 18 19 20 43 44 3 4 5 6 7 8 9 10 41 42	of Signal Name	R RANGE SW	CAN-L	CAN-H	VIGN	VIGN
Connector No.	Connector Name TCM (T CONTF Connector Color BLACK	(新 H.S. (新 22 23 33 11 12 13 13 11 12 13 13 11 12 13 13 11 12 13 13 11 12 13 13 13 13 13 13 13 13 13 13 13 13 13	Terminal No. Wire	9 9	23 P	33 F	47 Y	48 Y
Connector No. F2	Connector Name WIRE TO WIRE Connector Color WHITE	H.S. 16 15 14 13 12 11 10 9	Terminal No. Wire Signal Name	- С	10 L –			

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EXL-211 2016 Altima Sedan Revision: November 2015



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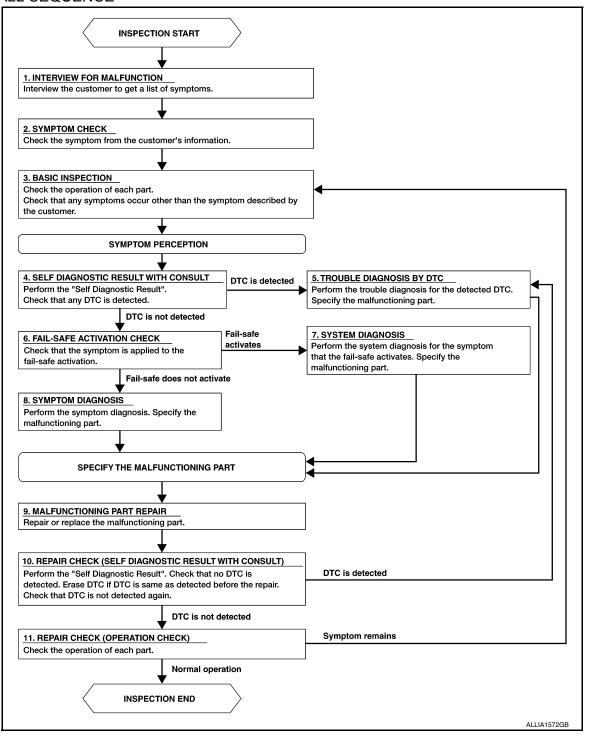
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BASIC INSPECTION

DIAGNOSIS AND REPAIR WORK FLOW

Work Flow

OVERALL SEQUENCE



DIAGNOSIS AND REPAIR WORK FLOW

< BASIC INSPECTION >

[LED HEADLAMP]

DETAILED FLOW

1.INTERVIEW FOR MALFUNCTION

Find out what the customer's concerns are.

>> GO TO 2.

2.SYMPTOM CHECK

Verify the symptom from the customer's information.

>> GO TO 3.

3.BASIC INSPECTION

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

>> GO TO 4.

4. SELF DIAGNOSTIC RESULT WITH CONSULT

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

Is any DTC detected?

YES >> GO TO 5.

NO >> GO TO 6.

5. TROUBLE DIAGNOSIS BY DTC

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

>> GO TO 9.

6. FAIL-SAFE ACTIVATION CHECK

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

Does the fail-safe activate?

YES >> GO TO 7.

NO >> GO TO 8.

7. SYSTEM DIAGNOSIS

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

>> GO TO 9.

8.SYMPTOM DIAGNOSIS

Perform the symptom diagnosis. Specify the malfunctioning part.

>> GO TO 9.

9. MALFUNCTIONING PART REPAIR

Repair or replace the malfunctioning part.

>> GO TO 10.

10. REPAIR CHECK (SELF DIAGNOSTIC RESULT WITH CONSULT)

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

Is any DTC detected?

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

LED HEADLAMP OPERATION INSPECTION

< BASIC INSPECTION > [LED HEADLAMP]

LED HEADLAMP OPERATION INSPECTION

Work Procedure

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.
- 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.
- Turn headlamp ON for approximately 30 minutes and then check that headlamp operates normally without difference in brightness between LH and RH, blinking or flickering.

Is the inspection result normal?

YES >> Inspection End.

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

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DTC/CIRCUIT DIAGNOSIS

HEADLAMP (HI) CIRCUIT

Component Function Check

1. CHECK HEADLAMP (HI) OPERATION

(P)With CONSULT

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

Hi: : Headlamp (HI) blinks (ON/OFF is repeated

1 second each.)

Off : Headlamp (HI) OFF

- 1. Start IPDM E/R auto active test. Refer to PCS-9, "Diagnosis Description".
- 2. Check that the headlamp (HI) blinks.

Is the inspection result normal?

YES >> Headlamp (HI) circuit is normal.

NO >> Refer to EXL-217, "Diagnosis Procedure".

Diagnosis Procedure

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

1. CHECK HEADLAMP (HI) FUSE

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

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

Is the inspection result normal?

YES >> GO TO 2.

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

2.CHECK HEADLAMP (HI) OUTPUT VOLTAGE

(P)With CONSULT

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

Fr	(+) Front combination lamp		(-)	Test	Voltage (Approx.)						
Conr	nector	Terminal				(лрргох.)					
RH	RH E212				Hi	Battery voltage					
KII	EZIZ	4	4	4	4	4	4	Ground	EXTERNAL	Off	0
	LH E217	Ground	LAMPS	Hi	Battery voltage						
				Off	0						

Revision: November 2015 EXL-217 2016 Altima Sedan

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HEADLAMP (HI) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

Is the inspection result normal?

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

3.CHECK HEADLAMP (HI) POWER SUPPLY CIRCUIT

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

Front combination lamp			IPDI	Continuity	
Con	nector	Terminal	Connector	Terminal	Continuity
RH	E212	E212	E200	80	Yes
LH	E217	4	E200	81	165

Is the inspection result normal?

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

NO >> Repair or replace harness.

4. CHECK FRONT COMBINATION LAMP (HI) GROUND CIRCUIT

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

Front combination lamp				Continuity
	Connector	Terminal	_	Continuity
RH	E212	Q	Ground	Yes
LH	E217	0	Ground	165

Is the inspection result normal?

YES >> Replace the headlamp bulb. Refer to EXL-254, "Bulb Replacement".

NO >> Repair or replace the harness or connector.

HEADLAMP (LO) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

HEADLAMP (LO) CIRCUIT

Component Function Check

INFOID:0000000012830927

1. CHECK HEADLAMP (LO) OPERATION

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(P)With CONSULT

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

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

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Without CONSULT

- Start IPDM E/R auto active test. Refer to <u>PCS-9</u>, "<u>Diagnosis Description</u>".
- Check that the headlamp (LO) is turned ON.

Is the inspection result normal?

YES >> Headlamp (LO) circuit is normal.

NO >> Refer to EXL-219, "Diagnosis Procedure".

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Diagnosis Procedure

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

1. CHECK HEADLAMP (LO) FUSE

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

Unit	Location	Fuse No.	Capacity
Headlamp LO (RH)	IPDM E/R	36	15A
Headlamp LO (LH)	IPDIVI E/K	37	15A

Is the inspection result normal?

YES >> GO TO 2.

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

2.CHECK HEADLAMP (LO) OUTPUT VOLTAGE

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(P)With CONSULT

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

(+) Front combination lamp		(-)	Test	Voltage (Approx.)								
Conr	nector	Terminal				(* (ÞÞ. 5711)						
RH E212				Lo	Battery voltage							
IXII	E212	1	1	1	1	1	1	1	Ground	EXTERNAL	Off	0
LH E217	'	Glound	LAMPS	Lo	Battery voltage							
LII	Ln E217				Off	0						

Is the inspection result normal?

YES >> Perform the LED headlamp diagnosis. Refer to EXL-223, "Diagnosis Procedure".

NO >> GO TO 3.

HEADLAMP (LO) CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

3.CHECK HEADLAMP (LO) POWER SUPPLY CIRCUIT

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

Front combination lamp		IPDM E/R		Continuity	
Conr	nector	Terminal	Connector	Terminal	Continuity
RH	E212		E200	75	Yes
LH	E217	1	E200	76	168

Is the inspection result normal?

YES >> Replace IPDM E/R. Refer to <u>PCS-47</u>, "Removal and Installation".

NO >> Repair or replace harness.

DAYTIME RUNNING LIGHT RELAY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

DAYTIME RUNNING LIGHT RELAY CIRCUIT

Component Function Check

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${f 1}$.CHECK DAYTIME RUNNING LIGHT OPERATION

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(P)CONSULT

- Select "EXTERNAL LAMPS" in "Active Test" mode of "IPDM E/R".
- While operating the test items, check daytime running light operation.

: EXTERNAL LAMPS Hi On Off : EXTERNAL LAMPS Off

Is the inspection result normal?

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

Diagnosis Procedure

INFOID:0000000012830930

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

1. CHECK DAYTIME RUNNING LIGHT RELAY FUSE

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

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

Is the inspection result normal?

YES >> GO TO 2.

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

2.CHECK DAYTIME RUNNING LIGHT RELAY POWER SUPPLY

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

(+) Daytime running light relay		(-)	Voltage (Approx.)	
Connector	Terminal		(/ (pp. 6/)	
E228	2	Ground	Battery voltage	
E220	5	Giodila	Dattery voltage	

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.CHECK DAYTIME RUNNING LIGHT RELAY

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

Is the inspection result normal?

YES >> GO TO 4.

>> Replace daytime running light relay.

$oldsymbol{4}.$ CHECK DAYTIME RUNNING LIGHT RELAY CONTROL SIGNAL OUTPUT

CONSULT

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

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EXL-221 Revision: November 2015 2016 Altima Sedan

DAYTIME RUNNING LIGHT RELAY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

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

	+) M E/R	(-)	Test item		Voltage (Approx.)
Connector	Terminal				, , ,
E10	E18 14 Ground	Ground EXTERNAL		On	0 V
£10		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-47, "Removal and Installation".

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

- 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.

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

Is the inspection result normal?

YES >> GO TO 6.

NO >> Repair or replace harness.

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

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

IPDI	/I E/R		Continuity
Connector	Terminal	Ground	Continuity
E201	85		No

Is the inspection result normal?

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

NO >> Repair or replace harness.

Component Inspection

INFOID:0000000012830931

1. CHECK DAYTIME RUNNING LIGHT RELAY

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

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

Is the inspection result normal?

YES >> Daytime running light relay is normal.

NO >> Replace daytime running light relay.

LED HEADLAMP

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

LED HEADLAMP

Diagnosis Procedure

INFOID:0000000012830932

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

1. CHECK HEADLAMP (LO) GROUND CIRCUIT

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

Front combination lamp				Continuity
Coni	nector	Terminal	Ground	Continuity
RH	E212	E	Ground	Yes
LH	E217	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-141</u>, "<u>LED Headlamp Control Module</u>".

Is the headlamp turned ON?

YES >> Replace LED headlamp control module. Refer to EXL-254, "Removal and Installation".

NO >> GO TO 3.

3.CHECK HEADLAMP

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

Is the headlamp turned ON?

YES >> Replace headlamp. Refer to EXL-254, "Removal and Installation".

NO >> LED headlamp is normal. Check headlamp control system.

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Revision: November 2015 EXL-223 2016 Altima Sedan

[LED HEADLAMP]

INFOID:0000000012830933

INFOID:0000000012830934

PARKING LAMP CIRCUIT

Component Function Check

1. CHECK PARKING LAMP OPERATION

(P)CONSULT

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

TAIL : Parking lamp ON
Off : Parking lamp OFF

Is the inspection result normal?

YES >> Parking lamp circuit is normal.

NO >> Refer to EXL-224, "Diagnosis Procedure".

Diagnosis Procedure

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

1. CHECK PARKING LAMP FUSE

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

Unit	Location	Fuse No.	Capacity	
Parking lampsSide 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
- Check continuity between IPDM E/R harness connector and ground.

IPDI	M E/R		Continuity
Connector	Terminal	Ground	No
E201	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

CONSULT

1. Disconnect front combination lamp connector.

PARKING LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

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- 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 item		Voltage (Approx.)
Connector	Terminal				, , ,
E201	90	Ground	EXTERNAL	TAIL	Battery voltage
⊑ 201	E201 90	Ground	LAMPS	Off	0 V

Is the inspection result normal?

YES >> GO TO 5.

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

5. CHECK PARKING LAMP POWER SUPPLY CIRCUIT

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

Front combination lamp			IPDN	Continuity	
Coni	nector	Terminal	Connector	Terminal	Continuity
RH	E212	2	E201	90	Yes
LH	E217	2	L201	30	163

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	E212	7	Ground	Yes
LH	E217	ı		165

Is the inspection result normal?

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

NO >> Repair or replace harness.

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FRONT SIDE MARKER LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

FRONT SIDE MARKER LAMP CIRCUIT

Component Function Check

INFOID:0000000012830935

1. CHECK PARKING LAMP OPERATION

Check that the parking lamp is turned ON.

Is the inspection result normal?

YES >> GO TO 2.

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

2.CHECK FRONT SIDE MARKER LAMP OPERATION

(P)CONSULT

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

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

Is the inspection result normal?

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

Diagnosis Procedure

INFOID:0000000012830936

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

1. CHECK FRONT SIDE MARKER LAMP BULB

Check applicable lamp bulb.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace bulb. Refer to EXL-254, "Bulb Replacement".

2.CHECK FRONT SIDE MARKER LAMP POWER SUPPLY CIRCUIT

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

Front combination lamp			IPDN	Continuity	
Coni	nector	Terminal	Connector	Terminal	Continuity
RH	E212	2	E201	90	Yes
LH	E217	2	L201	90	163

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3.CHECK FRONT SIDE MARKER LAMP GROUND CIRCUIT

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

Composter	Continuity
Connector Terminal Ground	o o
RH E212	Yes
LH E217	165

Is the inspection result normal?

FRONT SIDE MARKER LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

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

NO >> Repair or replace harness.

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[LED HEADLAMP]

TAIL LAMP CIRCUIT

Component Function Check

INFOID:0000000012830937

1. CHECK TAIL LAMP OPERATION

CONSULT

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

TAIL : Tail lamp ON
Off : Tail lamp OFF

Is the inspection result normal?

YES >> Tail lamp circuit is normal.

NO >> Refer to EXL-228, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012830938

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

1. CHECK PARKING LAMP OPERATION

Check that the parking lamp is turned ON.

Is the inspection result normal?

YES [When tail lamp RH or LH does not turn ON]>>GO TO 2.

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

2. CHECK TAIL LAMP FUSE

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

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

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

(P)CONSULT

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

R	(+) Rear combination lamp		(–) Test i		item	Voltage (Approx.)			
Coni	nector	Terminal				(, , , , , , , , , , , , , , , , , , ,			
RH	B45				TAIL	Battery voltage			
КП	D45	4	1	1	1	Ground	EXTERNAL	Off	0 V
	P20	, , , , , , , , , , , , , , , , , , ,	Giodila	LAMPS	TAIL	Battery voltage			
	LH B30				Off	0 V			

TAIL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

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Is the inspection result normal?

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

4. CHECK TAIL LAMP POWER SUPPLY CIRCUIT (SHORT)

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

	(+)		
IPDM E/R		(–)	Continuity
Connector	Terminal		
E18	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 CIRCUIT (OPEN)

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

	Rear combination lamp			IPDM E/R		
Coni	nector	Terminal	Connector	Terminal	Continuity	
RH	B45	1	E18	9	Yes	
LH	B30	1	E10	10	res	

Is the inspection result normal?

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

NO >> Repair or replace harness.

6.CHECK TAIL LAMP GROUND CIRCUIT

Check continuity between rear combination lamp harness connector and ground.

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

Is the inspection result normal?

YES >> Replace rear combination lamp. Refer to EXL-262, "Removal and Installation".

NO >> Repair or replace harness.

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[LED HEADLAMP]

INFOID:0000000012830939

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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-228, "Component Function Check".

2.CHECK LICENSE PLATE LAMP OPERATION

(P)CONSULT

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

2. While operating the lighting switch, check that the license plate lamp is turned ON.

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

Is the inspection result normal?

YES >> License plate lamp circuit is normal.

NO >> Refer to EXL-230, "Diagnosis Procedure".

Diagnosis Procedure

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

1. CHECK LICENSE PLATE LAMP BULB

Check the applicable lamp bulb.

Is the inspection result normal?

YES >> GO TO 2.

NO >> Replace bulb. Refer to EXL-261, "Removal and Installation".

2.CHECK LICENSE PLATE LAMP POWER SUPPLY CIRCUIT

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

License plate lamp			IPDN	Continuity	
Co	Connector Terminal		Connector	Terminal	Continuity
RH	B32	1	E18	٥	Yes
LH	B34	'	LIO	9	163

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		Continuity	
Connector Terminal		Terminal	Ground	Continuity
RH	B32	2	Ground	Yes
LH	B34	2		165

Is the inspection result normal?

LICENSE PLATE LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

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

NO >> Repair or replace harness.

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FRONT FOG LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

INFOID:0000000012830941

INFOID:0000000012830942

FRONT FOG LAMP CIRCUIT

Component Function Check

1. CHECK FRONT FOG LAMP OPERATION

(P)CONSULT

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

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

Is the inspection result normal?

YES >> Front fog lamp circuit is normal.

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

Diagnosis Procedure

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

1. CHECK FRONT FOG LAMP FUSE

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

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

Is the inspection result normal?

YES >> GO TO 2.

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

2.CHECK FRONT FOG LAMP OUTPUT VOLTAGE

(P)CONSULT

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

(+) Front fog lamp		(-)	Test item		Voltage (Approx.)			
Conr	nector	Terminal					(* .pp10/)	
RH	E353	1	1		Fog	Battery voltage		
IXII	L333	•	Ground	EXTERNAL	Off	0 V		
LH	E308	1		LAMPS	Fog	Battery voltage		
LII	E306	I			Off	0 V		

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 3.

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

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

FRONT FOG LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

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IPD	M E/R		Continuity
Connector	Terminal	Ground	Continuity
E200	78	Ground	No
L200	79		INU

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace harness.

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

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

Front fog lamp			IPDN	Continuity	
Coni	nector	Terminal	Connector	Terminal	Continuity
RH	E353	1	E200	78	Yes
LH	E308	1	E200	79	

Is the inspection result normal?

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

NO >> Repair or replace harness.

5. CHECK FRONT FOG LAMP GROUND CIRCUIT

Check continuity between front fog lamp harness connector and ground.

Front fog lamp				Continuity
Connector		Terminal	Ground	Continuity
RH	E353	2	Ground	Yes
LH	E308	2	=	168

Is the inspection result normal?

YES >> Replace bulb. Refer to EXL-256, "Removal and Installation".

NO >> Repair or replace harness.

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[LED HEADLAMP]

TURN SIGNAL LAMP CIRCUIT

Component Function Check

INFOID:0000000012830943

1. CHECK TURN SIGNAL LAMP

(P)CONSULT

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

LH: Turn signal lamp LH blinkingRH: Turn signal lamp RH blinkingOFF: The turn signal lamp OFF

Is the inspection result normal?

YES >> Turn signal lamp circuit is normal.

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

Diagnosis Procedure

INFOID:0000000012830944

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

1. CHECK TURN SIGNAL LAMP BULB

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

Is the bulb OK?

YES >> GO TO 2.

NO >> Replace the bulb.

2.CHECK TURN SIGNAL LAMP OUTPUT VOLTAGE

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

	Front combination lamp Connector Terminal		()	Valtage
Co			(-)	Voltage
LH	E217			
RH	E212	3	Ground	(V) 15 10 5 0 PKID0926E

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

With turn signal in mirror

Door mirror		(-)	Voltage
Connector	Terminal	(-)	voltage

TURN SIGNAL LAMP CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

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LH	D4			
RH	D107	6	Ground	(V) 15 10 5 0

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

	Rear combination lamp		()	Voltage	
Coi	nnector	Terminal	(-)	voltage	
LH	B30				
RH	B45	3	Ground	(V) 15 10 5 0	

Is the inspection result normal?

YES >> GO TO 5.

NO >> GO TO 3.

${f 3.}$ CHECK TURN SIGNAL LAMP POWER SUPPLY CIRCUIT

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

Front combination lamp			BCM		Continuity	
Connector		Terminal	Connector	Terminal	Continuity	
LH	E217	2	2 M3	M20	117	Yes
RH	E212	3	IVIZU	105	162	

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

With turn signal in mirror

	Door mirror lamp	ВСМ		Continuity		
Connector		Terminal	Connector	Terminal	Continuity	
LH	D4	6	M20	117	Yes	
RH	D107	6	IVIZU	105	168	

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

Rear combination lamp			ВСМ		Continuity
Connector		Terminal	Connector	Terminal	Continuity
LH	B30	2	M19	103	Yes
RH	B45	3	10119	92	res

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.

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TURN SIGNAL LAMP CIRCUIT

[LED HEADLAMP]

	Front combin	ation lamp		Continuity	
Conr	Connector Terminal		_	Continuity	
LH	E217	7	Ground	Yes	
RH	E212	I	Giodila	165	

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

With turn signal in mirror

Door mirror lamp				Continuity	
Conr	Connector Terminal		_	Continuity	
LH	D4	5	Ground	Yes	
RH	D107	5	Giodila	165	

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

Rear combination lamp				Continuity	
Conr	nector	Terminal	_	Continuity	
LH	B30	4	Ground	Yes	
RH	B45	'	Giodila	165	

Is the inspection result normal?

YES >> Replace the malfunctioning lamp.

NO >> Repair the harness or connector.

OPTICAL SENSOR

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

OPTICAL SENSOR

Component Function Check

INFOID:0000000012830945

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1. CHECK OPTICAL SENSOR SIGNAL WITH CONSULT

CONSULT

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

Monitor item	Condition		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		

^{*:} Illuminate the optical sensor. The value may be less than the standard value if brightness is weak.

Is the inspection result normal?

YES >> Optical sensor is normal.

>> Refer to EXL-237, "Diagnosis Procedure". NO

Diagnosis Procedure

INFOID:0000000012830946

Regarding Wiring Diagram information, refer to <a>EXL-174, "Wiring Diagram".

1. CHECK OPTICAL SENSOR POWER SUPPLY INPUT

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

Optica	l sensor	(-)	Voltage (Approx.)	
Connector	Terminal			
M66	1	Ground	5 V	

Is the inspection result normal?

YES >> GO TO 2.

NO >> GO TO 4.

2.CHECK OPTICAL SENSOR GROUND INPUT

Check voltage between optical sensor harness connector and ground.

	(+)		Voltage (Approx.)	
Optio	cal sensor	(–)		
Connector	Terminal		()	
M66	3	Ground	0 V	

Is the inspection result normal?

YES >> GO TO 3.

NO >> GO TO 6.

3.CHECK OPTICAL SENSOR SIGNAL OUTPUT

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

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(+) Optical sensor		(–)	Condition		Voltage (Approx.)	
Connector	Terminal				(11 - 7	
M66	2	Ground	Optical sensor	When illuminating	3.1 V or more *	
10100	2	Ground	Optical selisor	When shutting off light	0.6 V or less	

^{*:} Illuminate the optical sensor. The value may be less than the standard if brightness is weak.

Is the inspection result normal?

YES >> GO TO 7.

NO >> Replace the optical sensor. Refer to EXL-268, "Removal and Installation".

4. CHECK OPTICAL SENSOR (OPEN) CIRCUIT

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

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

Is the inspection result normal?

YES >> GO TO 5.

NO >> Repair or replace harness.

CHECK OPTICAL SENSOR (SHORT) CIRCUIT

Check continuity between optical sensor harness connector and ground.

Optical sensor			Continuity
Connector	Terminal	Ground	Continuity
M66	1		No

Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-81, "Removal and Installation"</u>.

NO >> Repair or replace harness.

6.CHECK OPTICAL SENSOR GROUND CIRCUIT

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

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

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-81, "Removal and Installation".

NO >> Repair or replace harness.

7. CHECK OPTICAL SENSOR SIGNAL CIRCUIT (OPEN)

- 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 >

[LED HEADLAMP]

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

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Is the inspection result normal?

YES >> GO TO 8.

NO >> Repair or replace harness.

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8.CHECK OPTICAL SENSOR CIRCUIT (SHORT)

Check continuity between optical sensor harness connector and ground.

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Optical sensor			Continuity
Connector	Terminal	Ground	Continuity
M66	2		No

Is the inspection result normal?

YES >> Replace BCM. Refer to <u>BCS-81, "Removal and Installation"</u>.

NO >> Repair or replace harness.

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HAZARD SWITCH

Component Function Check

INFOID:0000000012830947

1. CHECK HAZARD SWITCH SIGNAL WITH CONSULT

CONSULT

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

Monitor item	Con	Monitor status	
HAZARD SW	Hazard switch	ON	On
HAZAKD 3W	Hazard Switch	OFF	Off

Is the inspection result normal?

YES >> Hazard switch circuit is normal.

NO >> Refer to EXL-240, "Diagnosis Procedure".

Diagnosis Procedure

INFOID:0000000012830948

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

1. CHECK HAZARD SWITCH SIGNAL INPUT

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

(+) Hazard switch		(-)	Voltage (Approx.)
Connector	Terminal		(* PP : 5/11)
M54	2	Ground	Battery voltage

Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 2.

2.CHECK HAZARD SWITCH SIGNAL CIRCUIT (OPEN)

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

Hazar	d switch	В	CM	Continuity
Connector	Terminal	Connector	Terminal	Continuity
M54	2	M17	36	Yes

Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace harness.

3. CHECK HAZARD SWITCH SIGNAL CIRCUIT (SHORT)

Check continuity between hazard switch harness connector and ground.

Hazard switch			Continuity
Connector	Terminal	Ground	Continuity
M54	2		No

HAZARD SWITCH

< DTC/CIRCUIT DIAGNOSIS >

[LED HEADLAMP]

Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-81, "Removal and Installation".

NO >> Repair or replace harness.

4. CHECK HAZARD SWITCH GROUND CIRCUIT

Check continuity between hazard switch harness connector and ground.

Hazard switch			Continuity
Connector	Terminal	Ground	Continuity
M54	1		Yes

Is the inspection result normal?

YES >> Replace hazard switch. Refer to EXL-267, "Removal and Installation".

NO >> Repair or replace harness.

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EXTERIOR LIGHTING SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[LED HEADLAMP]

SYMPTOM DIAGNOSIS

EXTERIOR LIGHTING SYSTEM SYMPTOMS

Symptom Table

NOTE:

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

Symp	otom	Possible cause	Inspection item	
Headlamp (HI) is not turned ON	One side	Fuse Headlamp (HI) power supply circuit Front combination lamp internal circuit Harness IPDM E/R	Headlamp (HI) circuit Refer to EXL-217, "Component Function Check".	
	Both sides	Symptom diagnosis "BOTH SIDE HEADLAMPS (HI) AF Refer to EXL-246, "Diagnosis Proc		
High beam indicator lamp [Headlamp (HI) is turned C		Combination meter	Combination meter "Data Monitor""HI-BEAM IND" "BCM (HEAD LAMP) "Active Test""HEAD LAMP"	
Headlamp (LO) is not turned ON	One side	Fuse Headlamp (LO) power supply circuit Front combination lamp internal circuit LED (headlamp low) LED headlamp control module Harness IPDM E/R	Headlamp (LO) circuit Refer to EXL-219, "Component Function Check".	
	Both sides	Symptom diagnosis "BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON" Refer to EXL-247, "Diagnosis Procedure".		
Headlamp (HI) and (LO) is not turned ON		LED headlamp ground circuit (headlamp HI) Front combination lamp internal circuit LED headlamp control module (headlamp HI) Harness	LED headlamp Refer to EXL-223, "Diagnosis Procedure".	
Headlamp warning remains ON [Headlamp (LO) is turned ON]		LED headlamp warning signal circuit Front combination lamp internal circuit LED headlamp control module Harness Combination meter	Headlamp warning Refer to EXL-142, "HEADLAMP SYSTEM: System Description".	
Each lamp is not turned ON/OFF with lighting switch AUTO		Combination switch input/out- put signal circuit Combination switch BCM	Combination switch Refer to BCS-79, "Symptom Table".	
		Optical sensor power supply/ ground/signal circuit Optical sensor BCM	Optical sensor Refer to EXL-237, "Component Function Check".	

EXTERIOR LIGHTING SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[LED HEADLAMP]

Symptom	Possible cause	Inspection item	
Parking lamp is not turned ON	 Fuse Parking lamp power supply/ ground circuit Front combination lamp internal circuit LED (parking lamp) Control circuit Harness IPDM E/R 	Parking lamp circuit Refer to EXL-224, "Component Function Check".	
Side marker lamp is not turned ON Parking lamp is turned ON]	Front combination lamp internal circuit Side marker lamp Control circuit Harness	Replace front combination lamp Refer to EXL-254, "Removal and In- 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 EXL-228, "Component Function Check".	
License plate lamp is not turned ON Tail lamp is turned ON]	 License plate lamp power supply/ground circuit License plate lamp bulb License plate lamp bulb socket IPDM E/R 	License plate lamp circuit Refer to EXL-230, "Component Function Check".	
Parking lamp, license plate lamp, side marker lamp and tail lamp are not turned ON	Symptom diagnosis "PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMPS ARE NOT TURNED ON" Refer to EXL-248, "Diagnosis Procedure".		
Position lamp indicator is not turned ON (Parking lamp, license plate lamp, side marker lamp and tail lamp are turned ON)	Combination meter	Combination meter "Data Monitor" "LIGHT IND" BCM (HEAD LAMP) "Active Test" "TAIL LAMP"	
Daytime running light is not turned ON	Fuse Daytime running light relay Daytime running light relay power supply/control signal circuit Daytime running light power supply/ground circuit Front combination lamp internal circuit LED (daytime running light) Control circuit Harness IPDM E/R BCM ECM Combination meter	 Daytime running light circuit Refer to <u>EXL-221</u>, "Component <u>Function Check"</u>. BCM (HEAD LAMP) "Data Monitor" ENGINE STATE" Combination meter "Data Monitor" PKB SW" 	
Back-up lamp is not turned ON	Back-up lamp power supply/ ground circuit Rear combination lamp internal circuit Back-up lamp Harness Joint connector TCM	_	

Revision: November 2015 **EXL-243** 2016 Altima Sedan

EXTERIOR LIGHTING SYSTEM SYMPTOMS

< SYMPTOM DIAGNOSIS >

[LED HEADLAMP]

Symp	tom	Possible cause	Inspection item
Turn signal lamp does not blink	Indicator lamp is normal (Applicable side per- forms high flasher acti- vation)	Front turn signal lamp Front turn signal lamp power supply/ground circuit Front turn signal lamp Side turn signal lamp Side turn signal lamp power supply/ground circuit Side turn signal lamp Rear turn signal lamp Rear turn signal lamp Bear turn signal lamp Rear turn signal lamp power supply/ground circuit Bulb (rear turn signal lamp) Rear turn signal lamp bulb socket/harness	Turn signal lamp circuit Refer to EXL-234, "Component Function Check".
	Indicator lamp is included	Combination switch input/out- put signal circuit Combination switch BCM	Combination switch Refer to BCS-79, "Symptom Table".
	One side	Combination meter	_
Turn signal indicator lamp does not blink	Both sides (Always)	Turn signal indicatorBCMCombination meter	 Combination meter "Data Monitor""TURN IND" BCM (FLASHER) "Active Test"FLASHER"
(Turn signal lamp is nor- mal)	Both sides (Only when activating hazard warning lamp with ignition switch OFF)	Combination meter power sup- ply/ground circuit Combination meter	Combination meter Power supply and ground circuit Refer to MWI-59, "COMBINATION METER: Diagnosis Procedure".
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 EXL-240, "Component Function Check".
Front fog lamp is not	One side	 Front fog lamp power supply/ ground circuit Front fog lamp IPDM E/R 	Front fog lamp circuit Refer to EXL-232, "Component Function Check".
turned ON	Both sides	Symptom diagnosis "BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON" Refer to EXL-249, "Diagnosis Procedure".	
Front fog lamp indicator lamp is not turned ON (Front fog lamp is turned ON)		Combination meter	 Combination meter "Data Monitor" FR FOG IND" BCM (HEAD LAMP) "Active Test" FR FOG LAMP"

NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS >

[LED HEADLAMP]

NORMAL OPERATING CONDITION

Description INFOID:000000012830950

LED HEADLAMP

- LED brightness and color may slightly change until the temperature becomes stable. This is not a malfunction.
- Illumination time lag may occur between right and left. This is not a malfunction.
- Brightness may be reduced due to age deterioration of LED.

AUTO LIGHT SYSTEM

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

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BOTH SIDE HEADLAMPS (HI) ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

[LED HEADLAMP]

BOTH SIDE HEADLAMPS (HI) ARE NOT TURNED ON

Description INFOID:000000012830951

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

Diagnosis Procedure

INFOID:0000000012830952

1. COMBINATION SWITCH INSPECTION

Check combination switch. Refer to BCS-79, "Symptom Table".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

2.CHECK HEADLAMP (HI) REQUEST SIGNAL INPUT

(I) With CONSULT

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

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

Is the inspection result normal?

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

NO >> Replace BCM. Refer to BCS-81, "Removal and Installation".

BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS >

[LED HEADLAMP]

BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

Description INFOID:000000012830953

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

Diagnosis Procedure

INFOID:0000000012830954

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1. CHECK COMBINATION SWITCH

Check combination switch. Refer to BCS-79, "Symptom Table".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

2.CHECK HEADLAMP (LO) REQUEST SIGNAL INPUT

(P)With CONSULT

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

Monitor item	Condition		Monitor status
HL LO REQ	Lighting switch	2ND	On
		OFF	Off

Is the inspection result normal?

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

NO >> Replace BCM. Refer to BCS-81, "Removal and Installation".

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

< SYMPTOM DIAGNOSIS >

[LED HEADLAMP]

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

Description INFOID:000000012830955

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

Diagnosis Procedure

INFOID:0000000012830956

1. COMBINATION SWITCH INSPECTION

Check combination switch. Refer to BCS-79, "Symptom Table".

Is the combination switch normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

2.CHECK TAIL LAMP RELAY REQUEST SIGNAL INPUT

(P)With CONSULT

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

Monitor item	Condition		Monitor status
TAIL & CLR REQ	Lighting switch	1ST	On
		OFF	Off

Is the inspection result normal?

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

NO >> Replace BCM. Refer to BCS-81, "Removal and Installation".

BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS > [LED HEADLAMP]

BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

Description INFOID:000000012830957

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

Diagnosis Procedure

INFOID:0000000012830958

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1. COMBINATION SWITCH INSPECTION

Check combination switch. Refer to BCS-79, "Symptom Table".

Is the inspection result normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

2.CHECK FRONT FOG LAMP REQUEST SIGNAL INPUT

(P)With CONSULT

- 1. Select "FR FOG REQ" in "Data Monitor" mode of "IPDM E/R".
- 2. While operating the front fog lamp switch, check the monitor status.

Monitor item	Condition		Monitor status
FR FOG REQ	Front fog lamp switch (With lighting switch 1ST)	ON	On
		OFF	Off

Is the item status normal?

YES >> Perform the front fog lamp diagnosis. Refer to <a>EXL-232, "Diagnosis Procedure".

NO >> Replace BCM. Refer to <u>BCS-81, "Removal and Installation"</u>.

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[LED HEADLAMP]

PERIODIC MAINTENANCE

HEADLAMP AIMING ADJUSTMENT

Aiming Adjustment INFOID:000000012851509

PREPARATION BEFORE ADJUSTING

Before performing aiming adjustment, check the following:

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

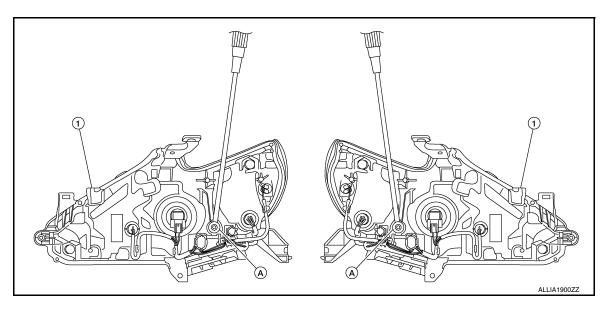
CAUTION:

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

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

NOTE:

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



1. Front combination lamp

A. Suitable tool (for aiming adjustment) B. Adjusting screw

Aiming Adjustment procedure

1. Position the screen.

NOTE:

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

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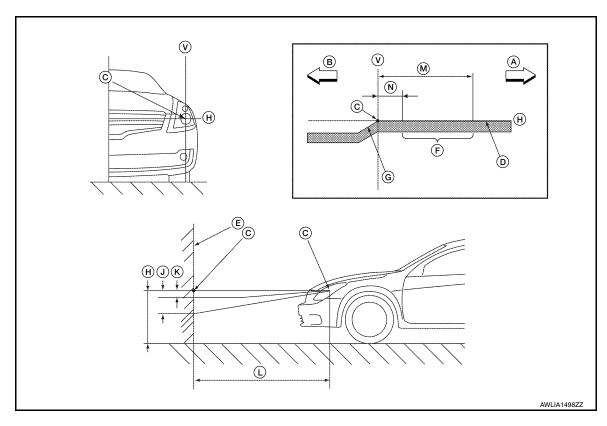
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CAUTION:

Do not cover the lens surface with tape, etc. The lens is made of resin. ${\bf NOTE}$:

- Aim each headlamp individually and ensure other headlamp beam pattern is blocked from screen.
- For horizontal aiming, adjust headlamp until beam pattern is at horizontal center point.



A. Right

G. Step

- B. Left
- D. Cutoff line
- H. Horizontal center line of head lamp
- K. -13.3 mm (-0.52 in)
- L. 10 m (33 ft)

Screen

- N. 133 mm (5.24 in) V. Vertical center line of headlamp
- C. Center of headlamp bulb (H-V point)
 - F. Aim evaluation segment
 - J. 53.2 mm (2.09 in)
 - M. 399 mm (15.71 in)
- Basic illuminating area for adjustment should be within the range shown on the aiming chart. Adjust headlamps accordingly.

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[LED HEADLAMP]

FRONT FOG LAMP

Aiming Adjustment

INFOID:0000000012851510

PREPARATION BEFORE ADJUSTING

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

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

CAUTION:

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

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

NOTE:

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

Aiming Adjustment Procedure

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.

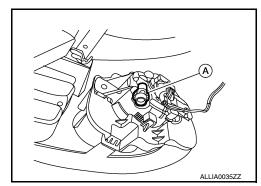
NOTE:

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

< PERIODIC MAINTENANCE >

[LED HEADLAMP]

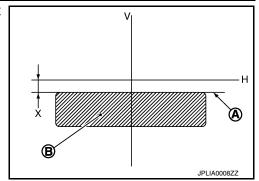
5. Adjust the cutoff line height (A) with the aiming adjustment screw so that the distance (X) between the horizontal center line of front fog lamp (H) and (A) becomes 100 mm (4 in).

A : Cutoff line

B : High illuminance area

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

X : Cutoff line height



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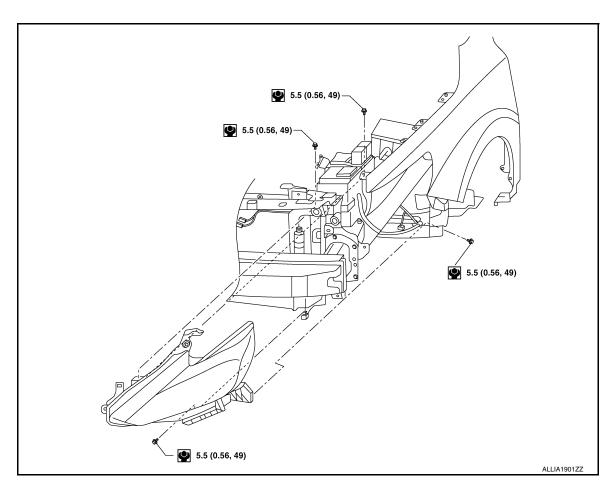
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REMOVAL AND INSTALLATION

FRONT COMBINATION LAMP

Exploded View



1. Front combination lamp

NOTE:

LH shown, RH similar.

Removal and Installation

REMOVAL

- 1. Remove front bumper fascia. Refer to EXT-24, "Exploded View".
- 2. Remove front combination lamp bolts.
- 3. Pull front combination lamp forward.
- 4. Disconnect harness connectors from front combination lamp and remove.

INSTALLATION

Installation is in the reverse order of removal.

NOTE:

After installation, perform headlamp aiming adjustment. Refer to EXL-250, "Aiming Adjustment".

Bulb Replacement

INFOID:0000000012830964

INFOID:0000000012830963

WARNING:

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

FRONT COMBINATION LAMP

< REMOVAL AND INSTALLATION >

[LED HEADLAMP]

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

HEADLAMP (LOW BEAM) BULB

The headlamp (low beam) bulb is LED and not serviced separately. Refer to <u>EXL-254</u>, "Removal and Installation".

HEADLAMP (HIGH BEAM) BULB

Removal

- 1. Remove front combination lamp. Refer to EXL-254, "Removal and Installation".
- 2. Rotate bulb counterclockwise and remove from front combination lamp.
- 3. Disconnect the harness connector from the high beam lamp bulb and remove.

Installation

Installation is in the reverse order of removal.

SIDE MARKER LAMP BULB

Removal

- 1. Remove front combination lamp. Refer to EXL-254, "Removal and Installation".
- 2. Rotate bulb socket counterclockwise and remove from front combination lamp.
- 3. Remove bulb from bulb socket.

Installation

Installation is in the reverse order of removal.

TURN SIGNAL LAMP BULB

Removal

- Remove front combination lamp. Refer to EXL-254, "Removal and Installation".
- 2. Rotate bulb socket counterclockwise and remove from front combination lamp.
- 3. Remove bulb from bulb socket.

Installation

Installation is in the reverse order of removal.

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Revision: November 2015 EXL-255 2016 Altima Sedan

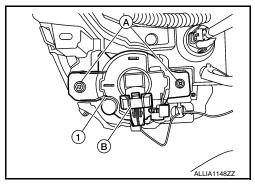
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FRONT FOG LAMP

Removal and Installation

REMOVAL

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



INSTALLATION

Installation is in the reverse order of removal.

NOTE:

After installing, perform fog lamp aiming adjustment. Refer to EXL-115, "Aiming Adjustment".

Bulb Replacement

INFOID:0000000012830967

WARNING:

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

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

FRONT FOG LAMP BULB

Removal

- Remove the front under cover. Refer to EXT-38, "FRONT UNDER COVER: Removal and Installation"
- Remove the front fender protector side cover. <u>EXT-36</u>, "FENDER PROTECTOR: Exploded View".
- 3. Position the front fender protector aside. Refer to EXT-36, "FENDER PROTECTOR: Removal and Installation".
- 4. Disconnect the harness connector from the front fog lamp bulb.
- 5. Rotate the front fog lamp bulb socket counterclockwise and remove.

Installation

Installation is in the reverse order of removal.

CAUTION:

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

DAYTIME LIGHT BULB (CANADA ONLY)

Removal

- 1. Remove the front under cover. Refer to EXT-38, "FRONT UNDER COVER: Removal and Installation"
- 2. Remove the front fender protector side cover. <u>EXT-36</u>, "FENDER PROTECTOR: Exploded View".
- Position the front fender protector aside. Refer to EXT-36, "FENDER PROTECTOR: Removal and Installation".

FRONT FOG LAMP

< REMOVAL AND INSTALLATION >

[LED HEADLAMP]

- 4. Disconnect the harness connector from the daytime light lamp.
- 5. Release the pawls and remove the daytime light lamp bulb.

Installation

Installation is in the reverse order of removal.

CAUTION:

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

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DOOR MIRROR TURN SIGNAL LAMP

< REMOVAL AND INSTALLATION >

[LED HEADLAMP]

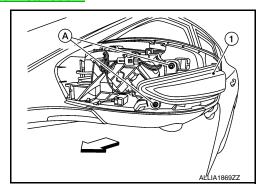
DOOR MIRROR TURN SIGNAL LAMP

Removal and Installation

INFOID:0000000012830969

REMOVAL

- 1. Remove door mirror rear finisher. Refer to MIR-23, "Removal and Installation".
- 2. Remove screws (A) from door mirror turn signal lamp (1).



3. Disconnect the harness connector from the door mirror turn signal lamp and remove.

INSTALLATION

Installation is in the reverse order of removal.

Bulb Replacement

INFOID:0000000012855539

DOOR MIRROR SIDE TURN SIGNAL LAMP

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

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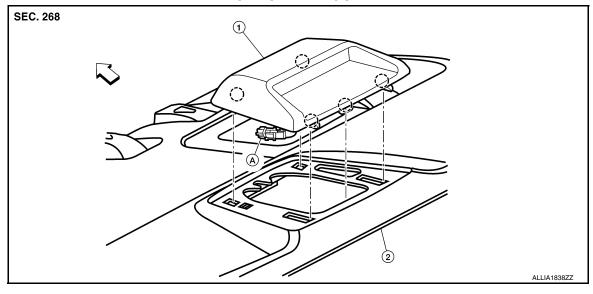
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HIGH-MOUNTED STOP LAMP

Exploded View INFOID:0000000012830979

PRACEL SHELF MOUNTED



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

Removal and Installation

REMOVAL

Release pawls and lift up on high-mounted stop lamp.

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

INSTALLATION

Bulb Replacement

Installation is in the reverse order of removal.

HIGH-MOUNTED STOP LAMP BULB

The high-mounted stop lamp bulb is LED and not serviced separately. Refer to EXL-259, "Removal and Installation".

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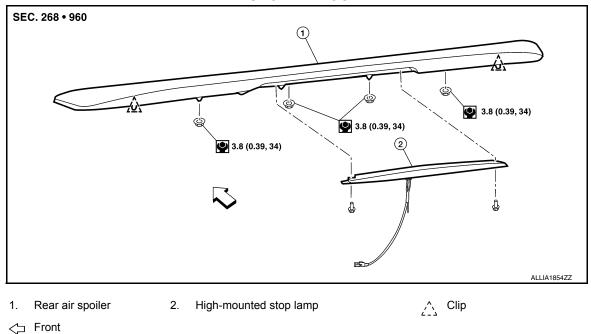
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Exploded View

REAR SPOILER MOUNTED



Removal and Installation

INFOID:0000000012830983

REMOVAL

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

INSTALLATION

Installation is in the reverse order of removal.

Bulb Replacement - With Rear Spoiler

INFOID:0000000012830984

HIGH-MOUNTED STOP LAMP BULB

The high-mounted stop lamp bulb is LED and not serviced separately. Refer to <u>EXL-260</u>, "Removal and Installation".

LICENSE PLATE LAMP

< REMOVAL AND INSTALLATION >

[LED HEADLAMP]

LICENSE PLATE LAMP

Removal and Installation

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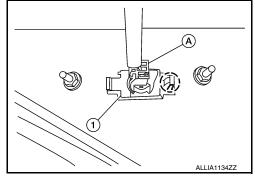
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REMOVAL

- 1. Remove the license lamp finisher. Refer to <a>EXT-46, "Removal and Installation".
- 2. Disconnect the harness connector (A) from the license plate lamp (1).
- 3. Release pawl and remove.

(): Pawl



INSTALLATION

Installation is in the reverse order of removal.

Bulb Replacement

INFOID:0000000012830987

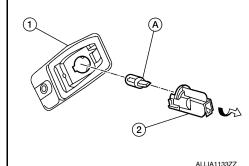
WARNING:

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

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

REMOVAL

- Position trunk lid finisher (if equipped) aside. Refer to <u>INT-33, "Exploded View"</u>.
- 2. Rotate license plate lamp bulb socket (2) counterclockwise and remove from license plate lamp (1).
- 3. Remove license plate lamp bulb (A) from license plate lamp bulb socket (2).



INSTALLATION

Installation is in the reverse order of removal.

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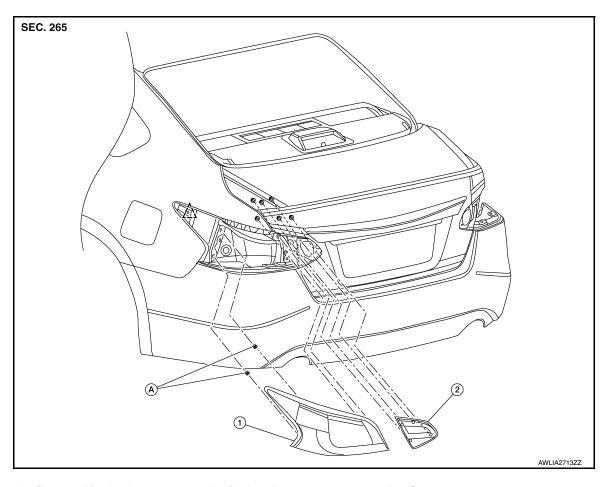
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REAR COMBINATION LAMP

Exploded View



Rear combination lamp

2. Back-up lamp

A. Grommet

رُےٰے Clip

RH shown, LH similar.

Removal and Installation

INFOID:0000000012830977

REMOVAL

NOTE:

- 1. Partially remove trunk side finisher.
- 2. Remove rear combination lamp nuts.
- 3. Pull rear combination lamp rearward to release clip and locators.
- 4. Disconnect the harness connector from the rear combination lamp and remove.

INSTALLATION

Installation is in the reverse order of removal.

Bulb Replacement

INFOID:0000000012830978

WARNING:

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

Do not touch glass surface of bulb with bare hands or allow oil or grease to get on it to prevent damage to bulb.

REAR COMBINATION LAMP

< REMOVAL AND INSTALLATION >

[LED HEADLAMP]

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• Do not leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect performance of lamp. When replacing bulb, be sure to replace it with new one.

REAR TURN SIGNAL LAMP BULB

Removal

- 1. Remove the rear combination lamp. Refer to EXL-125, "Removal and Installation".
- 2. Rotate the rear turn signal lamp bulb socket counterclockwise and remove.
- Remove the rear turn signal lamp bulb from the bulb socket.

Installation

Installation is in the reverse order of removal.

CAUTION:

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

STOP/TAIL LAMP BULB

Removal

- Remove the rear combination lamp. Refer to <u>EXL-125</u>, "Removal and Installation".
- 2. Rotate the stop/tail lamp bulb socket counterclockwise and remove.
- 3. Remove the stop/tail lamp bulb from the bulb socket.

Installation

Installation is in the reverse order of removal.

CAUTION:

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

SIDE MARKER LAMP BULB

Removal

- Remove the rear combination lamp. Refer to <u>EXL-125</u>, "Removal and Installation".
- Rotate the side marker lamp bulb socket counterclockwise and remove.
- 3. Remove the side marker lamp bulb from the bulb socket.

Installation

Installation is in the reverse order of removal.

CAUTION:

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

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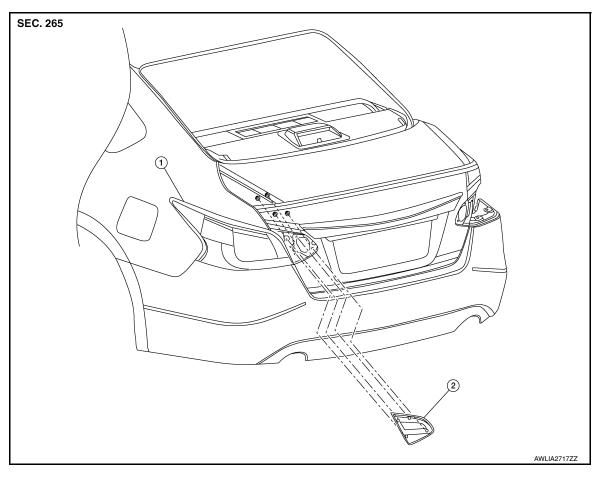
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Revision: November 2015 EXL-263 2016 Altima Sedan

BACK-UP LAMP

Exploded View



1. Rear combination lamp

Back-up lamp

______ Clip

Removal and Installation

REMOVAL

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

INSTALLATION

Installation is in the reverse order of removal.

Bulb Replacement

INFOID:0000000012830990

INFOID:0000000012830989

WARNING:

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

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

REMOVAL

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

BACK-UP LAMP

< REMOVAL AND INSTALLATION >

[LED HEADLAMP]

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.

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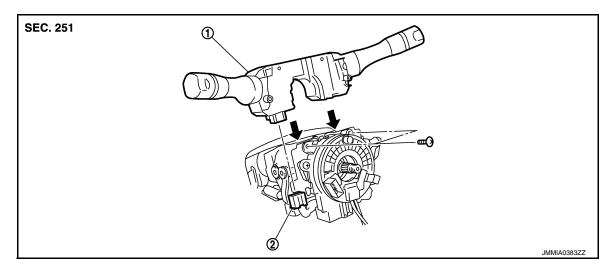
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COMBINATION SWITCH

Exploded View



1. Combination switch

2. Combination switch harness connector

NOTE

Shown with the steering wheel removed for clarity only.

Removal and Installation

INFOID:0000000012830973

REMOVAL

CAUTION:

- Before servicing, turn the ignition switch OFF, disconnect both battery terminals and wait at least three minutes.
- Do not use air tools or electric tools for servicing.
- Disconnect both the negative and positive battery terminals, then wait at least three minutes. Refer to <u>PG-</u> 81, "Removal and Installation".
- 2. Remove the steering column covers. Refer to IP-17, "Removal and Installation".
- 3. Rotate steering wheel clockwise to access first combination switch bolt and remove.
- 4. Rotate steering wheel counter-clockwise to access second combination switch bolt and remove.
- 5. Disconnect the harness connector from the combination switch and remove.

INSTALLATION

Installation is in the reverse order of removal.

CAUTION:

- After the work is completed, make sure no system malfunction is detected by air bag warning lamp.
- In case a malfunction is detected by the air bag warning lamp, reset with the self-diagnosis function and delete the memory with CONSULT.
- If a malfunction is still detected after the above operation, perform self-diagnosis to repair malfunctions. Refer to SRC-16, "SRS Final Check".

HAZARD SWITCH

< REMOVAL AND INSTALLATION >

[LED HEADLAMP]

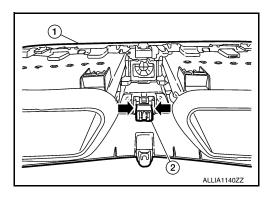
HAZARD SWITCH

Removal and Installation

INFOID:0000000012830975

REMOVAL

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



INSTALLATION

Installation is in the reverse order of removal.

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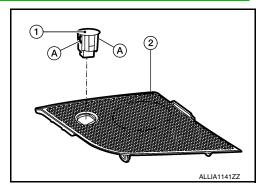
OPTICAL SENSOR

Removal and Installation

INFOID:0000000012830971

REMOVAL

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



INSTALLATION

Installation is in the reverse order of removal.

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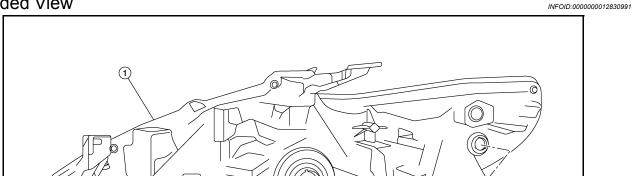
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UNIT DISASSEMBLY AND ASSEMBLY

FRONT COMBINATION LAMP

Exploded View



- 1. Front combination lamp High beam lamp bulb
- 2. Turn signal lamp bulb
- Side marker lamp bulb
- 3. Turn signal lamp bulb socket

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Side marker lamp bulb sock-

NOTE:

LH shown, RH similar.

Disassembly and Assembly

INFOID:0000000012830992

WARNING:

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

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

The headlamp (low beam) bulb is LED and not serviced separately. Refer to EXL-254, "Removal and Installation".

DISASSEMBLY

- Remove front combination lamp. Refer to EXL-254, "Removal and Installation". 1.
- Rotate headlamp (high beam) bulb counterclockwise and remove.
- 3. Disconnect the harness connector from the headlamp (high beam) bulb.
- 4. Rotate turn signal lamp bulb socket counterclockwise and remove.
- Remove turn signal lamp bulb from bulb socket. 5.
- Rotate side marker lamp bulb socket counterclockwise and remove.

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FRONT COMBINATION LAMP

< UNIT DISASSEMBLY AND ASSEMBLY >

[LED HEADLAMP]

7. Remove side marker lamp bulb from bulb socket.

ASSEMBLY

Assembly is in the reverse order of disassembly.

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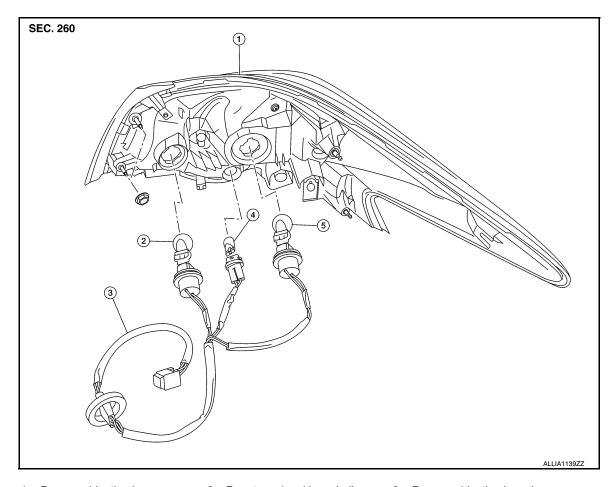
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REAR COMBINATION LAMP

Exploded View INFOID:0000000012830993



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

Disassembly and Assembly

INFOID:0000000012830994

REAR COMBINATION LAMP

WARNING:

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

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

Disassembly

- 1. Remove rear combination lamp. Refer to EXL-125, "Removal and Installation".
- 2. Rotate rear turn signal lamp bulb socket counterclockwise to remove from rear combination lamp.
- 3. Remove the rear turn signal lamp bulb from bulb socket.
- 4. Rotate side mark lamp bulb socket counterclockwise to remove from rear combination lamp.
- 5. Remove the side mark lamp bulb from bulb socket.
- Rotate stop/tail lamp bulb socket counterclockwise to remove from rear combination lamp.
- 7. Remove the stop/tail lamp bulb from bulb socket.

Assembly

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REAR COMBINATION LAMP

< UNIT DISASSEMBLY AND ASSEMBLY >

[LED HEADLAMP]

Assembly is in the reverse order of disassembly.

CAUTION:

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

ASSEMBLY

Assembly is in the reverse order of disassembly.

SERVICE DATA AND SPECIFICATIONS (SDS)

< SERVICE DATA AND SPECIFICATIONS (SDS)

[LED HEADLAMP]

INFOID:0000000012830997

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SERVICE DATA AND SPECIFICATIONS (SDS)

SERVICE DATA AND SPECIFICATIONS (SDS)

Bulb Specifications

Item		Wattage (W)
Front combination lamp	High beam	65
	Low beam	_
	Turn signal/parking lamp	28/8
	Side marker lamp	5
	Daytime running lamp	_
Front fog lamp (if equipped)		19
Daytime running lamp built-in fog lamp (Canada only)		_
Door mirror turn signal lamp (if equipped)		_
Rear combination lamp	Stop/Tail lamp	21
	Side marker lamp	5
	Turn signal lamp	21
Back-up lamp		16
License plate lamp		5
High-mounted stop lamp	Parcel shelf mounted	_
	Rear spoiler mounted	_

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

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