

D

Е

F

Н

K

N

0

Р

### **CONTENTS**

**XENON TYPE** PRECAUTION ...... 4 PRECAUTIONS ...... 4 Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TEN-SIONER" .....4 General precautions for service operations ......4 Precaution for Work ......5 PREPARATION ......6 PREPARATION ...... 6 Special Service Tool ......6 SYSTEM DESCRIPTION ......7 COMPONENT PARTS ......7 Component Parts Location ......7 Component Description ......8 SYSTEM ......9 HEADLAMP SYSTEM ......9 HEADLAMP SYSTEM: System Diagram ......9 HEADLAMP SYSTEM: System Description ......9 AUTO LIGHT SYSTEM .....9 AUTO LIGHT SYSTEM: System Diagram ......10 AUTO LIGHT SYSTEM: System Description ....... 10 DAYTIME RUNNING LIGHT SYSTEM ......10 DAYTIME RUNNING LIGHT SYSTEM: System Diagram ......10 DAYTIME RUNNING LIGHT SYSTEM: System Description ......10 HEADLAMP AIMING CONTROL (MANUAL) .......11 HEADLAMP AIMING CONTROL (MANUAL): System Diagram ......11 HEADLAMP AIMING CONTROL (MANUAL): System Description ......11

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM11 TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM: System Diagram11 TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM: System Description11	
PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMP SYSTEM	
FRONT FOG LAMP SYSTEM12 FRONT FOG LAMP SYSTEM : System Diagram12 FRONT FOG LAMP SYSTEM : System Description	
TRAILER TOW SYSTEM12 TRAILER TOW SYSTEM: System Diagram13 TRAILER TOW SYSTEM: System Description13	ŀ
DIAGNOSIS SYSTEM (BCM)14	
COMMON ITEM14 COMMON ITEM : CONSULT Function (BCM - COMMON ITEM)14	
HEADLAMP        15           HEADLAMP : CONSULT Function (BCM - HEAD-LAMP)	
FLASHER	
DIAGNOSIS SYSTEM (IPDM E/R)	
ECU DIAGNOSIS INFORMATION21	

BCM, IPDM E/R2	1 Component Function Check
List of ECU Reference2	Diagnosis Procedure
WIRING DIAGRAM2	2 XENON HEADLAMP130
	Description130
HEADLAMP2	Diagnosis Procedure
Wiring Diagram2	DAYTIME RUNNING LIGHT RELAY CIRCUIT
DAYTIME RUNNING LIGHT SYSTEM3	
Wiring Diagram	
	Diagnosis Procedure 131
AUTO LIGHT SYSTEM4	Component Inspection 132
Wiring Diagram4	3
FRONT FOG LAMP SYSTEM5	HEADLAMP AIMING SYSTEM (MANUAL)134
Wiring Diagram5	Description
TURN SIGNAL AND HAZARD WARNING	Diagnosis Procedure
LAMP SYSTEM6	
Wiring Diagram	1 KON 1 OO LAWI OKOON
•	Description150
PARKING, LICENSE PLATE AND TAIL	Component Function Check
LAMPS SYSTEM7	Diagnosis Procedure
Wiring Diagram7	PARKING LAMP CIRCUIT138
STOP LAMP8	Description 138
Wiring Diagram 8	Component Function Check
•	Diagnosis Procedure138
BACK-UP LAMP8	
Wiring Diagram 8	7 Description141
TRAILER TOW9	
Wiring Diagram9	7 Diagnosis Procedure 141
HEADLAND AIMING SYSTEM (MANUAL)	OPTICAL SENSOR144
HEADLAMP AIMING SYSTEM (MANUAL) 11 Wiring Diagram11	'
	Component Function Check 144
BASIC INSPECTION12	1 Diagnosis Procedure 144
DIAGNOSIS AND REPAIR WORKFLOW 12	1 HAZARD SWITCH146
Work Flow12	
	Diagnosis Procedure146
DTC/CIRCUIT DIAGNOSIS12	4
POWER SUPPLY AND GROUND CIRCUIT 12	SYMPTOM DIAGNOSIS148
	EXTERIOR LIGHTING SYSTEM SYMPTOMS.148
BCM (BODY CONTROL MODULE)12	Symptom Table 148
BCM (BODY CONTROL MODULE) : Diagnosis	NORMAL OPERATING CONDITION
Procedure12	4 NORMAL OPERATING CONDITION151 Description151
IPDM E/R (INTELLIGENT POWER DISTRIBU-	Description131
TION MODULE ENGINE ROOM)12	
IPDM E/R (INTELLIGENT POWER DISTRIBU-	TO HIGH BEAM152
TION MODULE ENGINE ROOM): Diagnosis Pro-	Description
cedure12	Diagnosis Procedure
HEADLAMP (HI) CIRCUIT12	6 BOTH SIDE HEADLAMPS (LO) ARE NOT
Description12	6 TURNED ON153
Component Function Check	200011ption100
Diagnosis Procedure12	Diagnosis Procedure
HEADLAMP (LO) CIRCUIT12	PARKING, LICENSE PLATE, SIDE MARKER
Description12	8 AND TAIL LAMPS ARE NOT TURNED ON154

Description Diagnosis Procedure	
BOTH SIDE FRONT FOG LAMPS ARE NOT	
TURNED ON  Description	
Diagnosis Procedure	
DAYTIME LIGHT SYSTEM INOPERATIVE	. 156
Description  Diagnosis Procedure	
PERIODIC MAINTENANCE	
HEADLAMP AIMING ADJUSTMENT	
Inspection Aiming Adjustment Procedure	
FRONT FOG LAMP AIMING ADJUSTMENT.	
Aiming Adjustment	
REMOVAL AND INSTALLATION	. 162
FRONT COMBINATION LAMP	. 162
Exploded View	
Removal and Installation	
FRONT FOG LAMP	
Exploded ViewRemoval and Installation	
OPTICAL SENSOR	167
Exploded View	
Removal and Installation	
LIGHTING & TURN SIGNAL SWITCH	. 168
Exploded View	
Removal and Installation	. 168

HAZARD SWITCH	Α
HEADLAMP AIMING SWITCH	В
REAR COMBINATION LAMP	С
HIGH-MOUNTED STOP LAMP172 Removal and Installation172	D
BACK-UP LAMP173Exploded View173Removal and Installation173	Е
LICENSE PLATE LAMP	F
UNIT DISASSEMBLY AND ASSEMBLY . 176	G
FRONT COMBINATION LAMP	Н
REAR COMBINATION LAMP	I
SERVICE DATA AND SPECIFICATIONS (SDS)179	J
SERVICE DATA AND SPECIFICATIONS (SDS)	K

EXL

 $\mathbb{M}$ 

Ν

0

< PRECAUTION > [XENON TYPE]

### **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. This system includes dual stage front air bag modules. The SRS system may only deploy one front air bag, depending on the severity of a collision and whether the front passenger seat is occupied. Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

#### **WARNING:**

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

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

#### WARNING:

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

### General precautions for service operations

INFOID:0000000011134616

- 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 > [XENON TYPE]

Precaution for Work

INFOID:0000000011134617

• 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.

Е

F

D

Α

G

Н

K

EXL

N

Ν

0

### **PREPARATION**

< PREPARATION > [XENON TYPE]

## **PREPARATION**

### **PREPARATION**

Special Service Tool

INFOID:0000000011134618

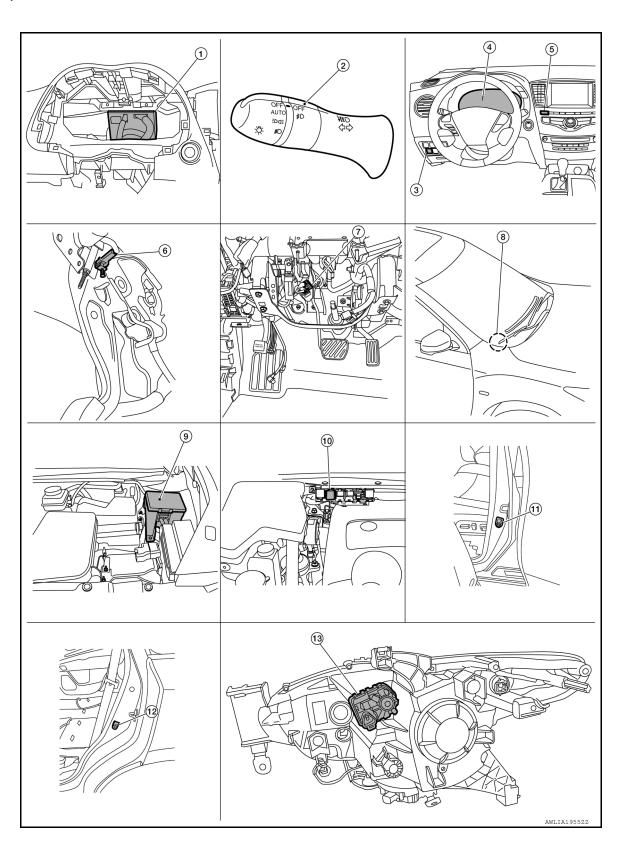
The actual shape of the tools may differ from	The actual shape of the tools may differ from those illustrated here.					
Tool number (TechMate No.)		Description				
Tool name						
(J-46534) Trim Tool Set		Removing trim components				
	AWJIA0483ZZ					

INFOID:0000000011134619

### SYSTEM DESCRIPTION

### **COMPONENT PARTS**

**Component Parts Location** 



В

Α

С

D

Ε

G

F

Н

l

K

EXL

M

Ν

0

### **COMPONENT PARTS**

### [XENON TYPE]

## < SYSTEM DESCRIPTION >

- BCM
  (view with combination meter removed)
- 4. Combination meter
- 7. Stop lamp switch
- 10. Daytime running light relay (if equipped)
- Front combination lamp RH (headlamp aiming motor) (LH similar)

- 2. Combination switch (lighting and turn signal switch)
- 5. A/C and AV switch assembly (hazard switch)
- 8. Optical sensor
- 11. Front door switch LH (RH similar)

- 3. Headlamp aiming switch
- 6. Parking brake switch
- IPDM E/R, (Front fog lamp relay, Headlamp high relay, Headlamp low relay, Tail lamp relay)
- 12. Rear door switch LH (RH similar)

### Component Description

INFOID:0000000011134620

Part	Description
BCM	Controls the exterior lighting system.
Combination switch (Lighting & turn signal switch)	Refer to BCS-7, "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 stop lamp switch signal to BCM 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.
Front combination lamp RH (headlamp aiming motor)	Moves the headlamp up/down based on input from the headlamp aiming switch.
Front door switch LH/RH	Transmits the deer one signal to the DCM to energie the cutolight quater
Rear door switch LH/RH	Transmits the door open signal to the BCM to operate the autolight system.
Optical sensor	Optical sensor converts the outside brightness (lux) to voltage and transmits the optical sensor signal to BCM to operate the autolight system.
Parking brake switch	Transmits the parking brake switch signal to the combination meter to operate the autolight system.
Headlamp aiming switch	Controls variable ground to the headlamp aiming motor signal to move the headlamp aiming motor up/down.
A/C and AV switch assembly (hazard switch)	Inputs the hazard switch signal to BCM.

[XENON TYPE]

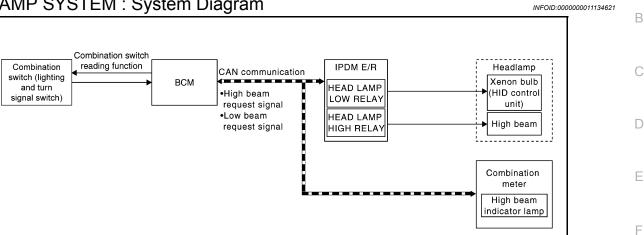
INFOID:0000000011134622

Α

### SYSTEM

### **HEADLAMP SYSTEM**

### **HEADLAMP SYSTEM: System Diagram**



### **HEADLAMP SYSTEM: System Description**

#### 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

K

Н

EXL

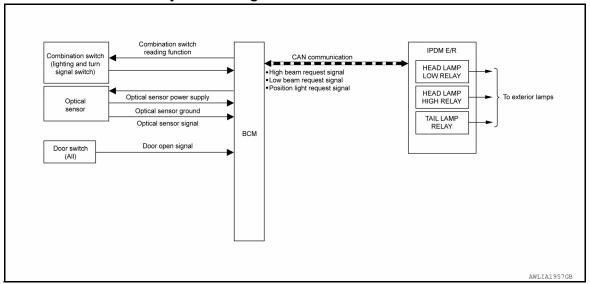
M

Ν

P

### AUTO LIGHT SYSTEM: System Diagram

INFOID:0000000011134623



### **AUTO LIGHT SYSTEM: System Description**

INFOID:0000000011134624

- 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

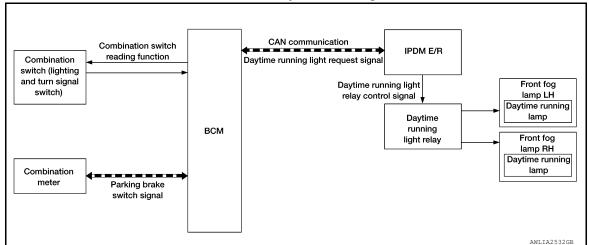
The auto light control system has an optical sensor that detects outside brightness.

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 in four steps. For the details of the setting, Refer to <a href="https://example.com/BCS-17">BCS-17</a>, "HEADLAMP: CONSULT Function (BCM - HEADLAMP)".

### DAYTIME RUNNING LIGHT SYSTEM

### DAYTIME RUNNING LIGHT SYSTEM: System Diagram

INFOID:0000000011134625



### DAYTIME RUNNING LIGHT SYSTEM: System Description

INFOID:0000000011134626

System Description

[XENON TYPE]

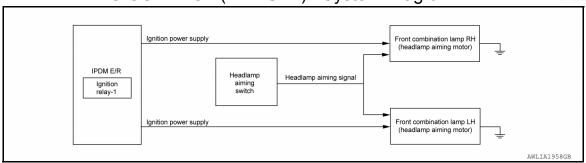
The daytime running light system is equipped with a daytime running light control that activates the daytime running lights within the front fog lamp assembly when the engine is operating. If the parking brake is applied, the daytime running lights will turn OFF. The daytime running lights will turn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

**OPERATION** B

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.

HEADLAMP AIMING CONTROL (MANUAL)

### HEADLAMP AIMING CONTROL (MANUAL): System Diagram

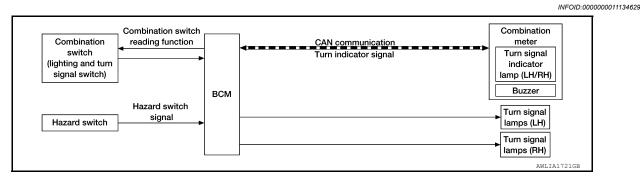


### HEADLAMP AIMING CONTROL (MANUAL): System Description

The headlamp aiming system (manual) controls the headlamp light axis height according to input from the headlamp aiming switch. The variable internal resistance of the headlamp aiming switch controls the signal ground of the headlamp aiming motors located on the front combination lamp LH and RH. The headlamp aiming system operates when the combination switch (lighting and turn signal switch) is in the 2nd position.

TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

### TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM: System Diagram



### TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM: System Description

INFOID:0000000011134630

#### **TURN SIGNAL OPERATION**

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

#### HAZARD LAMP OPERATION

When the hazard switch is in the ON position, the BCM receives input requesting the hazard lamps illuminate. The BCM controls the turn signal power to both the LH and RH turn signal lamps. The BCM sends a hazard indicator signal ON request via the CAN communication lines to the combination meter. The combination meter then activates both the LH and RH turn signal indicators and audible buzzer.

Revision: August 2014 EXL-11 2015 QX60 NAM

INFOID:0000000011134627

Α

Е

Н

INFOID:0000000011134628

K

EXL

M

Ν

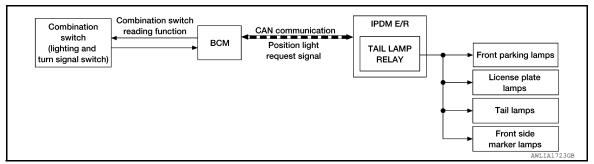
0

INFOID:0000000011134631

## PARKING, LICENSE PLATE, SIDE MARKER AND TAIL LAMP SYSTEM

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

agram



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

### PARKING, LICENSE PLATE AND TAIL LAMPS OPERATION

When the lighting switch is in 1st position, BCM detects the LIGHTING SWITCH 1st 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.

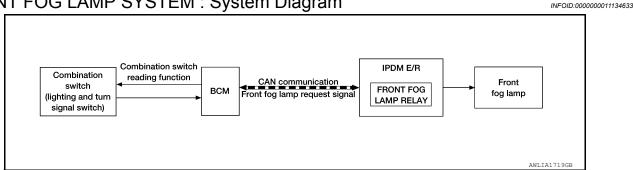
#### EXTERIOR LAMP BATTERY SAVER CONTROL

With the combination switch (lighting and turn signal switch) in the 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.

#### FRONT FOG LAMP SYSTEM

### FRONT FOG LAMP SYSTEM: System Diagram



### FRONT FOG LAMP SYSTEM: System Description

INFOID:0000000011134634

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.

#### TRAILER TOW SYSTEM

Α

В

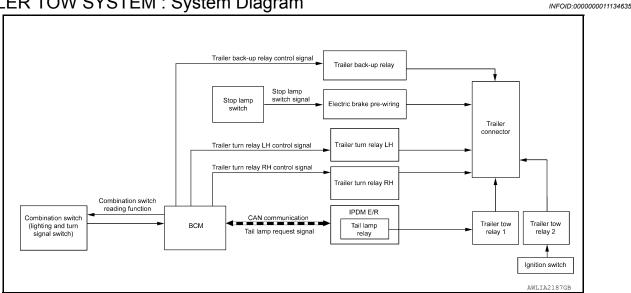
D

Е

Н

J

### TRAILER TOW SYSTEM: System Diagram



### TRAILER TOW SYSTEM: System Description

INFOID:0000000011134636

#### TRAILER TAIL LAMP OPERATION

The trailer tail lamps are controlled by the trailer tow relay 1. With the combination switch (lighting and turn signal switch) in the 1st position, the BCM detects the LIGHTING SWITCH 1st 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 activates the trailer tow relay 1 and sends power to the trailer connector.

#### TRAILER TURN SIGNAL LAMP OPERATION

The trailer turn signal lamps are controlled by the BCM. When the turn signal switch is in the LH or RH position with the ignition switch ON, the combination switch (lighting and turn signal switch) sends a signal to the BCM. The BCM detects the TURN RH or TURN LH ON request. The BCM sends a control signal to the respective trailer turn relay which sends power to the trailer connector.

#### TRAILER HAZARD LAMP OPERATION

The trailer hazard lamps are controlled by the BCM. When the hazard switch is pressed, the BCM detects the hazard ON request. The BCM then sends a control signal to both trailer turn relays which sends power to the trailer connector.

#### TRAILER BRAKE LAMP OPERATION

The trailer brake lamps operate when the brake pedal is pressed sending the stop lamp switch signal to the trailer connector.

EXL

M

Ν

### **DIAGNOSIS SYSTEM (BCM)**

< SYSTEM DESCRIPTION >

[XENON TYPE]

### **DIAGNOSIS SYSTEM (BCM)**

**COMMON ITEM** 

COMMON ITEM: CONSULT Function (BCM - COMMON ITEM)

INFOID:0000000011544281

#### 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	<ul> <li>The vehicle specification can be read and saved.</li> <li>The vehicle specification can be written when replacing BCM.</li> </ul>
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			×	×			
Back door open	TRUNK			×				
Vehicle security system	THEFT ALM			×	×	×		
RAP system	RETAINED PWR			×				

[XENON TYPE]

Α

В

D

Е

Р

				Direct D	Diagnosti	c 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)

#### INFOID:0000000011544282

#### **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	Н		
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]		1		
TAIL LAMP SW [On/Off]		J		
HI BEAM SW [On/Off]				
HEAD LAMP SW 1 [On/Off]	Indicates condition of combination switch.	K		
HEAD LAMP SW 2 [On/Off]				
PASSING SW [On/Off]		EV		
AUTO LIGHT SW [On/Off]		EX		
FR FOG SW [On/Off]				
DOOR SW-DR [On/Off]	Indicates condition of front door switch LH.	M		
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.	N		
DOOR SW-BK [On/Off]	Indicates condition of back door switch.			
OPTI SEN (DTCT) [V]	Indicates outside brightness voltage signal from optical sensor.	0		
OPTI SEN (FILT) [V]	Indicates outside brightness voltage signal from optical sensor filtered by BCM.			

### **ACTIVE TEST**

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

#### **WORK SUPPORT**

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

<sup>\* :</sup> Initial setting

### **FLASHER**

### FLASHER: CONSULT Function (BCM - FLASHER)

INFOID:0000000011544283

### **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 (IPDM E/R)**

< SYSTEM DESCRIPTION >

[XENON TYPE]

### DIAGNOSIS SYSTEM (IPDM E/R)

### **Diagnosis Description**

INFOID:0000000011544284

Α

В

D

Е

### **AUTO ACTIVE TEST**

#### Description

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

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

#### Operation Procedure

#### **CAUTION:**

#### Do not start the engine.

#### NOTE:

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

#### NOTE:

- If auto active test mode cannot be actuated, check door switch system. Refer to <u>DLK-171</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	<ul><li>Front fog lamps</li><li>Parking lamps</li><li>Side marker lamps</li><li>Tail lamps</li><li>License plate lamps</li></ul>	10 seconds	
3	Daytime running lamps	10 seconds	
4	Headlamps	LO ⇔ HI 5 times	
5	A/C compressor	ON ⇔ OFF 5 times	
6 <sup>*</sup>	Cooling fans	LO for 5 seconds → HI for 5 seconds	

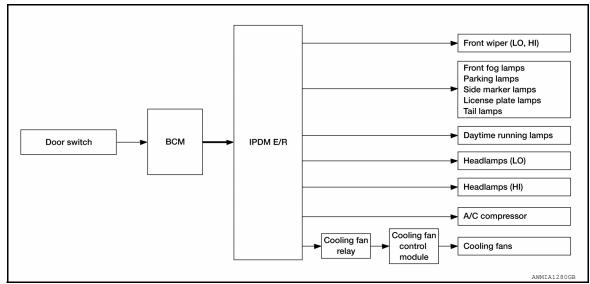
<sup>\*:</sup> Outputs duty ratio of 50% for 5 seconds → duty ratio of 100% for 5 seconds on the cooling fan control module.

Revision: August 2014 EXL-17 2015 QX60 NAM

EXL

K

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
<ul> <li>Front fog lamps</li> <li>Parking lamps</li> <li>Side marker lamps</li> <li>License plate lamps</li> <li>Tail lamps</li> <li>Daytime running lamps</li> <li>Headlamp (HI, LO)</li> <li>Front wiper</li> </ul>	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:0000000011544285

#### **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 >

[XENON TYPE]

### **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-20, "DTC Index".

### **DATA MONITOR**

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

Revision: August 2014 EXL-19 2015 QX60 NAM

F

G

Н

J

Κ

Α

В

C

 $\mathsf{D}$ 

Е

EXL

VI

Ν

 $\circ$ 

### **DIAGNOSIS SYSTEM (IPDM E/R)**

### < SYSTEM DESCRIPTION >

[XENON TYPE]

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-25, "CAN Diagnostic Support Monitor".

### BCM, IPDM E/R

< ECU DIAGNOSIS INFORMATION >

[XENON TYPE]

INFOID:0000000011134642

## **ECU DIAGNOSIS INFORMATION**

BCM, IPDM E/R

List of ECU Reference

ECU	Reference
	BCS-29, "Reference Value"
DOM	BCS-49, "Fail Safe"
ВСМ	BCS-49, "DTC Inspection Priority Chart"
	BCS-51, "DTC Index"
	PCS-12, "Reference Value"
IPDM E/R	PCS-19, "Fail Safe"
	PCS-20. "DTC_Index"

F

Α

В

С

 $\mathsf{D}$ 

Е

G

Н

J

K

EXL

M

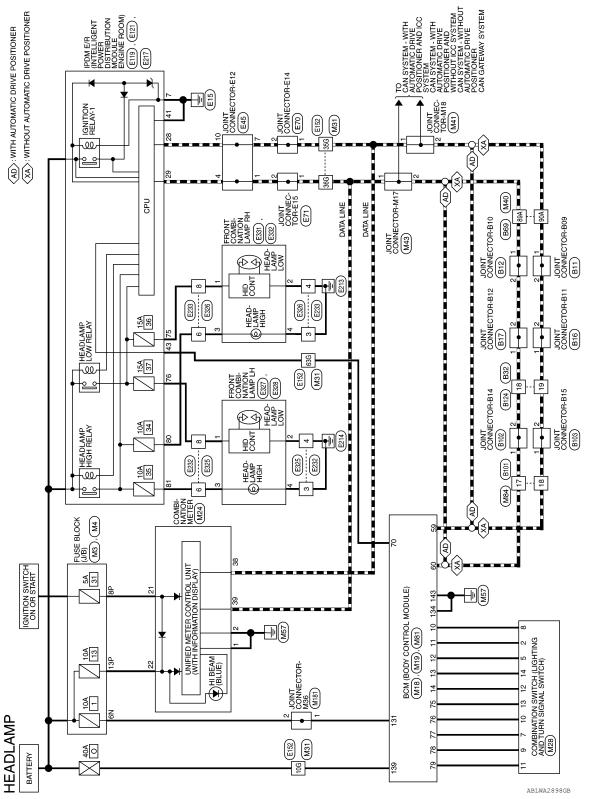
Ν

0

### **WIRING DIAGRAM**

### **HEADLAMP**

Wiring Diagram



Connector Name | COMBINATION METER

Connector No.

Connector Color WHITE

CAN-H

Α

В

С

 $\mathsf{D}$ 

Е

F

G

Н

J

Κ

EXL

 $\mathbb{N}$ 

Ν

0

Ρ

Connector No.	. M4		Connector No.	M18		
Connector Na	ame FU	Connector Name FUSE BLOCK (J/B)	Connector Na	ne BCN	Connector Name BCM (BODY CONTROL	
Connector Color   WHITE	olor WF			2 ≥	MODULE)	
			Connector Color   GREEN	or GRE	EN	
	7P 6P 5P 4P 16P 15P 14P 13P	7P   6P   5P   4P   3P   2P   1P   16P   14P   17P   17P   17P   17P   18P   1	管			
			H.S.			
			20 19 18 17 16 15 14 13 12 11 10 9 8 8 97 38 37 38 37 38 37 38 9 9 9 9 9 2 8	15 14 13 1	2 11 10 9 8 7 6 5 4 3 2 2 2 31 30 29 28 27 26 25 24 23 22	[- Z]
Terminal No. Wire	Color of Wire	Signal Name	Terminal No. Wire	Color of Wire	Signal Name	
8P	BG	ı	10	۵	COMBI SW IN 5	
13P	*	ı	<del>-</del>	Д	COMBI SW IN 4	
			12	>	COMBI SW IN 3	
			13	Μ	COMBI SW IN 2	
			14	Ь	COMBI SW IN 1	

Signal Name

Terminal No. Wire

GND2

Ŋ

GND1

В В

IGN BAT CAN-L

Bg≥

Д

22 22 38 39

Connector No.	M19											
Connector Name BCM (BODY CONTROL MODULE)	BCM (BOI MODULE)	# Z	G E	<u>≻</u>	8	E	Ĕ	٦				
Connector Color	BLACK	S										
语.S.		11	IV.	117								
60 59 58 57 56 55 54	54 53 52 51 50 49 48 47 46 45 44 43 42 41	2 51	20	64	84	47	46	45	4	43	42	14
80 79 78 77 76 75 74 73 72 71 70 69 68 67 66	73 7.	2 71	70	69	89	29	99	65 64	28	છ	63 62 61	19
												ı

Signal Name

Terminal No. N9

≥

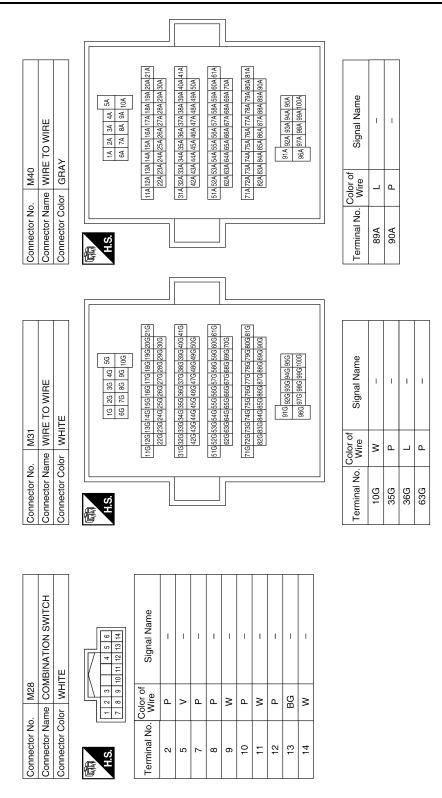
HEADLAMP CONNECTORS Connector No.

M3

Connector Name FUSE BLOCK (J/B)
Connector Color WHITE

ABLIA4638GB

**EXL-23** 2015 QX60 NAM Revision: August 2014



ABLIA4969GB

Α

В

С

 $\mathsf{D}$ 

Е

F

G

Н

J

Κ

EXL

M

							Ш		٦	
	Connector Name BCM (BODY CONTROL	JULE)	TE	1,1321138113811381138113811381	143 142 141 140 139 138	Signal Name	BAT BCM FUSE	GND2	BAT POWER F/L	GND1
M81	ne BCN	MO	or WHI	11371136113511	143 142	Solor of Wire	8	В	8	В
Connector No.	Connector Nan		Connector Color WHITE		и́	Terminal No. Wire	131	134	139	143
			7						1	
	Connector Name JOINT CONNECTOR-M17	빝	!	3 2 1		Signal Name	1	1		
M43	me JOIN	or WHI		4		Color of Wire	٦	_		
Connector No.	Connector Na	Connector Color   WHITE		暨	H.S.	Terminal No. Wire	-	2		
			7						1	
	Connector Name JOINT CONNECTOR-M18			3 2 1		Signal Name	I	I		
. M41	me JOI	lor		4		Color of Wire	۵	۵		
Connector No.	Connector Nai	Connector Color WHITE		管	HS.	Terminal No. Wire	-	2		

	;TOR-E12		3 2 1	Jame				
45	Connector Name JOINT CONNECTOR-E12	LUE	8 0 7 4	of Signal Name		1	1	ı
o. E45	ame J	olor	11 10 9	Color	_	_	_	۵
Connector No.	Connector Na	Connector Color BLUE	H.S.	Terminal No. Wire	-	4	7	10
1	Connector Name JOINT CONNECTOR-M36	ТЕ	3 2 1 0	Signal Name	1	ı		
M18	ne JOII	or WH	4	Solor of Wire	>	>		
Connector No. M181	Connector Nan	Connector Color WHITE	原 H.S.	Terminal No. Wire	-	2		
			2 1 18 17		1		1	
	E TO WIRE	Щ	11 10 9 8 7 6 5 4 3 2 2 1 20 19	Signal Name	I	I		
M84	e WIRE	r WHI	14 13 12 30 29 28	Solor of Wire	_	۵		
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	H.S. 22 31	Terminal No. Wire	17	18		

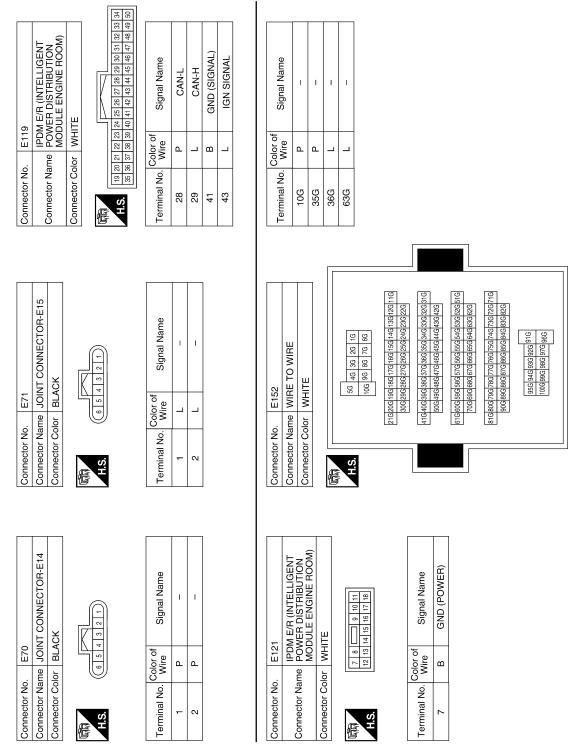
Ν

ABLIA3542GB

Ρ

0

**EXL-25** 2015 QX60 NAM Revision: August 2014



ABLIA4640GB

33	RE TO WIRE	3AY	[	8 4 8 7 8 9 1 9 1 9 1 9 1 9 1 9 1 9 1 9 1 9 1 9	Signal Name	1	1	_	ı
E233	me WI	or GF			Solor of Wire	В	В	Μ	œ
Connector No.	Connector Name WIRE TO WIRE	Connector Color GRAY	á	H.S.	Terminal No. Wire	က	4	9	80
					Φ				
E232	WIRE TO WIRE	BLACK		8 4 7 8 6 5 1	or of Signal Name	- B	- B	- B	1
Connector No.	Connector Name	Connector Color BLACK	4	(中国) H.S.	Terminal No. Wire	е	4	9	8
								<u> </u>	
7	M E/R (INTELLIGENT	Connector Name   POWEH DISTRIBUTION   MODULE ENGINE ROOM)	ITE	78 79 80 81	Signal Name	HEADLAMP LO RH	HEADLAMP LO LH	HEADLAMP HI RH	HEADLAMP HILH
E217	G S	a S <u>M</u>	or WH	77 78	Color of Wire	Œ		Ν	ŋ
Connector No.	-	Connector Nar	Connector Color WHITE	呵荷 H.S.	Terminal No. Wire	75	92	80	81

Connector No.	. E327	
Connector Name		FRONT COMBINATION LAMP LH
Connector Color	lor BLACK	CK
H.S.		
Terminal No.	Color of Wire	Signal Name
3	g	ı
4	В	ı

Connector No.	E326 WIRE TO WIRE
Connector Color	GRAY
H.S.	L   r   r   r   r   r   r   r   r   r

WIRE	GRA	2 - 2	
Connector Name	Connector Color	્રં	
Con	ا ا	優	

Signal Na	1	1	I	1
Color of Wire	В	В	M	æ
Terminal No.	တ	4	9	æ

E325	WIRE TO WIRE	BLACK	5 6 7 8 4
Connector No.	Connector Name WIRE TO WIRE	Connector Color	E.S.





Signal Name	1	ı	I	ı	
Color of Wire	В	В	В	٦	
Terminal No.	3	4	9	8	

ABLIA4970GB

Α

В

С

 $\mathsf{D}$ 

Е

F

G

Н

J

Κ

EXL

M

Ν

0

Ρ

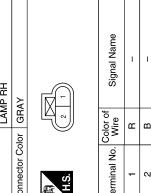
Signal Name

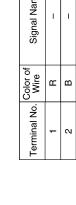
Color of Wire 凸 Ъ

Terminal No.

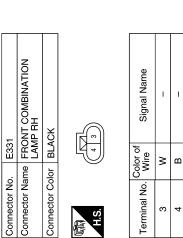
Ø

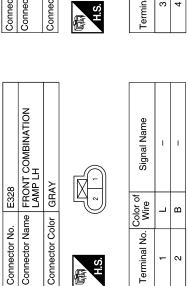
	Connector No. E332	E332
NATION	Connector Name	Connector Name   FRONT COMBINATION   LAMP RH
	Connector Color GRAY	GRAY

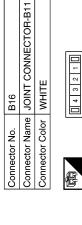




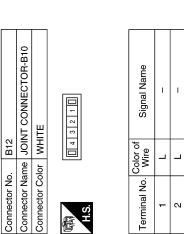
က



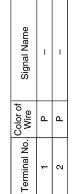




**HEADLAMP** 

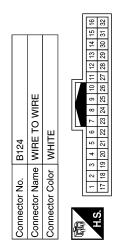




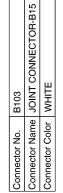


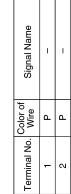
ABLIA3545GB

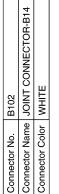
	А
No. B101 Name WIRE TO WIRE  Color WHITE  Color WHITE  Color WHITE  Color Of Signal Name  L	В
ETO WIRE TE  Signal Name	С
Connector No. B101  Connector Name WIRE TO WIRE  Connector Color WHITE  Terminal No. Wire Signal I  Table 19 20 21 22 23 24 25  Terminal No. Wire Signal I  The Signal II	D
Connector No. Connector Name Connector Color H.S.  17 8 1 17 8 1 17 8 1 18 17 8 1	Е
	F
No. B32 Name WIRE TO WIRE  Color   WHITE	G
Connector No. B32  Connector Name WIRE TO WIRE  Connector Color   WHITE  Connector Color of   Signal Name   S9A   L   -   -    S9A   L   -   -   -    90A   P   -   -   -    90A   P   -   -	Н
Name WIR B32 Color of Wire P P P P P P P P P P P P P P P P P P P	I
Connector No.  Connector Name Connector Name Connector No.  Terminal No.  89A  89A  90A	J
	K
B17	EXL
Connector Name JOINT CONNECTOR-B12  Connector Color WHITE  Terminal No. Wire Signal Name  1 L  2 L  2 L  Connector Name WIRE TO WIRE  Connector Color GRAY  10 9 8 9 74 64  10 4 3 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	M
Or No. B17  Or Name JOIN  Or Color of WHI  Or Color of A1A 40A 388  GIA 40A 388  GI	N
Connector No. Connector No.  Terminal No. Connector No. Connector Name Connector Name Connector Name Connector Color  A1.A  (1.1A  (1.1A)	0
ABLIA4971GB	



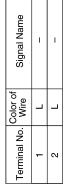
Signal Name	1	I
Color of Wire	٦	Ь
Terminal No.	18	19











是 E.S.

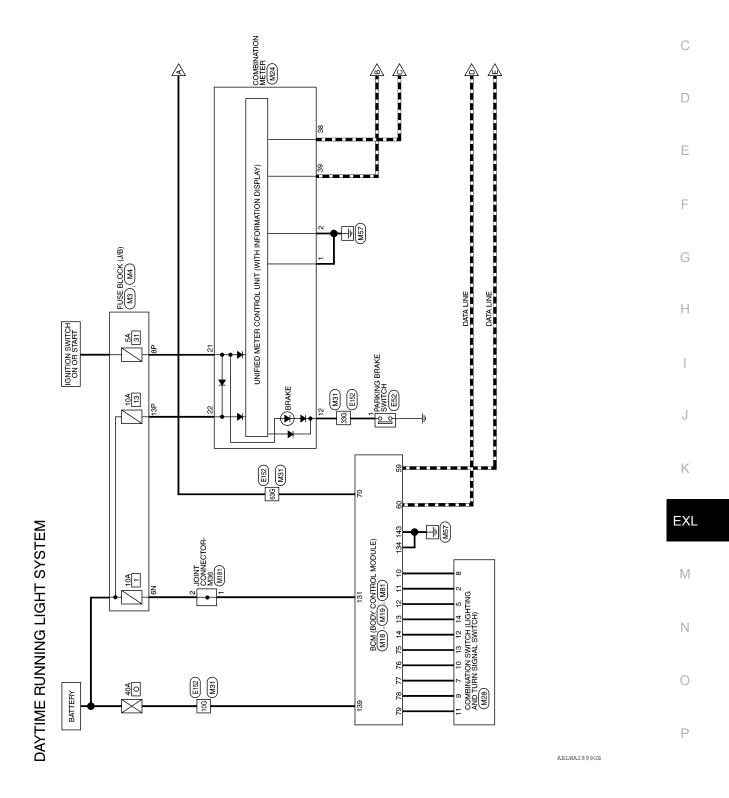
AALIA0626GB

### DAYTIME RUNNING LIGHT SYSTEM

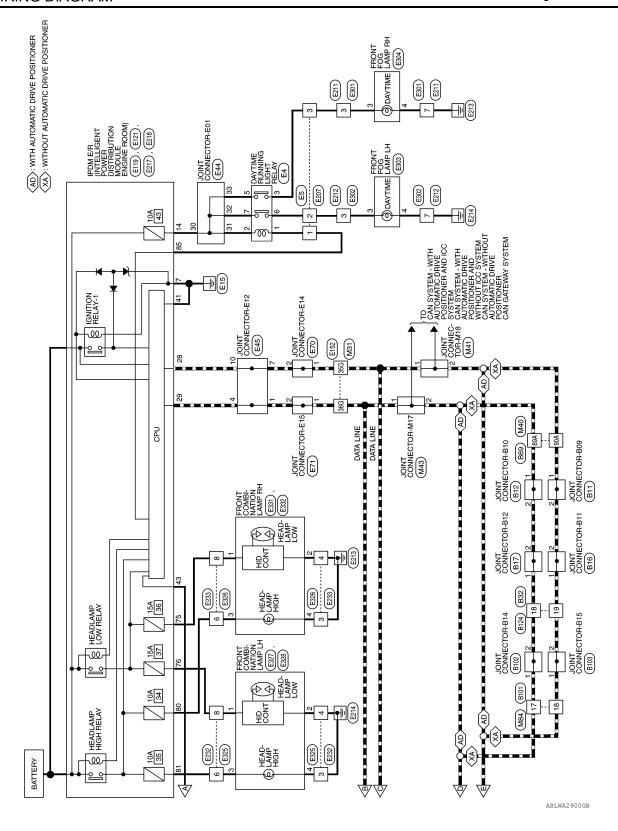
Wiring Diagram

NNFOID:000000011134644

В



Revision: August 2014 EXL-31 2015 QX60 NAM



Α

В

С

D

Е

F

G

Н

J

Κ

**EXL** 

M

Ν

0

Ρ

Ź١	ONNECTOR	-					
Connector No. M3	Connector No.	M4		Connector No.	No. M18	3	
Connector Name FUSE BLOCK (J/B)	Connector Name	me FUSE B	FUSE BLOCK (J/B)	Connector N	lame BC	Connector Name BCM (BODY CONTROL	
Connector Color WHITE	Connector Color	or WHITE		) rotocom	OM 30	DULE)	
	4				_	GREEN	
	E SH	7P 6P 5P 4P 16P 15P 14P 13P	7P 6P 5P 4P 3P 2P 1P [6P 15P 14P 13P 12P 11P 10P 9P 8P]				
				H.S.			
				20 19 18 17 1 40 39 38 37 3	18         17         16         15         14         13         12         11         10           38         37         36         35         34         33         32         31         30	16         15         14         13         12         11         10         9         7         6         5         4         3         2         11           36         35         34         36         31         30         29         28         27         26         25         24         29         22         21	
Terminal No. Color of Signal Name	Terminal No.	Color of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name	
- M N9	8B	BG	ı	10	۵	COMBI SW IN 5	
	13P	*	1	£	۵	COMBI SW IN 4	
				12	>	COMBI SW IN 3	
				13	≯	COMBI SW IN 2	
				41	В	COMBI SW IN 1	
Connector No.	Connector No.	M24					
e e	Connector Nar	me COMBIN	Connector Name COMBINATION METER				
MODULE)	Connector Color	or WHITE					
Connector Color   BLACK							
	E						
HS	H.S.						
0 0 50 50 75 75 6 55 4 50 5 5 1 50 40 8 7 46 45 44 43 42 41	20 19 18 17 16 15 14 13 12 11	15 14 13 12 11	10 9 8 7 6 5 4 3 2 1				
80 79 78 77 76 75 74 73 72 71 70 69 68 67 66 65 64 63 62 61	[40]39[38[37]36[3	35 34 33 32 31	40   39   38   37   36   35   34   33   32   31   30   29   28   27   26   25   24   23   22   21				

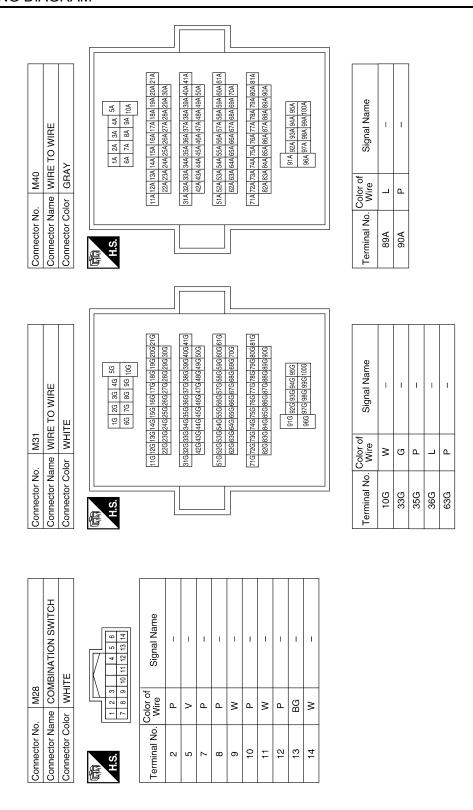
 
 20
 19
 18
 17
 16
 15
 14
 15
 12
 11
 10
 9
 8
 7
 6
 5
 4
 3
 2
 1

 40
 39
 38
 37
 36
 35
 34
 33
 32
 31
 30
 29
 28
 27
 26
 25
 24
 23
 22
 21
 Signal Name CAN-L GND2 GND1 PKB IGN BAT Terminal No. Wire BB Q ш ш ≥ Д 4 38 22 23 Ŋ

> COMBI SW OUT 5 COMBI SW OUT 3 COMBI SW OUT 2 COMBI SW OUT 4 COMBI SW OUT 1 IGN USM OUT 1 Signal Name CAN-H CAN-L Color of Wire 8 ┙ ۵ ۵ Φ ≥ ≥ Terminal No. 2 8 20 75 77 78

> > ABLIA7049GB

**EXL-33** Revision: August 2014 2015 QX60 NAM



ABLIA4972GB

SB

9

Α

В

С

 $\mathsf{D}$ 

Е

F

G

Н

J

Κ

EXL

 $\mathbb{N}$ 

Ν

0

Ρ

	Connector No.	. M43		Connector No.	lo. M81	
ONNECTOR-M18	Connector Na	me JOIN	Connector Name JOINT CONNECTOR-M17	Connector N	ame BCI	Connector Name BCM (BODY CONTROL
	Connector Color WHITE	lor WHIT	щ		<u>Q</u>	MODULE)
			J	Connector Color   WHITE	olor WH	ITE
	H.S.	4	4 3 2 1	图 H.S.	137136135	137  138  138  138  138  138    148    148    148    138
Signal Name	Terminal No. Wire	Color of Wire	Signal Name	Terminal No. Wire	Color of Wire	Signal Name
1	-	_	1	131	>	BAT BCM FUSE
ı	2	_	1	134	В	GND2
				139	>	BAT POWER F/L
				143	В	GND1

N

Terminal No.

Connector Name JOINT CC Connector Color WHITE

M41

Connector No.

Connector No.	o. M84		Õ	Connector No. M181	. M181		O	Connector No.	o. <b>E4</b>	
Connector Name WIRE TO WIRE	ame WIR	E TO WIRE	Ŝ	nnector Na	me JOIN.	Connector Name JOINT CONNECTOR-M36	<u> </u>	Sonnector Na	ame DA	Connector Name DAYTIME RUNNING
Connector Color   WHITE	olor WHI		Õ	Connector Color   WHITE	lor WHIT	TE TI			<u>ב</u>	ni RELAY
							<u>o</u> ]	Connector Color BROWN	olor BR	NMC
H.S. (16 15 32 31	15 14 13 12 31 30 29 28	77 26 25 24 23 22 21 20 19 18		H.S.	4 3	3 2 1 🗍		SH	الله الله	$\neg$ $\vdash$
]			1				•	1		6 3
Terminal No. Wire	Color of Wire	Signal Name	L	Terminal No. Wire	Color of Wire	Signal Name	<u> </u>	Terminal No. Wire	Color of Wire	Signal Name
17	_	1	<u> </u>	-	3	1	<u> </u>	-	>	1
18	۵	1		2	*	1		2	ГG	1
								3	BR	I
								5	>	ı
							L			

ABLIA7050GB

Revision: August 2014 EXL-35 2015 QX60 NAM

Connector No. E5 Connector Name WIRE TO WIRE Connector Color WHITE	ame WIRI	IE TO WIRE	Connector No. Connector Name Connector Color		E44 JOINT CONNECTOR-E01 WHITE	Connector No. Connector Name Connector Color		E45 JOINT CONNECTOR-E12 BLUE
印.S.	8 10 10 10 10 10 10 10 10 10 10 10 10 10	11 12 13 14 15 16	赋证 H.S.	22 2 2 2 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0	22 [21] [20] [19] [18] [17] [16] [15] [14] [13] [12] [13] [12] [13] [12] [14] [13] [12] [14] [15] [14] [15] [15] [15] [15] [15] [15] [15] [15	原 H.S.	11 10 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	2 C C C C C C C C C C C C C C C C C C C
Terminal No.	Color of Wire	Signal Name	Terminal No.	No. Wire	f Signal Name	Terminal No.	Color of Wire	Signal Name
-	>	1	30	>	ı	-	_	ı
2	SB	1	31	re	1	4	_	1
က	BR	I	32	>	ı	7	۵	1
			33	^	1	10	۵	ı
Connector No. E52 Connector Name PARKING BRA	o. E52 ame PAR	RKING BRAKE SWITCH	Connector No.	r No. E70	Connector No. E70 Connector Name JOINT CONNECTOR-E14	Connector No.	No. E71 Name JOIN	Connector No. E71 Connector Name JOINT CONNECTOR-E15
Connector Color	olor BLACK	CK	Connector Color	r Color BL	BLACK	Connector Color	Color BLACK	ICK
是 H.S.	ШТ		H.S.	9	4 3 2 1	H.S.	6 5 4	3 2 1
Terminal No.	Color of Wire	Signal Name	Terminal No.	No. Wire	Signal Name	Terminal No.	Color of Wire	Signal Name

ABLIA4974GB

ا ا

<u>م</u> م

Α

В

С

D

Е

F

G

Н

Κ

EXL

 $\mathbb{N}$ 

Ν

0

Р

						Connector No.   E207	Connector Name   WIRE TO WIRE	-	-	7 6 5 4 7 3 2 1	16 15 14 13 12 11 10		Terminal No. Vire Signal Name	С С	2 B	3 R					
Connector No. E121 Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM) Connector Color WHITE	(京) (12   13   14   15   16   17   18   H.S.	Terminal No. Wire Signal Name	B	14 V DTRL		Color of	l erminal No. Wire Signal Name	10G P –	33G LG –	35G P –	36G L –	63G L –									
Connector No. E119  Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM)  Connector Color WHITE	(時期 (19 20   21   22   23   24   25   25   27   28   29   31   32   33   34   24   42   42   43   44   45   46   47   48   49   50	Terminal No. Wire Signal Name	P CAN-	29 L CAN-H	л П	Connector No.   F152	<u> </u>		-		26		210/2004/99/170/160/150/140/150/110	30G29G28G27G26G25G24G23G22G	41 G 40 G 39 G 38 G 37 G 36 G 35 G 34 G 33 G 34 G	50G 49G 48G 47G 46G 45G 44G 43G 42G	61G600G59G58G57G56G55G5AG52G57G 770G89G88G67G86G65G6AG52G22G	81G 80G 73G 76G 75G 75G 74G 72G 71G  90G 85G 87G 87G 87G 87G 85G 87G 82G 87G 87G 87G 87G 87G 87G 87G 87G 87G 87	966 946 956 948 956 916 2006 986 976 986 9776 986 9719		

Revision: August 2014 EXL-37 2015 QX60 NAM

E217 IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) WHITE	Signal Name HEADLAMP LO RH HEADLAMP LO LH HEADLAMP HI RH HEADLAMP HI LH	33 AE TO WIRE  AY  4 3 2 1  6 7 6 5	Signal Name	1 1	1 1
	Color of Wire R R W	me WIRE lor GRAY	Color of Wire	<u>а</u> а	≥ α
Connector No. Connector Name Connector Color	Terminal No. 75 76 80 81	Connector No. E233 Connector Name WIRE TO WIRE Connector Color GRAY  H.S. 4 3 2 1 8 7 6 5	al No.	ю 4	9 8
E212 WIRE TO WIRE GRAY	e Signal Name	E232 WIRE TO WIRE BLACK  4 3 2 1 8 7 6 5	r of e Signal Name	1 1	1 1
	Color of Wire B		ō≤ O	B B	5 -
Connector No. Connector Color Connector Color H.S.	Terminal No.	Connector No. Connector Color Connector Color H.S.	Terminal No.	ω 4	9 8
				_	
Connector No. E211  Connector Name WIRE TO WIRE  Connector Color GRAY  LS. 12 3 4  12 3 4  15 6 7 8	Signal Name	E218 IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM) WHITE  MHITE  MHITE	Signal Name	DTRL RLY	
Dr GRAY	Wire Wire B		Color of Wire	۵	
Connector No. Connector Color Connector Color H.S.	Terminal No. 0	ctor Nan	No.	82	
Conne Conne Conne H.S.	Termi	Conne Conne H.S.	Termi	ω	

ABLIA4975GB

Α

В

С

 $\mathsf{D}$ 

Е

F

G

Н

	Connector Name   FRONT FOG LAMP LH	<u>\</u>	( t )		Signal Name	ı	I
E303	me FRC	or GR/			Color of Wire	re	В
Connector No.	Connector Nar	Connector Color GRAY			Terminal No. Wire	က	4
	TO WIRE		$\neg$		Signal Name	ı	ı
E302	me WIRE	or GRA	4-	9 8	Color of Wire	re	В
Connector No. E302	Connector Name WIRE TO WIRE	Connector Color GRAY			Terminal No. Wire	ო	7
10	tor Name   WIRE TO WIRE	AY	[ ~ ·	2 9	Signal Name	ı	1
o. E301	ame WIF	or Color GRAY	$\neg \vdash$		al No. Wire	re	В
tor No.	tor N	otor Co			al No.		

Connector No.	. E326	9
Connector Name		WIRE TO WIRE
Connector Color	lor GRAY	АУ
H.S.	- 6	2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Terminal No.	Color of Wire	Signal Name
ဗ	В	I
4	В	_
9	W	=
8	α	-

2	WIRE TO WIRE	CK		Signal Name	1	ı	1	
E325		or BLACK	- 10	Color of Wire	В	В	Э	-
Connector No.	Connector Name	Connector Color	file.S.	Terminal No.	3	4	9	8

)4	FRONT FOG LAMP RH	AY		Signal Name	1	I
. E304		lor GRAY	_	Color of Wire	ГG	В
Connector No.	Connector Name	Connector Color	明 H.S.	Terminal No.	3	4

ABLIA4976GB

EXL

Κ

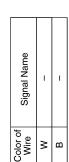
M

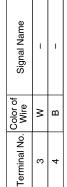
Ν

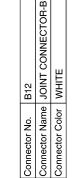
0

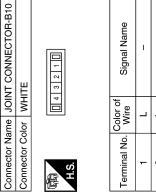
Р

Connector No.	E331
Connector Name	Connector Name FRONT COMBINATION LAMP RH
Connector Color BLACK	BLACK

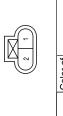


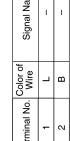






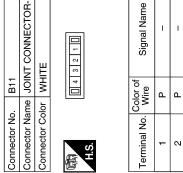
Connector No.	E328
Connector Name	Connector Name   FRONT COMBINATION   LAMP LH
Connector Color GRAY	GRAY
•	





Signal Nar	ı	1	
Color of Wire	٦	В	
Terminal No.	1	2	

B11	onnector Name JOINT CONNECTOR-B09	WHITE
onnector No.	onnector Name	onnector Color WHITE



E327	Connector Name   FRONT COMBINATION   LAMP LH	3LACK	
Connector No.	Connector Name	Connector Color BLACK	



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

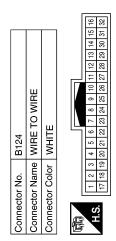
E332	Connector Name FRONT COMBINATION LAMP RH	GRAY	
Connector No.	Connector Name	Connector Color GRAY	

	Signal Name	ı	ı	
IJ	Color of Wire	œ	В	
Ċ	Terminal No. Wire	-	2	

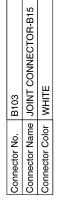
ABLIA3555GB

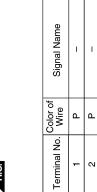
Р

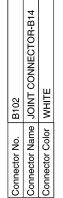
Connector No. B32  Connector Name WIRE TO WIRE  Connector Color WHITE  Connector Color WHITE  LS 32 31 30 29 28 27 28 25 24 23 22 21 20 19 18 17  Terminal No. Wire  18 L	Connector No.   B101   Connector Name   WIRE TO WIRE   Connector Color   WHITE   Connector Color   WHITE	A B C D
TOR-B12	lame lame	G
Connector No.   B17	Signal Name	Н
Connector No. B17 Connector Name JOINT Connector Color WHITE  LS.  Terminal No. Wire  1 L 2 L	No. Wire P	I
Connector Nan Connector Cold Connector Cold H.S.  Terminal No.  1 2	Terminal No. 89A 90A	J
		K
Sonnector No.   B16   Connector Name   JOINT CONNECTOR-B11   Connector Color   WHITE	B69   WIRE TO WIRE   SA   AA   SA   ZA   TA   EA   E	EXL
Connector No. B16 Connector Name JOINT C Connector Color   WHITE  LS.  Terminal No. Wire  1 P  2 P	ctor Nar	N
Connec Connec Connec Termin 1	Connec Connec	0
	ABLIA4977GB	

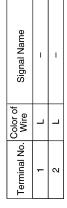


Signal Name	-	_
Color of Wire	٦	Ь
Terminal No.	18	19





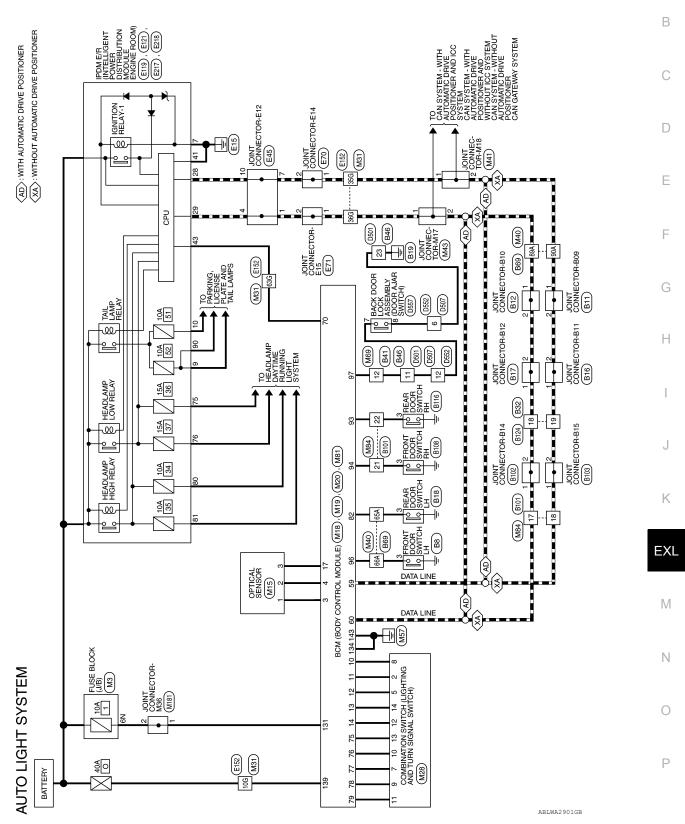




AALIA0627GB

### AUTO LIGHT SYSTEM

Wiring Diagram



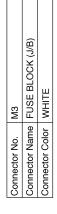
Connector Name | BCM (BODY CONTROL | MODULE) GREEN

Connector Color

M18

Connector No.

### AUTO LIGHT SYSTEM CONNECTORS



Connector Name | OPTICAL SENSOR

M15

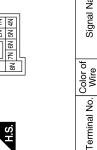
Connector No.

Connector Color WHITE









Signal Name	A/L POWER SUPPLY 5V	A/L SIGNAL	COMBI SW IN 5	COMBI SW IN 4	COMBI SW IN 3	COMBI SW IN 2	COMBI SW IN 1	GND RF A/L
Color of Wire	W	ŋ	۵	Д	>	Μ	Ь	œ
Terminal No.	3	4	10	11	12	13	14	17

Signal Name	I	_	_	
Color of Wire	*	g	В	
Terminal No.	1	2	3	

Signal Name	ı	
Color of Wire	×	
ю.		

N9

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



ě	32	32 31 30 83 88 87 80 83 84 83 85 81	3	8	8	ò	S	8	¢	3	ķ	ō	
į.	104	104 103 102 101 100 99	102	₽	100		86	96 26 86	96	88	94	93	
_													_
					ŀ								
Terminal No.	Š.	ర్	Color of Wire	o o	_		ری	Signal Name	nal	Ž	ап	<u>e</u>	
82			≥	_			ш	RL DOOR SW	18	ď	8	≥	
93			В				В	RR DOOR SW	0	Ö	3	ΝS	
94			g				¥	AS DOOR SW	0	Ö	8	Š	
96			ВВ	<b>(</b> 5			D	DR DOOR SW	2	ō	٦	ΝS	
26			≥	_		_	BA	BACK DOOR SW		8	H	S	>

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	_	Ь	BG	Ь	Ь	Μ	M
Terminal No.	29	09	20	75	9/	77	78	62

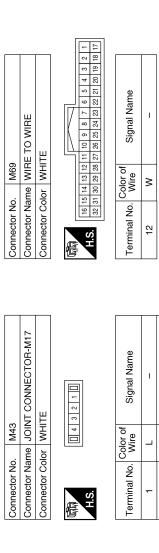
Connector No.	ů	ect	ō	2	ا نہ ا	_	M19	6												
Connector Name   BCM (BODY CONTROL MODULE)	иu	əct	ō	Š	III		BCM (BOE MODULE)	ΜÖ	E(B	D E)	>	$\sim$	Ž	Ĕ	OL					
Connector Color BLACK	Ě	ect	9	ပြ	힏	<del>.</del>	В	AC	X											
優王	H.S.							\	11	IV	17									
99	29	88	57	57 56	55	54 53 52 51 50 49 48 47 46 45 44 43 42	SS.	52	52	29	64	84	47	46	45	44	54	42	14	
8	79	78	77	76	75	79 78 77 76 75 74 73 72 71 70 69 68 67 66 65 64 63	73	72	7	2	69	88	67	99	65	22	æ	62	19	
		l	l	l			l	l	l	l	l	l	l	l	l	l	l	l	l	_

ABLIA7150GB

Р

	А
4   5   4	В
1	С
114   124   134   4   4   4   4   4   4   4   4   4	D
Connector No. Connector Name Connector Color H.S. H.S.  TTA  STA  STA  90A  U  Connector No. W  65A V  66A B  89A U  90A U	Е
	F
M31	G
M31  WIRE TO WIRE  WHITE  16 26 36 46 56  66 76 86 90 105  22062362464566677676673696900  22062362444466466677676670909000  2206236244645666677686615096000  2206236244645666677686615096000  2206236244645666677686615096000  2206236244645666677686615096000  220623624466566677686150960000000000000000000000000000000000	Н
M31   M31	I
Connector No. Connector Name Connector Color  Terminal No. W  10G 35G 36G 63G	J
	K
M28 COMBINATION SWITCH WHITE  WHITE  I g   10   11   12   13   14   Signal Name	EXL
	IVI
ctor NC O O O O O O O O O O O O O O O O O O	N
ABLIA4979GB	0

Revision: August 2014 EXL-45 2015 QX60 NAM



6	Connector Name   WIRE TO WIRE	нте	16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 32 31 30 29 28 27 26 28 24 23 22 21 20 19 11 10	Signal Name	ı			
o. M69	ame WI	olor WF	16 15 14 13 12 11 32 31 30 29 28 27	Color o Wire	8			
Connector No.	Connector Na	Connector Color WHITE	H.S.	Terminal No. Wire	12			
	Connector Name JOINT CONNECTOR-M17	Ē	3 2 1	Signal Name	I	1		
M43	ne JOIN	or   WHIT	4	Solor of Wire	_	Т		
Connector No.   M43	Connector Nan	Connector Color WHITE	原面 H.S.	Terminal No. Wire	-	2		
	<b>JT CONNECTOR-M18</b>	TE	4 3 2 1 1	Signal Name	1	1		
M41	ne JOIN	or WHI		Color of Wire	۵	۵		
Connector No.	Connector Name JOINT C	Connector Color WHITE	原面 H.S.	Terminal No.	-	2		

Connector No.	). M181	31
Connector Na	ame JOI	Connector Name   JOINT CONNECTOR-M36
Connector Color WHITE	olor WH	ПЕ
斯 H.S.	4	4 3 2 1
Terminal No. Wire	Color of Wire	Signal Name
1	>	1
7	>	ı

ı			Γ	1		18						
					m							
					4	20 19						
					2	51		_e				
				l 15	၂ ဖ	22		lan				
		Щ		/	_	23		<del>_</del>	1	1	1	1
		\		<u> </u>	-	24		Signal Name				
		>		\	6 0	3 25		Š				
		۲	ш		1 =	27 26						
	4	뿐			12 1	28		<b>4</b> _				
	M84	₹	≶		13	53		Color of Wire	١.	_	/B	_ ا
		<u>o</u>	_	1		8		Solor o	_	Д	മ	۳
	o.	au	응		15 14	31						
	z	Z	5		16	32		2				
	cto	용	용	_			J	ਯੂ			_	۱,
	ű	le le	ű		٥	Ó		<u>=</u>	17	92	2	2
	Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	Æ	į	3		Terminal No.				
	O	$^{10}$	$_{\rm LO}$		,	7			<u> </u>			

Connector No.	). M81	
Connector Name		BCM (BODY CONTROL MODULE)
Connector Color	olor WHITE	ПЕ
S.H	143 14	143   142   141   140   139   138
Terminal No.	Color of Wire	Signal Name
131	≥	BAT BCM FUSE
134	В	GND2
139	≯	BAT POWER F/L
143	В	GND1

ABLIA7151GB

	15							
	Connector Name JOINT CONNECTOR-E15	Ϋ́	2 5 1	Signal Name	ı	1		
E71	ne JOII	or BLA	9	Color of Wire	_	٦		
Connector No.	Connector Nar	Connector Color BLACK	原 H.S.	Terminal No. Wire	-	2		
	Connector Name JOINT CONNECTOR-E14	CK	2 ( )	Signal Name	1	ı		
E70	ne JOII	or BLA	9	Solor of Wire	۵	۵		
Connector No.	Connector Nar	Connector Color BLACK	所.S.	Terminal No. Wire	-	0		
	Connector Name JOINT CONNECTOR-E12	Ц	8 7 6 5 4 3 2 1	Signal Name	1	I	1	
E45	ne JOIN	Connector Color BLUE	6 01	Color of Wire	_	_	۵	۵
Connector No.	or Nan	or Cok	12 11	No.				

Connector No.	, E121	-
Connector Name		IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)
Connector Color	lor WHITE	TE
所 H.S.	7 8 12 13	14 15 16 17 18
Terminal No.	Color of Wire	Signal Name
7	В	GND (POWER)
6	9	TAIL RH
10	7	TAIL LH

T			33 49 50 34					
	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)	ITE	3 24 25 26 27 28 29 30 31 32 89 40 41 42 43 44 45 46 47 48	Signal Name	CAN-L	CAN-H	GND (SIGNAL)	IGN SIGNAL
		lor WHITE	19 20 21 22 23 35 36 37 38 39	Color of Wire	۵	_	m	_
	Connector Name	Connector Color	H.S.	Terminal No.	28	59	41	43

ABLIA7152GB

Α

В

С

 $\mathsf{D}$ 

Е

F

G

Н

J

Κ

EXL

M

Ν

0

Р

Connector No. E119

Connector No. E152	E152 WIRE TO WIRE	Terminal No.	Color of Wire	Signal Name	Connector No.		F/B (INTELLIGENT
		10G	۵	ı	Connector Name		POWER DISTRIBUTION
		35G	۵	ı		_	OLE ENGINE ROOM
		36G	_	1	COLILIECTO COLOR	IOI WHILE	Щ
56	46 36 26 16	63G	_	1	•		
100	106 96 86 76 66				H.S.	77 77	78 79 80 81
306296286	30G29G27G26G27G26G25G24G23G22G				Terminal No.	Color of Wire	Signal Name
41G40G39G38G37G36G35	3376 366 356 346 336 326 316				75	æ	HEADLAMP LO RH
50G 49G 48(	50G 49G 48G 47G 46G 45G 44G 43G 42G				92	_	HEADLAMP LO LH
61G 60G 59G 58(	61 G 60 G 59 G 58 G 57 G 56 G 55 G 54 G 53 G 52 G 51 G				80	>	HEADLAMP HI RH
70G69G680	70G 69G 68G 67G 66G 65G 64G 63G 62G	7			81	g	HEADLAMP HI LH
	R (INTELLIGENT	Connector No.		B8 FRONT DOOR SWITCH LH	Connector No. Connector Name		B11 JOINT CONNECTOR-B09
Connector Name   POWEF   MODUL	POWER DISTRIBUTION MODULE ENGINE ROOM)	Connector Color	olor WHITE	Щ	Connector Color	lor WHITE	삗
Connector Color WHITE							0 0
RZ 83 84 85 86 87 88 90 91 92 93 94 95 96	94 95 97 97 97 97 97 97 97 97 97 97 97 97 97	H.S.		4	H.S.		2 2
Color of Wire Wire	Signal Name	Terminal No.	Color of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name
90 FG	CLEARANCE	က	_	1	-	Ъ	ı
_				-			

ABLIA7153GB

Α

В

С

 $\mathsf{D}$ 

Е

F

G

Н

Κ

EXL

M

Ν

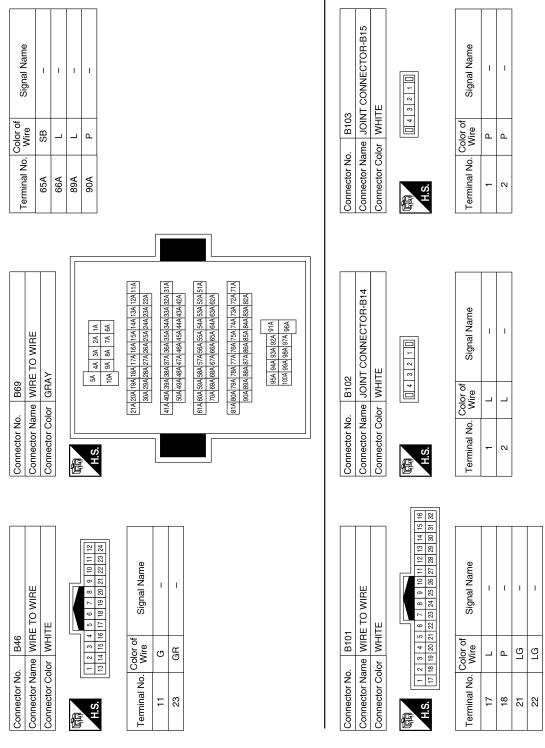
0

Р

	Connector Name JOINT CONNECTOR-B12	ITE	3 2 1	Signal Name	ı	1	
B17	me JOII	or WH	4	Color of Wire	_	_	
Connector No.	Connector Na	Connector Color WHITE	原动 H.S.	Terminal No. Wire	-	2	
	Connector Name JOINT CONNECTOR-B11	TE	3 2 1 1	Signal Name	ı	1	
B16	ne JOIN	or WHI	4	Solor of Wire	۵	۵	
Connector No.	Connector Nar	Connector Color WHITE	原知 H.S.	Terminal No. Wire	-	2	
	Connector Name JOINT CONNECTOR-B10	щ	3 2 1 0	Signal Name	ı	ı	
B12	JOIN et	L WHIT	4	Solor of Wire	_		
Connector No.	nector Nam	Connector Color WHITE	所 H.S.	Terminal No. Wire	-	2	

Connector No.   B4	1	RE TO WIRE	HTE	5 6 7 8 9 10 11 12 13 14 15 21 22 23 24 25 26 27 28 29 30 31	f Signal Name	1	
O WIRE    S   S   7   6   5   4   3   2   1		lame WI	color WI	19 20	Color o Wire	g	
O WIRE    O WIRE	Connector N	Connector N	Connector C	σ	Terminal No	12	
O WIRE  O WIRE  Signal Name				18 17			
Connector No.   B32		TO WIRE	ш	25 24 23 22 21 20 19	Signal Name	1	
Connector No.	B32	ne WIRE	or WHIT	30 29 28	Solor of Wire	_	•
	Connector No.	Connector Nar	Connector Col	σi	Terminal No.	18	
	18	EAR DOOR SWITCH LH	HITE	4	of Signal Name	1	
OOOR SW		ame R	olor		Color ( Wire	SB	
AR DOOR SW	Connector No.	onnector N	onnector C	E.S.	Terminal No. Wire	က	

ABLIA7154GB



Α

В

С

 $\mathsf{D}$ 

Е

F

G

Н

J

Κ

		1 32				
	E TO WIRE	6 7 8 9 10 11 12 13 14 15 22 23 24 25 26 27 28 29 30 31	Signal Name	1	I	
B124	r WIR	3 4 5 19 20 21	color of Wire	_	<u>_</u>	
Connector No.	Connector Name WIRE TO WIRE Connector Color WHITE	H.S.	Terminal No. Wire	18	19	
B116	Connector Name REAR DOOR SWITCH RH Connector Color WHITE	1 2 3 4	of Signal Name	1		
	ame R		Color	ГG		
Connector No.	Connector Name REAR Connector Color WHITE	刷.S.	Color of Wire	3		
					ı	
80	Connector Name FRONT DOOR SWITCH RH Connector Color WHITE	2 3 4 4	Signal Name	1		
B108	ne FRC or WH		Color of Wire	LG		
Connector No.	Connector Name FRONT Connector Color WHITE	H.S.	Terminal No.	3		

3	E TO WIRE	TE	3 4 5 6 7 8 11 12 13 14 15 16	Signal Name	1	1
D55	ne WIR	or WHI	9 10 1	Color of Wire	В	g
Connector No. D552	Connector Name WIRE TO WIRE	Connector Color WHITE	· H.S.	Terminal No. Wire	9	12
07	Connector Name WIRE TO WIRE	НТЕ	6 14 15 14 10 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	f Signal Name	ı	1
. D5(	me WII	lor WF	8 7 16 15	Color of Wire	>	Д
Connector No. D507	Connector Na	Connector Color WHITE	厨 H.S.	Terminal No. Wire	9	12
					1	
	E TO WIRE	TE	20 19 18 17 16 15 14 13	Signal Name	I	ı
D501	me WIR	or WHI	24 23 22 21 20	Color of Wire	۵	>
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	H.S.	Terminal No. Wire	1	23

Signal Name	ı	1	
Color of Wire	۵	Y	
Terminal No.	11	23	

ABLIA7156GB

**EXL-51** 2015 QX60 NAM Revision: August 2014

EXL

M

Ν

0

Р

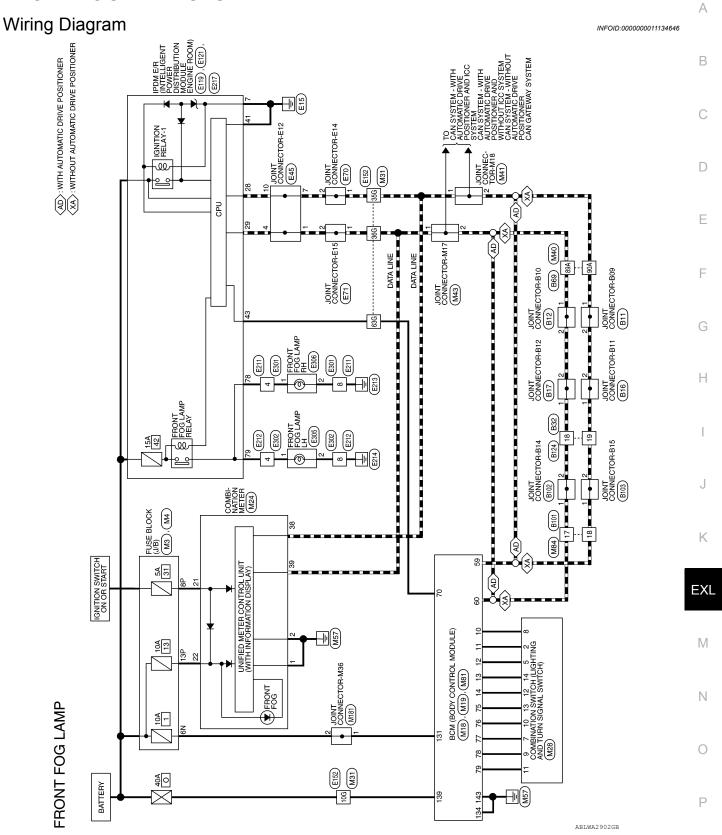
D557	e BACK DOOR LOCK ASSEMBLY	r WHITE	
Connector No.	Connector Name	Connector Color	



Signal Name	-	I
Color of Wire	В	В
Terminal No.	7	8

ABLIA7157GB

### FRONT FOG LAMP SYSTEM



BCM (BODY CONTROL MODULE)

Connector Name Connector Color

Connector Name FUSE BLOCK (J/B)

Α

Connector No.

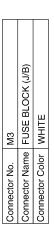
Connector Color | WHITE

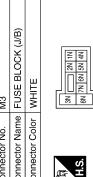
M18

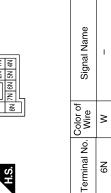
Connector No.

GREEN

### FRONT FOG LAMP CONNECTORS







COMBI SW IN 5 COMBI SW IN 4 COMBI SW IN 3 COMBI SW IN 2 COMBI SW IN 1

Signal Name

Color of Wire ℩ ₾ > ≷ Д

Terminal No. 10 Ξ 2 5 4

Signal Name

Color of Wire	ВВ	^
Terminal No.	8P	13P
		Ì
Signal Name	1	
Color of Wire	M	

Terminal No	8P	13P
Signal Name	I	
lor of Vire	×	

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

_			-		1
ш			9	26	ı
Σ			~	27	ı
Ζ			8	28	
읟		1 17		29	
ֻׁ		l 1/	10	30	ı
듦	Щ	l IN	20 19 18 17 16 15 14 13 12 11 10 9	40 39 38 37 36 35 34 33 32 31 30 29 28 27 26	
⅀	WHITE		12	32	
8	≶		13	33	
-			4	34	ı
Ĕ	lor		15	35	
g	ပ္ပ		16	36	
ъ	or		17	37	
Sc	ect		18	38	
Ĕ	п	H.S.	19	39	
Connector Name   COMBINATION METE	Connector Color		20	40	
_	_				_

23 22								
l∾l	1							
24								
25								
26								_
27		\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	=	2	-	-	亅亅	エー
28		<u>_</u>	١Ħ	ž	G	34	Æ	CAN-H
29		l g	۳	۳		_	0	O
30		S <sub>2</sub>						
31								
32								
33		<u>5</u> •			<b>(</b> 5	_		
34		ਫ਼ੵਫ਼	ω	В	BC	≥	₽	_
35		0						
36		<u>o</u>						
37		=						
38		La La	-	N	7	22	<u></u>	39
39		] [					(,,	(,)
40		<u> </u>						
	_							
	27 26 25	39 38 37 36 35 34 33 32 31 30 29 28 27 26 25	39 38 37 38 38 34 38 32 31 30 29 28 27 26 28 27 26 28 27 26 28 27 26 28 27 26 28 27 26 28 28 28 28 28 28 28 28 28 28 28 28 28	Si   si   si   si   si   si   si   si	Si   si   si   si   si   si   si   si	Si   Si   Si   Si   Si   Si   Si   Si	Si   Si   Si   Si   Si   Si   Si   Si	Signal   Signal   Signal Name

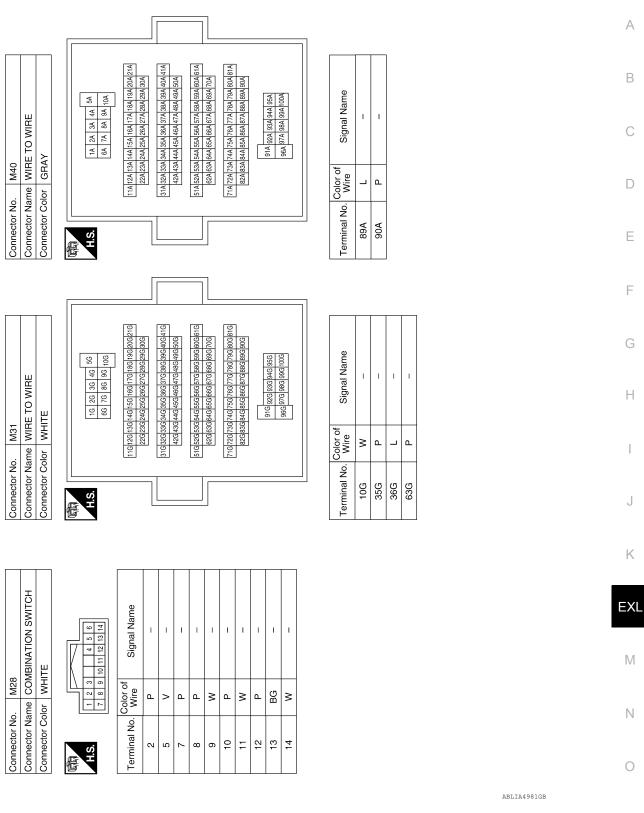
Signal Name	CAN-L	CAN-H	IGN USM OUT 1	COMBI SW OUT 5	COMBI SW OUT 4	COMBI SW OUT 3	COMBI SW OUT 2	COMBI SW OUT 1
Color of Wire	۵	_	۵	BG	Ь	Ь	Α	M
Terminal No.	29	09	20	52	92	<i>LL</i>	82	79

				2 41	80 79 78 77 76 75 74 73 72 71 70 69 68 67 66 65 64 63 62 61	
				54 53 52 51 50 49 48 47 46 45 44 43 42	63	
				44	49	
	70			45	65	
	Ě			46	99	
	Connector Name   BCM (BODY CONTROL   MODULE)			47	67	
	$\sim$			48	89	
			117	49	69	
	QŒ.		l IV	20	2	
	BCM (BOE MODULE)	X	I IN	51	7	
6	X S	BLACK		25	72	
M19	M	В		53	73	
	(I)			54	74	
	Ĕ	olo		55	75	
ž	ž	S		59 58 57 56 55	9/	
or	io.	or		22	11	
ect	ect	ect	, c	28	78	
Ē	Ē	ũ	H.S.	29	79	
Connector No.	ဝ	Connector Color	優工	99	80	

ABLIA4635GB

### FRONT FOG LAMP SYSTEM

[XENON TYPE] < WIRING DIAGRAM >



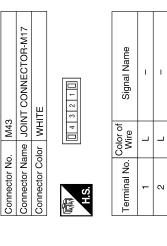
**EXL-55** Revision: August 2014 2015 QX60 NAM

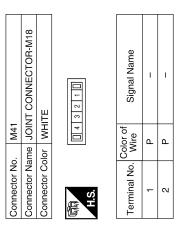
Р

우

BCM (BODY CONTROL MODULE)	WHITE
Connector Name	Connector Color WHITE
A17	
	OR-M17 Connector Name BCM (BODY CONTROL MODULE)

	BCM (BODY CONTROL MODULE)	ITE	137 136 135 134 133 132 131 130 123    143   142   141   140   139   138		Signal Name	BAT BCM FUSE	GND2	BAT POWER F/L	GND1
		lor   WH	143 142		Color of Wire	M	В	W	В
Collingated 140.	Connector Name	Connector Color WHITE		С	Terminal No.	131	134	139	143





Connector No.	E45	
Connector Nam	e JOINT C	Connector Name JOINT CONNECTOR-E12
Connector Color BLUE	r BLUE	
(12) H.S.	12 11 10 9 8 7	6 5 4 4 3 2 1
Terminal No.	Color of Wire	Signal Name

Term	Signal Name	Color of Wire W	Terminal No. Wire 1 W 2 W
唇王	3 2	Color of	明. H.S.
Conr	ITE	lor WHITE	Connector Color
Conr	Connector Name JOINT CONNECTOR-M36	Ime JOI	onnector Na
Conr	31	. M181	Connector No.

Connector No.	). M84	
Connector Name WIRE TO WIRE	ıme WIR	E TO WIRE
Connector Color WHITE	lor WHI	TE
() 32 32	15 14 13 12 31 30 29 28	2 11 10 9 8 7 6 5 4 3 2 1 2 7 26 25 24 23 22 21 20 19 18 17
]		
Terminal No.	Color of Wire	Signal Name
17	٦	ı
18	d	1

ABLIA3568GB

80 84		А
r No. E119  IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)  r Color WHITE  IS 20 21 22 22 24 25 36 27 28 39 31 32 33 34 35 38 38 37 38 38 40 41 42 48 46 47 48 49 59 30	Signal Name  CAN-L  CAN-H  GND (SIGNAL)  IGN SIGNAL	В
POWEF MODUL  NOTE WHITE  IPDM E  MODUL  TI IZ	Color of Wire D	D
Connector Name Connector Color Connector Color H.S. 19 20 21 H.S. 25 36 37	Terminal No. C 38 29 41 43 43 35G 83G 63G 63G	Е
		F
OR-E15	### ### ### ### ### ### ### ### ### ##	G
DOINT CONNECTOR-E15 BLACK  State of the stat	E152	Н
	Color of Land Wire Land Wi	I
Connector No. Connector Color Connector Color H.S.	Connector No. We Connector No. We Connector Name Connector Name Connector Color Line Line Line Line Line Line Line Line	J
		K
JOINT CONNECTOR-E14 BLACK	F - Signal Name P	EX
1 9 1		N
Connector Name Connector Color	Connector No.  Connector Name Connector Color Terminal No.  7	0
	ABLIA4637GB	

Signal Name

Color of Wire ≥ В

Terminal No.

Signal Name

Color of Wire ≥

Terminal No.

Signal Name

Color of Wire

Terminal No.

1

≥ В

ω

В

ω

Ŋ

	LIGENT	F BOOM)	()	
E217	IPDM E/R (INTEL	OSIMIECTO INSTITE   POWER DISTRIBUTION   MODITE ENGINE BOOM)		WHITE
Connector No.	omoly rotocaco	COLLINGCIOI INVITIG		Connector Color WHITE
	RE			

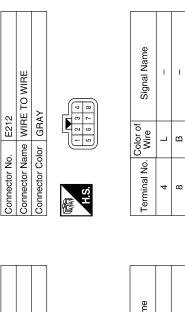
Connector Name | WIRE TO WIRE

E211

Connector No.

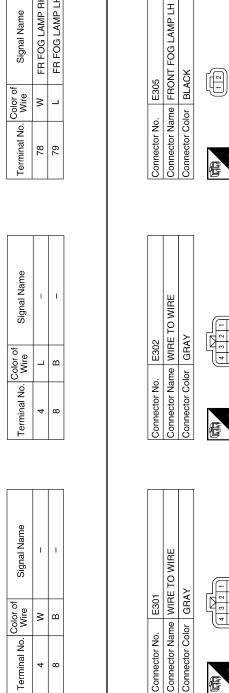
Connector Color | GRAY

MODULE ENGINE ROOM)	ITE	77 78 79 80 81	Signal Name	FR FOG LAMP RH	FR FOG LAMP LH
2	lor WF	77 78	Color of Wire	8	٦
	Connector Color WHITE	崎 H.S.	Terminal No.	28	62



Terminal No.

4 ω



ABLIA3570GB

Connector No.

Y.			N.	
Terminal No. Wire	Color of Wire	Signal Name	Terminal No. W	No.
-	8	ı	-	
2	В	1	Q	

Connector Name FRONT FOG LAMP RH Connector Color BLACK

Connector No.

Connector No. B32	Connector Name WIRE TO WIRE	Connector Color WHITE	16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1	32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17	Terminal No. Wire Signal Name	18 L –	0
Connecto	Connecto	Connecto	\ \frac{3}{2}	Ö E	Termina	18	,

Connector No.	). B17	
Connector Na	IMe JOI	Connector Name JOINT CONNECTOR-B12
Connector Color WHITE	olor WE	IITE
原则 H.S.	4	] 4 3 2 1 ]
Terminal No.	Color of Wire	Signal Name
٢	_	I
٥	_	ı

Connector No.	). B16	
Connector Na	Ime JOII	Connector Name JOINT CONNECTOR-B11
Connector Color WHITE	lor WH	ТЕ
原 H.S.	4	4 3 2 1 1
Terminal No.	Color of Wire	Signal Name
1	Ь	I
2	Ь	ı

ABLIA3571GB

Revision: August 2014 **EXL-59** 2015 QX60 NAM

Α

В

С

D

Е

F

G

Н

ı

J

Κ

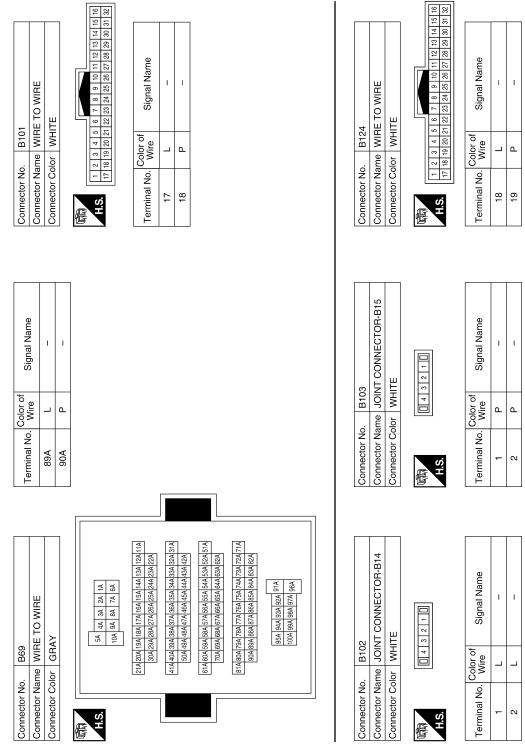
EXL

M

Ν

0

Р

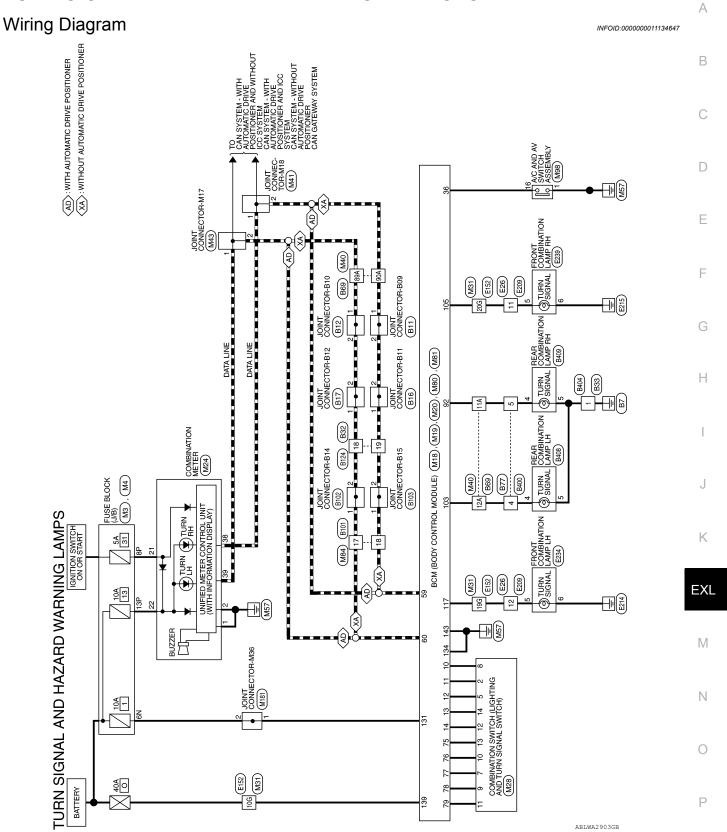


ABLIA4982GB

### TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< WIRING DIAGRAM > [XENON TYPE]

### TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM



## TURN SIGNAL AND HAZARD WARNING LAMPS CONNECTORS

Connector No M3			
COLLIECTOR INC.		Ö	0
Connector Name FUSE BLOCK (J/B)	ILOCK (J/B)	Ö	Q
Connector Color WHITE		Ō	1,0

Connector Name BCM (BODY CONTROL MODULE)

M18

Connector No.

GREEN

Connector Color

E





7N 6N 5N 4N

Signal Name	1
Color of Wire	Μ
Terminal No.	N9

Signal Name

Color of Wire BG ≥

Terminal No.

13P 8Ь

	2	22	_							
	6	83								
	4	24			_	١.				
	5	25 24		Θ	2	2	8	2	5	>
	9	26		Signal Name	COMBI SW IN 5	COMBI SW IN 4	COMBI SW IN 3	COMBI SW IN 2	COMBI SW IN 1	HAZARD SW
	7	27		Z	S	S	S S	S	S	윤
긭	∞	28		Па	丽	丽	丽	丽	丽	Z
$\parallel \parallel / \parallel$	6	53		Sig	≥	∣⋛	∣⋛	≥	∣⋛	₹
IV.	11 10	30			ŏ	ၓ	ၓ	ŏ	ၓ	-
$    \rangle$	Ξ	= ≅								
	12	32	lH	<del>_</del>						
	13	33		Solor	_	_		>	_	ပ္ခ
	4	34		ĕૂં≶	"	"	_	>	"	_
	19 18 17 16 15	35	lŀ	Terminal No. Wire						
	7	7 36		8						
_	-	39 38 37		<u></u>		_		_	_	ر ا
Ø.	9	3		Ξ	10	<del>-</del> -	12	13	14	36
Ŋ.	20	40		err						
<b>3</b> [	_c4	4	JL	<u> </u>						

<u>- 12</u>

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

Connector Name | BCM (BODY CONTROL MODULE)

Connector Name | BCM (BODY CONTROL | MODULE)

M19

Connector No.

BLACK

Connector Color

Connector No.

GRAY

Connector Color





CAN-L CAN-H

BAT <u>I</u>

BG

N

≥ ℩

3 8 2 2 8

ō	Color of	ŏ	(	Touismin T	9	3	
П							П
33		35 34	36	37	38	39	40
13	4	15	16	17	18	19	20
一							

	8 87 86 85 84 83 82 81	00 99 98 97 96 95 94 93	Signal Name	RR FLASHER	RL FLASHER
	92 91 90 89 88	104 103 102 101 100 99	Color of Wire	æ	BG
L	35	104	8		

	L
(၇)	
停工	

Signal N	RR FLAS	RL FLAS
Color of Wire	Œ	BG
Terminal No.	92	103

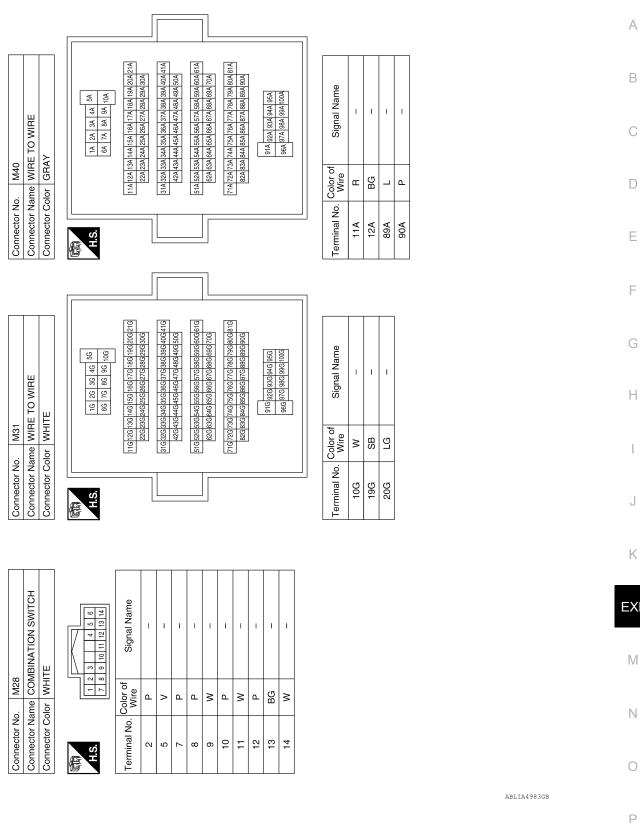
H.S.	

	Signal Name	CAN-L	CAN-H	COMBI SW OUT 5	COMBI SW OUT 4	COMBI SW OUT 3	COMBI SW OUT 2	COMBI SW OUT 1
	Color of Wire	Ь	٦	BG	Ь	Д	8	Μ
	erminal No.	59	09	75	9/	77	78	62

ABLIA3574GB

### TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

[XENON TYPE] < WIRING DIAGRAM >



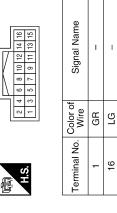
**EXL-63** Revision: August 2014 2015 QX60 NAM EXL

Connector No.	M80
Connector Name	Connector Name   BCM (BODY CONTROL   MODULE)
Connector Color BLACK	BLACK

Signal Name	FR FLASHER	EI EI ASHEB
Color of Wire	ГG	as
erminal No. Color of Wire	105	117

Signal Name	FR FLASHER	FL FLASHER	
Color of Wire	LG	SB	
Terminal No.	105	117	

M98	Connector Name   A/C AND AV SWITCH   ASSEMBLY	WHITE	
Connector No.	Connector Name	Connector Color WHITE	



	JOINT CONNECTOR-M17	ПЕ	3 2 1	Signal Name	I	-
. M43	me JOI	lor WH	4	Color of Wire	_	-
Connector No.	Connector Name	Connector Color WHITE	斯 H.S.	Terminal No.	-	٥

				3 2 1	18 17
				4	32 31 30 29 28 27 26 25 24 23 22 21 20 19
				2	5
				9	22
			117	7	23
	ш		l IV	8	24
	₩		IN	6	22
	≥			18	56
	잍	١	_ '¬	Ξ	27
١.	щ	≝		12	88
M84	₩	Į₹		13	53
2	>	>		14	೫
	l e	5		16 15 14 13 12 11	8
ġ.	lar	Ö		16	엃
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE		2	ē.

Signal Name	-	1	
Color of Wire	٦	Ь	
Terminal No.	17	18	

M41	Connector Name   JOINT CONNECTOR-M1	WHITE	
Connector No.	Connector Name	Connector Color WHITE	



Signal Name	l	1	
Color of Wire	Ь	Д	
Terminal No.	1	2	

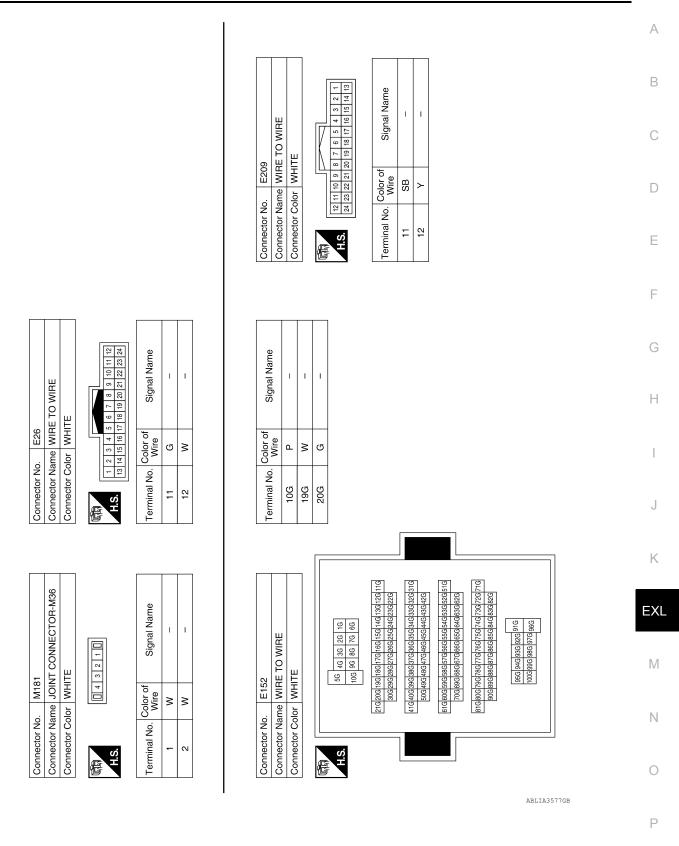
M81	nnector Name BCM (BODY CONTROL MODULE)	WHITE	- 
nnector No.	nnector Name	nnector Color WHITE	

	BCM (BODY CONTROL MODULE)	TE		Signal Name	BAT BCM FUSE	GND 2	BAT POWER F/L	י כואט
. M81		lor WHI	13713	Color of Wire	8	В	8	۵
Connector No.	Connector Name	Connector Color WHITE	H.S.	Terminal No.	131	134	139	170

ABLIA4984GB

### TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

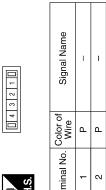
< WIRING DIAGRAM > [XENON TYPE]

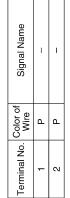


Revision: August 2014 EXL-65 2015 QX60 NAM

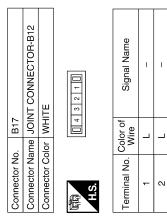
[XENON TYPE] < WIRING DIAGRAM >

Connector No.	B11
nnector Name	Connector Name JOINT CONNECTOR-B09
Connector Color WHITE	WHITE

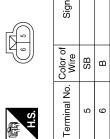








E239	Connector Name   FRONT COMBINATION   LAMP RH	GRAY	
Connector No.	Connector Name	Connector Color GRAY	



Signal Name	1	ı	
Color of Wire	SB	В	
ninal No.	5	9	

Connector No.	B16
Connector Name	Connector Name JOINT CONNECTOR-B11
Connector Color WHITE	WHITE
H.S.	
Terminal No. Color of Wire	Nor of Signal Name

Connector No.	E234
Connector Name	Connector Name FRONT COMBINATION LAMP LH
Connector Color GRAY	GRAY

(2)	Signal Nam	I	ı
	Color of Wire	<b>\</b>	В
H.S.	Terminal No.	5	9

Connector No.	B12
Connector Name	Connector Name JOINT CONNECTOR-B10
Connector Color WHITE	WHITE
原南 H.S.	1     4     3     2     1     1

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

Ф ۵

N

ABLIA3578GB

### TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

< WIRING DIAGRAM > [XENON TYPE]

Connector No. B77 Connector Name WIRE TO WIRE Connector Color WHITE  The state of t	Terminal No. Color of Signal Name  4 G 5 W
Connector No.   B33	
Connector No. B32  Connector Name WIRE TO WIRE  Connector Color WHITE  Terminal No. Color of Signal Name  18 L  19 P  19 RE9  Connector Name WIRE TO WIRE  Connector Name WIRE TO WIRE  Connector Color GRAY  Signal Name  MIRE TO WIRE  Connector No. B69  Connector Color GRAY  Signal Name  Signal Name  AB9  Connector No. B69  Connector No. B69  Connector No. GRAY  Signal Name  AB9  Signal Name  AB9  Signal Name  AB9  Connector No. B69  Connector No. B69  Signal Name  AB9  Signal Name  AB	[4] [4] [8] [8] [8] [8] [8] [8] [8] [8] [8] [8
Connector No.  Connector Name Connector Color  Terminal No.  Connector No. Connector Name Connector Name Connector Color  M. 18  The connector No. Connector	ABLIA4985GB

Revision: August 2014 EXL-67 2015 QX60 NAM

< WIRING DIAGRAM > [XENON TYPE]

03	Connector Name JOINT CONNECTOR-B15	IITE	4 3 2 1 0	Signal Name	ı	ı
B	me JO	lor W		Color o	۵	۵
Connector No. B103	Connector Na	Connector Color WHITE	副 H.S.	Terminal No. Wire	-	2
						•
)2	Connector Name JOINT CONNECTOR-B14	ITE	4 3 2 1	Signal Name	ı	ı
B10	ne JOI	or WH	4	Solor of Wire	_	_
Connector No. B102	Connector Nar	Connector Color WHITE	赋动 H.S.	Terminal No. Wire	-	2

Connector Name WIRE TO WIRE Connector Color WHITE

B101

Connector No.

Signal Name

Terminal No.

\_ | \_

17

)4 TETO WIDE	ACK		Signal Na	ı	
Connector No. B404	Connector Color BLACK	12 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Terminal No. Wire	- B	
) TO WIDE	TE TE	15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 1	Signal Name	I	1
. B400	alor WHI	15 14 13 12 11 31 30 29 28 27	Color of Wire	ŋ	8
Connector No.	Connector Color WHITE	(16 1 18 1 18 1 18 1 18 1 18 1 18 1 18 1	Terminal No. Wire	4	5
		16			
4 T T WIDE	TE TE	5 6 7 8 9 10 11 12 13 14 15 16 12 12 22 22 22 24 25 26 27 28 29 30 31 32	Signal Name	ı	1
. B124	lor WHI	3 4 4 19 20	Color of Wire	٦	۵
Connector No.	Connector Color WHITE	H.S.	Terminal No. Wire	18	19

ABLIA3580GB

### TURN SIGNAL AND HAZARD WARNING LAMP SYSTEM

[XENON TYPE] < WIRING DIAGRAM >

Α

В

С

 $\mathsf{D}$ 

Е

F

G

Н

J

Κ

EXL

M

Ν

0

ABLIA3644GB

Р

Connector No.	B409
Connector Name	Connector Name REAR COMBINATION LAMP
Connector Color GRAY	GRAY





jc		
Color of Wire	Μ	ЯĐ
Terminal No.	4	5

Signal Name

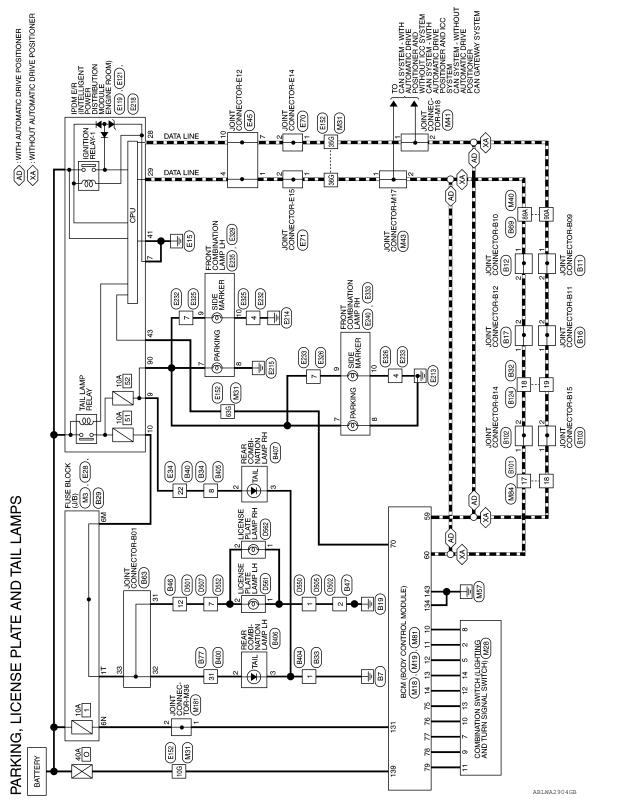
Connector No.	B408
Connector Name	Connector Name REAR COMBINATION LAMP
Connector Color GRAY	GRAY



	Signal Name	I	1
4	Color of Wire	g	а
H.S.	Terminal No. Wire	4	7

### PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

Wiring Diagram



### PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

[XENON TYPE] < WIRING DIAGRAM >

> COMBI SW OUT 5 COMBI SW OUT 4 COMBI SW OUT 3 COMBI SW OUT 2 COMBI SW OUT 1

BG

Ф Д ≥ ≥

COMBI SW IN 1

≥ ▄

€ <del>1</del>

78 79

22

Ф

20 75 9/

IGN USM OUT 1

CAN-H CAN-L

Signal Name

Color of Wire

Terminal No.

Д

60

# PARKING, LICENSE PLATE AND TAIL LAMPS CONNECTORS

8	Connector Name   BCM (BODY CONTROL	JUULE)	
Connector No. M1	Connector Name BC	JIM	
M3	Connector Name   FUSE BLOCK (J/B)	WHITE	
Connector No.	Connector Name	Connector Color	

Sonnector No. M18	Sonnector Name   BCM (BODY CONTROL   MODULE)	Sonnector Color   GREEN
Con	Con	Co

BCM (BODY CONTROL MODULE)

Connector Name Connector Color

M19

Connector No.

BLACK

Sonnector No. M18	Connector Name BCM (BODY CONTROL MODULE)	Connector Color GREEN	
Conn	Conn	Conn	

			3 2 1	40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21	
			6 5 4	5 24	
			(0)	9	
			-	2 2	
			2 8	8	
			6	63	
(;			0	30	
)LE	z		Ξ	31	
MODÙLE)	Connector Color GREEN		19 18 17 16 15 14 13 12 11 10 9	32	
10	ЗЯ		13	33	
_			4	34	
	<u>ō</u>		15	35	
	ပြ		16	36	
	5		17	37	
	ect	16	18	38	
	Ē	H.S.		39	
MODÙLE)	ပြ	偕 🔻	20	40	

Color of Wire	d	Ь	۸
Terminal No.	10	11	12
m			

COMBI SW IN 5 COMBI SW IN 4 COMBI SW IN 3 COMBI SW IN 2

Signal Name

Signal Name	ı	
Color of Wire	*	
Terminal No.	N9	

Signal Name	I	1	1	ı	1	1	ı	1	1	ı
Color of Wire	Ь	^	۵	۵	Μ	Ь	>	Ь	BG	>
Terminal No. Wire	2	5	7	œ	6	10	11	12	13	14

Connector No.	_	M28	m						
Connector Name   COMBINATION SWITCH	-	ΙŌ	ME	Ĭ≅	l۲I	◙	ž	اچ∣	ІТСН
Connector Color WHITE	_	¥	≣	111					
		느	Ш	IN.	W	117	_		
	E	T		Γ	Γ	T	Ţ	Γ	
S	-	7	က			4	S	9	
	7	8	8 9 10 11 12 13 14	10	Ξ	12	13	14	



ABLIA4986GB

В

Α

С

D

Е

F

G

Н

J

Κ

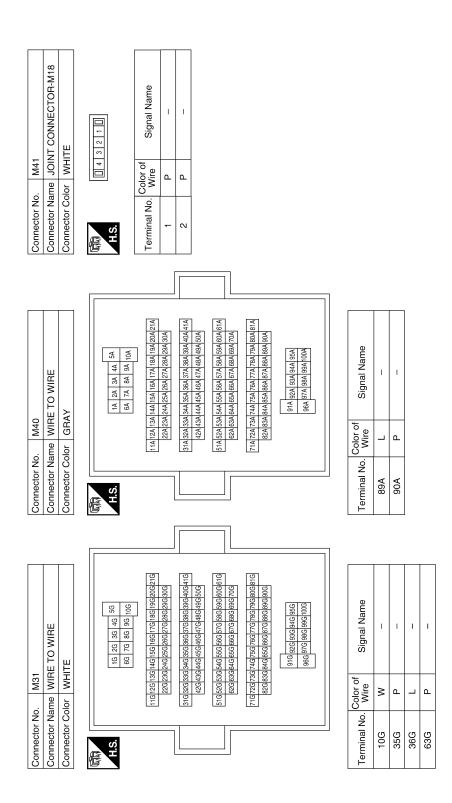
EXL

M

Ν

0

Р



ABLIA4987GB

## PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< WIRING DIAGRAM > [XENON TYPE]

	А
mm e mm	В
	С
	D
M84   Connector No.   M84   WIRE TO WIRE Connector Color   WHITE   Connector Color of   Signal   Terminal No.   Color of   Signal   Terminal No.   Color of   Signal   Terminal No.   Color of   WHITE   Connector Color   WHITE   Terminal No.   Color of   Signal   Terminal No.   Wire   Signal   Terminal No.   Wire   Signal   Terminal No.   Wire   Signal   Terminal No.   Color of   Color	Е
	F
NATROL Name A FUSE D 2 VER F/L D 1 Name	G
M81  M0DULE)  or WHITE  Color of Signal Name  W BAT BCM FUSE  B GND 2  W BAT POWER F/L  B GND 1  B GND 1  Color of WHITE  Color of WHITE  B GND 1  Color of WHITE  Color of Signal Name  W BAT POWER F/L  B GND 1  Color of Signal Name  L	Н
M81   M81   M91	I
Connector No. Connector Name Connector No. Connector No. Connector Name Connector Name Connector Name Connector Name Connector Color  Fig. 134  Fig. 139  Connector No.  Gome Terminal N	J
	K
Ctor No.   M43	EXL
ctor No. M43  ctor Color   WHITE  ctor Color of   L   L   L   L   L   L   L   L   L	
ctor No.  ctor Name  ctor No.  ctor No.  ctor No.  ctor No.  ctor No.  ctor Color  ctor No.  ctor Color  ctor No.	N

ABLIA3584GB

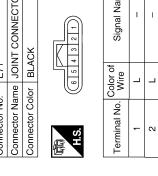
0

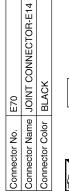
Р

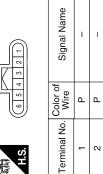
Revision: August 2014 EXL-73 2015 QX60 NAM

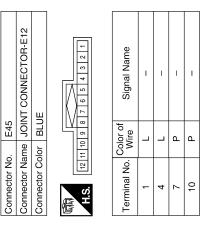
|--|

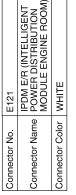


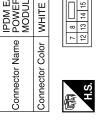












13   14   15   17   18   18   17   17   17	Signal Name	GND (POWER)	TAIL RH	TAIL LH
1 213	Color of Wire	В	В	٦
H.S.	Terminal No. Wire	7	6	10

Connector No.		Ш	E119	_											
Connector Name	me		집	쁜판짓	뜻눈백	三岛巴	5,50	IPDM E/R (INTELLIGENT POWER DISTRIBUTION MODULE ENGINE ROOM)	35	照은호	Fz6	. 🗧			
Connector Color WHITE	o	≥		世											
					\	<u> </u>	<i> </i>	17					l		
19 20	20 21 22 23 24 25	22	23	24	25	26	27	26 27 28 29 30 31 32 33	53	30	3	32	33	34	
35 36 37 38 39	37	38	33	40	41	42	43	40 41 42 43 44 45 46 47 48	45	46	47	48	49	20	

Signal Name	CAN-L	CAN-H	GND (SIGNAL)	IGN SIGNAL
Color of Wire	۵	Г	В	L
Terminal No. Wire	28	29	41	43

ABLIA4649GB

## PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< WIRING DIAGRAM > [XENON TYPE]

<u></u>																				
E/R (INTELLIGEN	POWER DISTRIBUTION	יר ד	ш		5 86 87 88 89 3 94 95 96 97	Signal Name	CLEARANCE					FRONT COMBINATION		\(\int_{\omega}\)	J	Signal Name	ı	ı		
		-	A MAILE		82 83 84 85 86 87 90 91 92 93 94 95	Color of Wire	re				). E235	_	_			Color of Wire	P	В		
	Connector Name	30,000		E	H.S.	Terminal No.	06				Connector No.	Connector Name	Connector Color	A.S.		Terminal No.	7	8		
					1								_		_					
Olginal Ivaline	1	ı	ı	ı								WIRE TO WIRE		2 1 1		Signal Name	1	ı		
Wire	۵	<u> </u>		_							. E233	-	lor   GRAY	8 4 7 8 6 5 1		Color of Wire	В	re		
į	10G	35G	36G	63G							Connector No.	Connector Name	Connector Color	用.S.		Terminal No.	4	7		
		1			ГØП		57	<b>5</b>	<u></u>						Г		1			
TO WIRE	Щ				8G 7G 6G	30G29G28G27G26G25G24G23G22G		610 600 590 580 580 570 560 550 540 530 520 510  700 690 680 670 660 650 640 630 620	81 G 80 G 73 G 77 G 76 G 75 G 74 G 73 G 72 G 71 G 90 G 89 G 87 G 86 G 85 G 84 G 83 G 82 G	95G 94G 93G 92G 91G		WIRE TO WIRE	X	0 5 1		Signal Name	I	1		
ame WIRE	olor WHITE			_ <u>ro</u>	216206196	30G290	50G 49C	70G69C	81G80G790 90G890	[ <u>0</u> ]2]	o. E232	-	olor BLACK	8 4 3 2 8		Color of Wire	В	re		
Connector Name   WIRE TO WIRE	Connector Color			Ų.							Connector No.	Connector Name	Connector Color	H.S.		Terminal No.	4	7		
																		ABLI	A4988GB	

Revision: August 2014 EXL-75 2015 QX60 NAM

E326  In GRAY  Solor of Wire  B  B							
stor No. E32 stor Color GR, 51 stor Color GR, 51 stor Color of 51 stor Color of 61 stor Col	9	RE TO WIRE	٩٧	8 1	Signal Name	ı	ı
stor No		me WIF			Color of Wire	В	P
Connec Connec Connec H.S. H.S.	Connector No.	Connector Na	Connector Color	原动 H.S.	Terminal No.	4	7

ninal No. Wire Wire A B B	Signal Name	ı	_	
ninal No. 4	Color of Wire	В	ГG	
Terr	Terminal No.	4	7	

Connector No.	). B11	
Connector Na	Ime JOI	Connector Name JOINT CONNECTOR-B09
Connector Color	olor WHITE	IITE
H.S.	1 4 0	3 2 1
Terminal No.	Color of Wire	Signal Name
-	۵	1
2	Д	ı

Connector No.	. E325	2
Connector Name	me WIF	WIRE TO WIRE
Connector Color	lor BLACK	CK
明.S.	2 - 2	<u>48</u>
Terminal No.	Color of Wire	Signal Name
4	В	ı
7	ГС	1

Signal Name	ı	-	
Color of Wire	В	ГС	
erminal No.	4	7	

Connector No. E333	Connector Name   FRONT COMBINATION   LAMP RH	Connector Color GRAY	
--------------------	--	----------------------	--

າ	FRONT COMBINAT LAMP RH	٩٧	10	Signal Nam	_	_
. = 5553		lor GRAY		Color of Wire	ГС	В
Collinector No.	Connector Name	Connector Color	原式 H.S.	Terminal No.	6	10

Connector No.	. E240	0.
Connector Name		FRONT COMBINATION LAMP RH
Connector Color GRAY	olor GR	AY
F.S.		8
Terminal No.	Color of Wire	Signal Name
7	re	ı
c	٥	

E329	Connector Name   FRONT COMBINATION   LAMP LH	GRAY	
Connector No.	Connector Name	Connector Color GRAY	

<u> </u>	(D)	Signal Name	ı	ı
<u> </u>		Color of Wire	LG	В
COLLINECTOR COROL GRAY	H.S.	Terminal No.	6	10

ABLIA4989GB

## PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

< WIRING DIAGRAM > [XENON TYPE]

Connector No.   B16		ý	Terminal No. Wire Signal Name	2	Connector No. B33	Connector Name WIRE TO WIRE	Connector Color BLACK	H.S.	Terminal No. Color of Signal Name	1 B
e e e e e e e e e e e e e e e e e e e	No. B16 Name JOINT CONNECTOR-B11 Color WHITE	2 2	Color of Wire					15   14   13   12   11   10   9   8   7   6   5   4	Color of Wire	
		H.S.		7 2	Connector P	FUSE BLOCK (J/B) Connector N	Connector C	ν <u>;</u>		19 19

ABLIA3588GB

Α

В

С

 $\mathsf{D}$ 

Е

F

G

Н

Κ

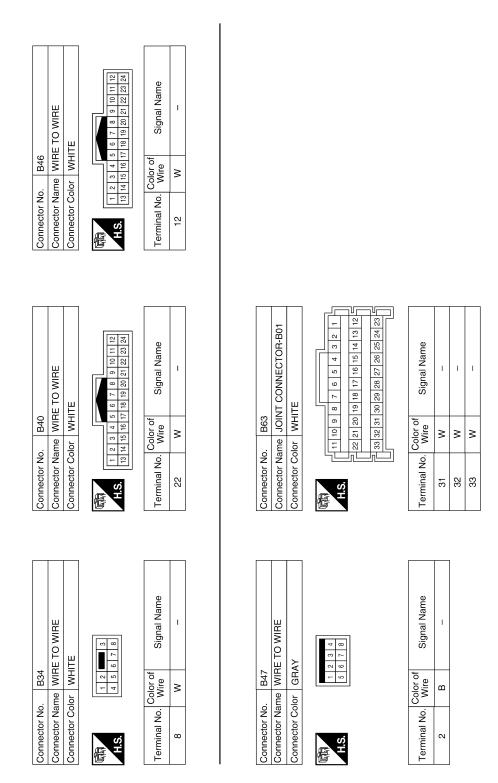
**EXL** 

M

Ν

0

Р



ABLIA4990GB

## PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

[XENON TYPE] < WIRING DIAGRAM >

B77   WIRE TO WIRE	Connector No.   B103   Connector Name   JOINT CONNECTOR-B15   Connector Color   WHITE	A B C
Connector No.   B77	Connector No. Connector Color Terminal No. W 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	E
		F
Signal Name	Connector No.   B102	G
	B102 JOINT CONN WHITE Or of Signine	Н
Color of Wire P	2018 3010 3010 3010 3010 3010 3010 3010 3	I
89A 90A	Connector No. Connector Name Connector Color H.S. 1 1 2	J
	<u> </u>	K
B69   WIRE TO WIRE   SA   44   34   24   14   154   154   14   154   1	No. B101  Name WIRE TO WIRE  Color WHITE  1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 28 29 30 31 32 29 29 30 31 32 29 29 30 31 32 29 29 30 31 32 29 29 30 31 32 29 29 30 31 32 29 29 30 31 32 29 29 30 31 32 29 29 30 31 32 29 29 30 31 32 29 29 30 31 32 29 29 30 31 32 29 29 30 31 32 29 30 31 32 29 30 31 32 31 32 31 31 32 31 31 32 31 31 32 31 31 32 31 31 32 31 31 32 31 31 32 31 31 32 31 31 32 31 31 32 31 31 32 31 31 32 31 31 32 31 31 32 31 31 32 31 31 31 31 31 31 31 31 31 31 31 31 31	EXL
Connector No.   B69  Connector Name   WIRE TO WIRE  Connector Color   GRAY  10A 3A 2A 7A	Connector No. B101  Connector Name WIRE T  Connector Color WHITE  H.S. T   1   2   3   4   5   6    T   18   19   20   21   22    T   18   19   20   21   21    T   18   P   P   P	Ν
Connec	Connector No Connector No Connector Connector Connector Connector Translation 17	0
	ABLIA4991GB	_
		Р

**EXL-79** Revision: August 2014 2015 QX60 NAM

						ı				
4	Connector Name   WIRE TO WIRE	IOK	-	Signal Name	1					
B404	ne WIF	Connector Color BLACK		Terminal No. Wire	В					
tor No.	tor Nan	tor Colc		No.						
Connector No.	Connec	Connec	引 H.S.	Termina	1					
						-				
			2 1 18 17			1				
)	Connector Name   WIRE TO WIRE	11	10 9 8 7 6 5 4 3 26 25 24 23 22 21 20 19	Signal Name	1					
B400	e WIR	WHI	14 13 12 11 30 29 28 27	Color of Wire	>					
or No.	or Nam	or Colo	16 15 32 31	No.						
Connector No.	onnect	Connector Color WHITE	H.S.	Terminal No.	31					
<u> </u>	U	U				l				
			15 16 31 32		1					
1	Connector Name   WIRE TO WIRE	핃	6 7 8 9 10 11 12 13 14 15 22 23 24 25 26 27 28 29 30 31	Signal Name	I	1				
B124	e WIR	WHI	3 4 5 19 20 21	olor of Wire	_	<u>а</u>				
or No.	or Nam	or Coloi	1 2 17 18	o S O						
Connector No.	Connect	Connector Color WHITE	H.S.	Terminal No. Wire	18	19				

Connector No.	). B407	21
Connector Na	tme RE/	Connector Name REAR COMBINATION LAMP RH
Connector Color GRAY	olor GR	AY
原 R.S.		2 3
Terminal No.	Color of Wire	Signal Name
2	>	ı
œ	a.c	1

Connector No.	. B406	9
Connector Na	me RE/	Connector Name REAR COMBINATION LAMP LH
Connector Color	lor GRAY	λt
呵奇 H.S.		2 3
Terminal No.	Color of Wire	Signal Name
2	*	ı
က	В	-

	E TO WIRE	12	7 6 5 4	Signal Name	1
. B405	me WIR	lor WHI	8 8	Color of Wire	8
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	南 H.S.	Terminal No.	8

ABLIA3591GB

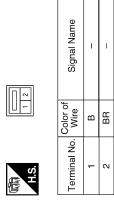
## PARKING, LICENSE PLATE AND TAIL LAMPS SYSTEM

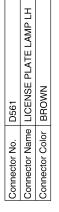
[XENON TYPE] < WIRING DIAGRAM >

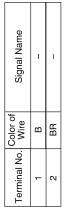
	А
	B
Signal Name  Signal Name  TE  TE  TE  TE  TE  TE  TE  TE	Signal Name
WIR WIR WHH WIR WHH WHH WHH WHH	Color of Wire BR BR D
Connector No. Connector Color  Terminal No.  Connector No.  Connector No. Connector No. Connector No.	Terminal No.
	F
Aame	G
	Signal Name
Vame WIRE    A   A   A	Color of Wire B
Connector No. Connector Color Terminal No. W 2 Connector No. Connector No. Connector No.	Terminal No.
	К
Signal Name	Signal Name
MIRE TO WIFE  WHITE  WHITE  D501  WHITE	13 2 4 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
No. D501 Name WIRE TO V Color WHITE    Color Wire   Si   No. D507   Name WIRE TO V   Name WIRE TO V	0. Vire of Y
Connector No.   D501	Terminal No.
	ablia4992gb

**EXL-81** Revision: August 2014 2015 QX60 NAM

D562	Connector Name   LICENSE PLATE LAMP RH	BROWN
Connector No.	Connector Name	Connector Color BROWN







ABLIA4993GB

Wiring Diagram

В

Α

С

 $\mathsf{D}$ 

Е

F

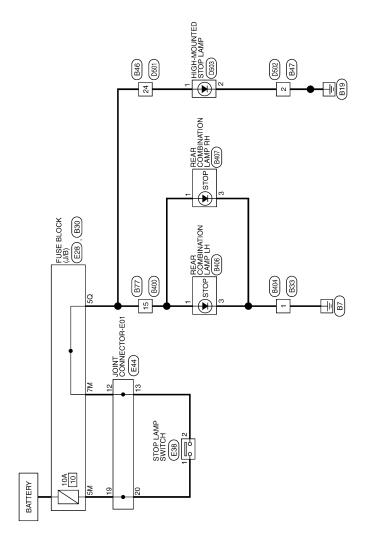
G

Н

J

Κ

EXL



 $\mathbb{N}$ 

Ν

0

Р

ABLWA2200GB

STOP LAMP

Connector Name JOINT CONNECTOR-E01

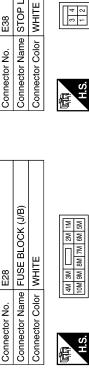
E44

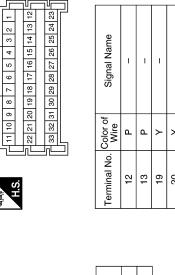
Connector No.

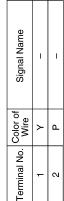
Connector Color WHITE

## STOP LAMP CONNECTORS









Signal Name	-	I
Color of Wire	Υ	Ъ
Terminal No.	WS	MZ

olgilai ivalile	ı	-	_	_			IE TO WIRE
Wire	<u>_</u>	۵	<b>\</b>	Υ		B46	ne WIF
all la	12	13	19	20		Connector No.	Connector Name WIRE TO WIRE

	E TO WIRE	CK	2
Connector No. B33	Connector Name WIRE TO WIRE	Connector Color BLACK	

Connector Color WHITE

RE TO WIRE	CK	2	Signal Name	
me WIF	lor BLA		Color of Wire	٥
 Connector Name WIRE TO WIRE	Connector Color BLACK	所 H.S.	Terminal No.	,

Signal Name

Terminal No. Color of Wire

24

Connector No.	). B30	
Connector Na	ame FUS	Connector Name FUSE BLOCK (J/B)
Connector Color WHITE	olor WHI	12
原 H.S.	30 [	20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 10 20 20 20 20 20 20 20 20 20 20 20 20 20
Terminal No. Wire	Color of Wire	Signal Name
50	9	1

ABLIA7053GB

G GR

ල <u>ක</u>

Connector No. B400  Connector Color WHITE  Connector Color WHITE  M.S. Relation 12 11 10 9 8 7 6 5 4 8 2 1 1 10 10 10 10 10 10 10 10 10 10 10 10	Terminal No. Color of Signal Name 15 G –
Connector No. B77  Connector Color WIRE TO WIRE  Connector Color WHITE  H.S.	Terminal No. Color of Signal Name  15 G -
Connector No. B47  Connector Name WIRE TO WIRE  Connector Color GRAY  T 2 3 4  H.S.	Terminal No. Color of Signal Name 2 B -

r No.   B407	Connector Name REAR COMBINATION LAMP	Connector Color GRAY	1 2 3	Terminal No. Color of Signal Name
Connector No.	Connecto	Connecto	H.S.	Terminal
φ	Connector Name REAR COMBINATION LAMP	AY	2 3	Signal Name
Connector No. B406	Connector Name REA	Connector Color GRAY	H.S.	Terminal No. Wire
		7		
4	RE TO WIRE			Signal Name
D. B404	ame WIF		2	Color of Wire
Connector No.	Connector Name WIRE TO WIRE		H.S.	Terminal No. Wire

		1
Signal Name	1	
Color of Wire	В	
Terminal No.	1	

ABLIA4995GB

Α

В

С

 $\mathsf{D}$ 

Е

F

G

Н

J

Κ

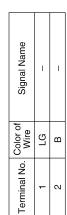
EXL

 $\mathbb{N}$ 

Ν

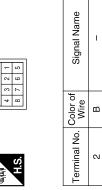
0

Р





	O WIRE		
D502	WIRET	GRAY	
Connector No.	Connector Name WIRE TO WIRE	Connector Color GRAY	



Connector No.		D501	=									
Connector Name WIRE TO WIRE	e <	I₩	ᄴ	Ĭ,	0	I₩	끭					
Connector Color WHITE	_	₹	<u>⊨</u>	ш								
	lt					11. [	- IV [	1171				Ιſ
JHC.	12 11 10 9	11	10	6	8	7	9	5	4	3	2	-
į.	24 23 22 21 20 19 18 17 16 15 14 13	33	22	21	20	19	18	17	16	12	14	13
					I							ı

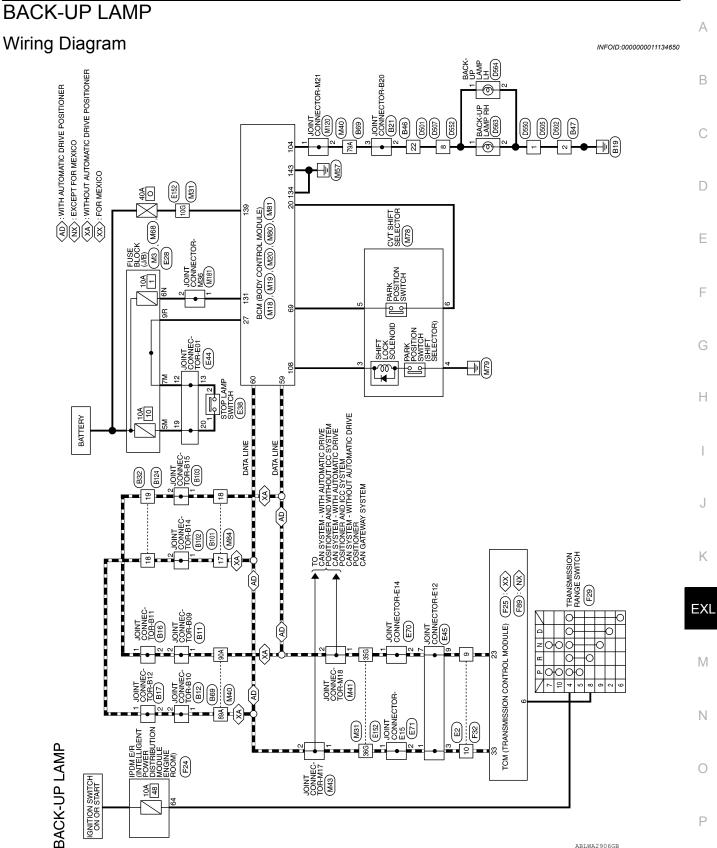
	-	13	]
	2	14	
	က	15	
	4	16	
-117	5	17	
IV.	9	18	
- 11	7	19	
$\Pi$	æ	20	
5	6	21	
	10	22	
	Ξ	23	
	12	24	
L			_

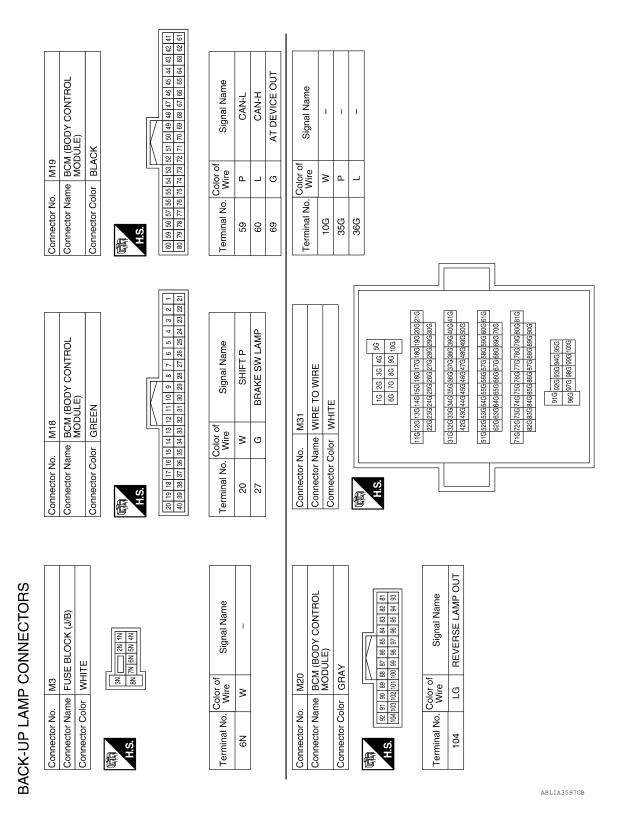


Signal Name	ı	
Color of Wire	LG	
Terminal No.	24	

ABLIA4996GB

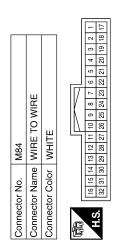
ABLWA2906GB





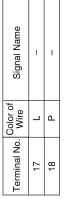
Α

Connector No. M41	Connector Color WHITE			ν.	Terminal No. Wire Signal Name	I -	Q Q					Connector No. M78 Connector Name CVT SHIET SELECTOR	Connector Color WHITE	H.S. 1 2 3 4 5 6	Terminal No. Wire Signal Name	3 G	4 GR –	- C	- M 9			B C D
		I																				F
Signal Name	1	1	ı									Connector No. M68 Connector Name FUSE BLOCK (J/B)	NN	7R   6R   5R   4R    3R   2R   1R	Signal Name	1						G H
Color of Wire	re	_	Д									lo. M68	olor BROWN	7R 6R 5R 16R 15R 14R	Color of Wire	ŋ						I
Terminal No.	79A	89A	90A									Connector No.	Connector Color	原 H.S.	Terminal No.	9B						J
		7																				K
E MIDE		_		14 24 34 44 54 64 74 84 94 104	11A 12A 13A 14A 15A 16A 17A 18A 19A 20A 21A	22A 23A 24A 25A 26A 27A 28A 29A 30A	31 A 32 A 33 A 34 A 35 A 36 A 37 A 38 A 39 A 40 A 41 A 42 A 43 A 44 A 45 A 46 A 47 A 48 A 49 A 50 A	51A 52A 53A 54A 55A 56A 57A 58A 59A 60A 61A 62A 63A 64A 65A 66A 67A 68A 69A 70A	71A 72A 73A 74A 75A 76A 77A 78A 79A 80A 81A 82A 83A 83A 83A 83A 83A 83A 83A 83A 83A 83	91A 92A 93A 94A 95A 96A 97A 98A 99A100A		M43 JOINT CONNECTOR-M17	Щ	043210	Signal Name	1	_					EXL
Connector No. M40	Connector Color GRAY			H.S.	11A12A13A1	22A23A z	31A 32A 33A 3	51A 52A 53A! 62A 63A!	71A 72A 73A 7 82A 83A 8			Connector No. M43	Connector Color WHITE	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	Terminal No. Wire	1	2 L					N
											ı							ABLI	A499	97GB		Р



Signal Name	1	1
Color of Wire	7	Ь
Terminal No.	17	18

Signal Name	1	1	
Color of Wire	Т	Ь	
Terminal No.	17	18	



Connector No.	M81
Connector Name	Connector Name   BCM (BODY CONTROL MODULE)
Connector Color WHITE	WHITE
南 H.S.	37 136 136 136 136 136 130 128   43  142  141  140  139  138



Connector No.	M80
Connector Name	Connector Name BCM (BODY CONTROL MODULE)
Connector Color BLACK	BLACK
(118/15/14 H.S. (128/12/128	116[115[114[113]112[11]110 100 100 100 100 100 100 100 100 1

	Signal Name	SHIFT LOCK SOLENOID OUT
•	Color of Wire	5
	Terminal No.	108

	TO WIRE	ш	2 3 4 5 6 7 8 10 11 12 13 14 15 16	Signal Name	-	ı
- E2	me WIRE	lor WHIT	9 10 11 12	Color of Wire	۵	_
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE	朝 H.S.	Terminal No.	6	10

Connector No.	). M181	-
Connector Name		JOINT CONNECTOR-M36
Connector Color	olor WHITE	TE
明.S.	4	4 3 2 1
Terminal No.	Color of Wire	Signal Name
1	W	_

≥

Ø

50	JOINT CONNECTOR-M21	ITE	14 3 2 1 1	Signal Name	ı	1
M120	me JOI	or WHITE	4	Color of Wire	ГG	LG
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	1	2

ABLIA3599GB

Connector No.	E28	Connector No.	E38		Connector No.		E44
Connector Name FUSE BLOCK	FUSE BLOCK (J/B)	Connector Name STOP LAMP SWITCH	ne STOP L	AMP SWITCH	Connector	Name J	Connector Name JOINT CONNECTOR-E01
Connector Color WHITE	WHITE	Connector Color WHITE	or WHITE		Connector Color WHITE	Color	HITE
H.S.	4M 3M	H.S.			H.S.	22 21 20	22 21 20 19 18 17 16 15 14 3 2 11 2 33 32 31 30 29 28 27 26 25 24 25
Terminal No.	Color of Signal Name Wire	Terminal No.	Color of Wire	Signal Name	Terminal No. Wire	lo. Color Wire	of Signal Name
5M	\ \	-	>	1	12	۵	ı
MZ	I	2	<b>a</b>	1	13	۵	ı
					19	>	ı
					20	>	1

	Connector Name JOINT CONNECTOR-E15	×	3 2 1	Signal Name	ı	-
. E71	me JOINT	lor BLACI	6 5 4	Color of Wire	٦	7
Connector No.	Connector Na	Connector Color BLACK	H.S.	Terminal No.	-	2

	Connector Name JOINT CONNECTOR-E14	¥	3 2 1	Signal Name	I	ı
. E70	me JOINT	lor BLAC	6 5 4	Color of Wire	۵	Д
Connector No.	Connector Na	Connector Color BLACK	明.S.	Terminal No.	-	2

R-E12	
NT CONNECTO JE Signal Na  Signal Na	
40. E45  Vame JOINT  Color of RLUE  Color of Ruff  LL  L  L  L  P	٥
Connector No. E45 Connector Name JOII Connector Color BLL H.S. [12   11   10   9 H.S.   Color of   1	

ABLIA4998GB

Α

В

С

D

Е

F

G

Н

J

Κ

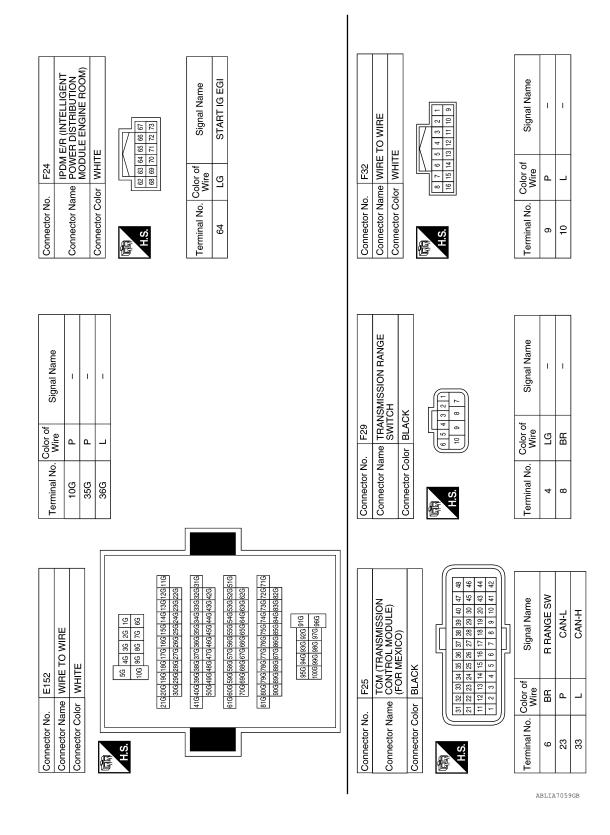
EXL

M

Ν

0

Р



Α

В

С

 $\mathsf{D}$ 

Е

F

G

Н

J

Κ

EXL

M

Ν

0

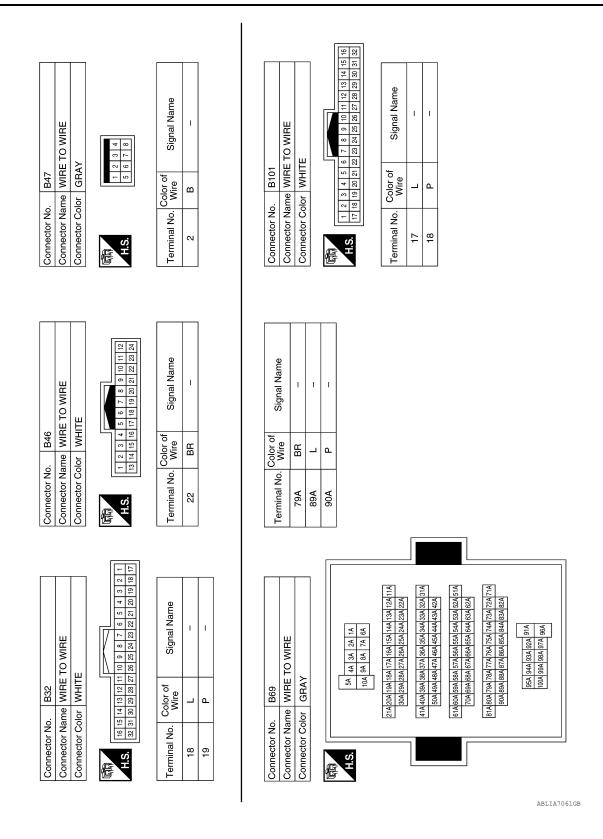
Р

	310			d)			
	Connector Name JOINT CONNECTOR-B10 Connector Color WHITE		3 2 1	Signal Name	1	1	
. B12	me JOINT lor WHIT		4	Color of Wire	_	_	
Connector No.	Connector Name JOINT (	<b>E</b>	H.S.	Terminal No.   Color of Wire	-	2	
							]
	Connector Name JOINT CONNECTOR-B09 Connector Color WHITE		3 2 1	Signal Name	ı	1	
B11	ne JOINT or WHITI		4	Color of Wire	۵	Ъ	
Connector No.	Connector Name JOINT C	<b>E</b>	H.S.	Terminal No.   Color of Wire	-	2	
	Connector Name CONTROL MODULE) (EXCEPT FOR MEXICO)	OK	35 88 37 38 39 40 47 48 82 26 27 28 29 30 45 46 46 15 16 17 18 19 20 43 44 42 5 6 7 8 9 10 41 42	Signal Name	R RANGE SW	CAN-L	CAN-H
. F89	TCIN TCIN (EX(	Connector Color BLACK	32 33 34 22 23 24 27 12 13 14 2 3 4 4	Terminal No. Color of Wire	BR	Ь	_
Connector No.	ector Na	ector Co	E S E E	nal No.	9	23	33

Connector No. B21 Connector Name JOINT CONNECTOR-B20 Connector Color WHITE	3 2 1 0		Signal Name	1	ı
De JOIN	4		Solor of Wire	BR	BB
Connector No. B21 Connector Name JOINT C	用.S.		Terminal No. Wire	2	ဇ
		Г			
Connector No. B17  Connector Name JOINT CONNECTOR-B12  Connector Color WHITE	2 1 0		Signal Name	ı	1
B17 ne JOINT or WHITE	1 4 3		Color of Wire	_	٦
Connector No. B17 Connector Name JOINT C	H.S.		Terminal No. Color of Wire	-	2
		-			
CONNECTOR-B11	211		Signal Name	ı	1
. B16 me JONIT lor WHITE	6		Color of Wire	۵	Ъ
Connector No. B16 Connector Name JONIT CONNECT Connector Color WHITE	原列 H.S.		Terminal No. Color of Wire	-	2

ABLIA7060GB

**EXL-93** 2015 QX60 NAM Revision: August 2014



Α

В

С

 $\mathsf{D}$ 

Е

F

G

Н

			11 32 16			
	TO WIRE		2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 16 16 18 19 20 21 22 22 24 25 25 27 28 29 29 30 31 32	Signal Name	ı	_
. B124	me WIRE	lor WHITE	2 3 4 5 18 19 20 21 2	Color of Wire	٦	Ь
Connector No. B124	Connector Name WIRE TO WIRE	Connector Color WHITE	H.S.	Terminal No.   Color of   Wire	18	19
	Connector Name JOINT CONNECTOR-B15	旦	3 2 1	Signal Name	ı	_
). B103	ume JOIN	lor WHI	4	Color of Wire	۵	Ь
Connector No. B103	Connector Na	Connector Color WHITE	明 H.S.	Terminal No.   Color of Wire	-	2
	Connector Name JOINT CONNECTOR-B14	ш	121	Signal Name	ı	ı
B102	ne JOINT	or WHITE	1 4 3	Color of Wire	_	Г
Connector No.	Connector Nar	Connector Color WHITE	H.S.	Terminal No. Color of Wire	-	2

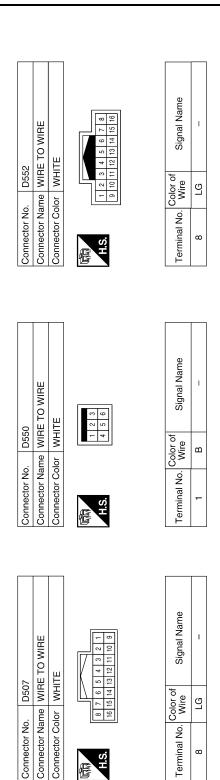
D505	connector Name   WIRE TO WIRE	or WHITE	<u>ω</u> ω α α α α α α α α α α α α α α α α α α	Solor of Signal Name
Connector No. D505	Connector Nar	Connector Color WHITE	H.S.	Terminal No. Wire
			_	
202	Connector Name   WIRE TO WIRE	AAY	C   C   C   C   C   C   C   C   C   C	Signal Name
Connector No. D502	tor Name   WI	Connector Color GRAY	<u> </u> 4 ∞	Terminal No. Wire
Connec	Connec	Connec	H.S.	Termin
),1	RE TO WIRE	IITE	8 7 6 5 4 3 2 1 20 19 18 17 16 15 14 13	Signal Name
o. D501	ame WIF	olor   WH	12 11 10 9 8 24 23 22 21 20	Color of Wire
Connector No.	Connector Name WIRE TO	Connector Color WHITE	H.S.	Terminal No. Wire

N		
	1	ŀ
1		E
		N
2		1
77		(
	ABLIA5002GB	F

Revision: August 2014 EXL-95 2015 QX60 NAM

Ν

0



Connector No.	. D564	4
Connector Na	me BAC	Connector Name BACK-UP LAMP LH
Connector Color WHITE	or WH	ІТЕ
H.S.		(1 s
Terminal No.	Color of Wire	Signal Name
-	LG	ı
2	В	ı

3	Connector Name   BACK-UP LAMP RH	ITE	2 1	Signal Name	ı	I
. D563	me BAC	lor WHITE		Color of Wire	LG	В
Connector No.	Connector Na	Connector Color	H.S.	Terminal No. Wire	٦	2

ABLIA5003GB

INFOID:0000000011134651

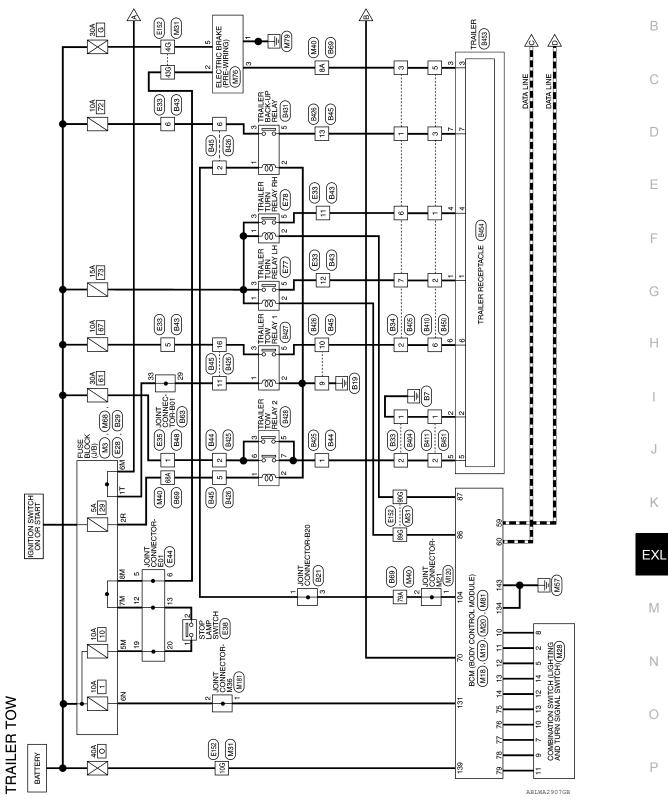
Α

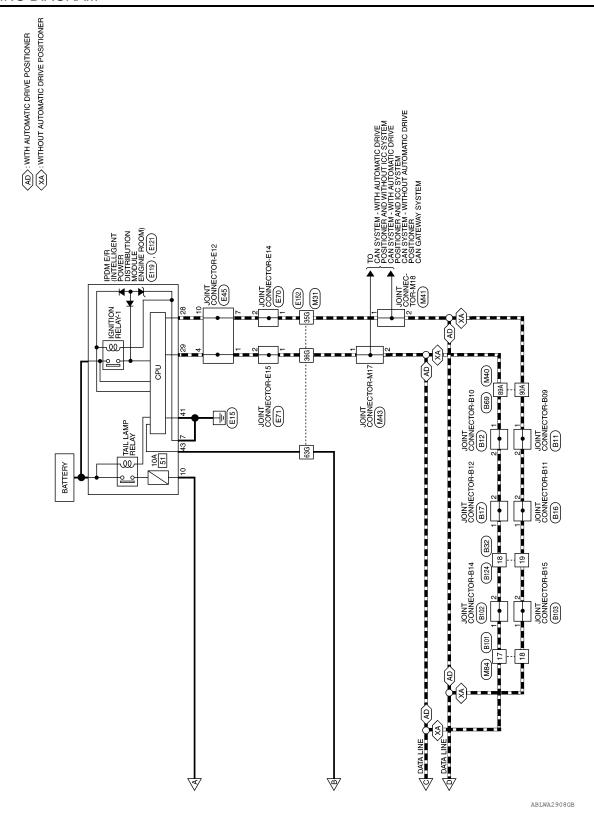
F

J

### TRAILER TOW







Connector Name | BCM (BODY CONTROL MODULE)

M19

Connector No.

BLACK

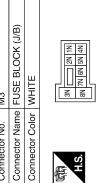
Connector Color

GREEN

Connector Color

# TRAILER TOW CONNECTORS





僵

8N 7N 6N 5N 4N	Signal Name	ı
<u>8</u>	Color of Wire	8
si E	erminal No.	N9

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	Д	٦	Ь	BG	Д	Ь	8	8
Terminal No.	59	09	20	75	9/	27	78	62

Signal Name	COMBI SW IN 5	COMBI SW IN 4	COMBI SW IN 3	COMBI SW IN 2	COMBI SW IN 1
Color of Wire	Ь	Д	>	Μ	Д
Terminal No. Color of Wire	10	11	12	13	14

Signal Name	COMBI SW IN 5	COMBI SW IN 4	COMBI SW IN 3	COMBI SW IN 2	COMBI SW IN 1
Color of Wire	Ь	۵	>	Μ	۵
Terminal No. Color of Wire	10	11	12	13	14

or No. M28	Connector Name COMBINATION SWITCH	Connector Color   WHITE
Connector No.	Connector Name	Connector Color

Signal Name

Color of Wire

Terminal No.

N 2 ω 6

/

Connector Name (		Connector Color H.S.
Connector Name (	_	Connector Color
	$\overline{}$	Connector Name

Connector No.	). M20	_							
Connector Name BOM (BODY CONTROL MODULE)	ame BCN MOI	BCM (BOE MODULE)	Ö	)	Ō	₽	R	٦٢	
Connector Color GRAY	olor GR/	<u></u>							
			IV.	117					
92	91 90 89	88 87 86	88	88	84 83	8	88	₩	
101	104 103 102 101 100 99		86	92	96	98	8	83	
]								1	
Terminal No. Wire	Color of Wire		S	igi	Signal Name	Na	Ĕ	m	

Α	BLI	Α	46	52	G

5 86

TRAILER FLASHER RL TRAILER FLASHER RR REVERSE LAMP OUT

œ ݐ

BG > ۵ ۵ ≥ Д ≥ ₾ ≥ 10 Ξ 5 5 4

F

Α

В

С

D

Е

G

Н

J

Κ

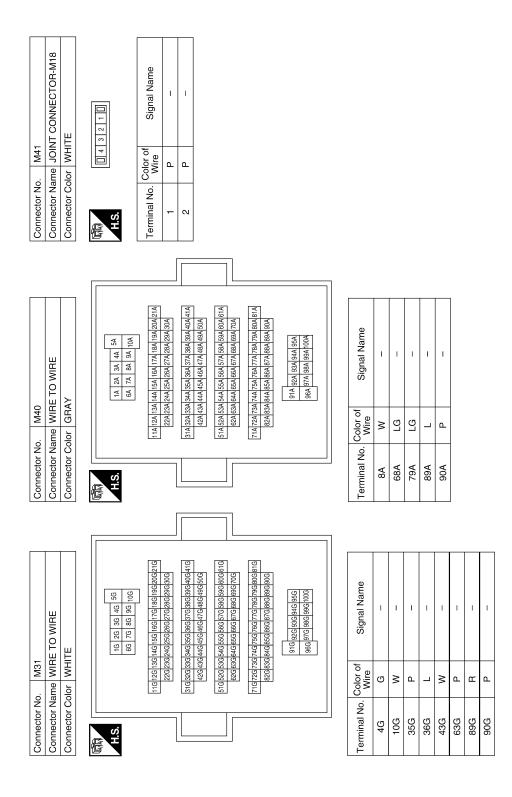
EXL

M

Ν

0

Р



ABLIA5004GB

Α

В

С

 $\mathsf{D}$ 

Е

F

G

Н

J

Κ

EXL

M

Ν

0

Р

Connector No.	o. M81		Connector No.	o. M84		Connector No.		M120
Connector Name BCM (BOD) MODULE)	ame BCN MOI	BCM (BODY CONTROL MODULE)	Connector Name WIRE TO WIRE	ame WIR	E TO WIRE	Connector	Connector Name JOINT C	Connector Name JOINT CONNECTOR-M21
Connector Color WHITE	olor WH	ITE			1			
原南 H.S.	137 136 135 134    143   142   141	42   42   44   440   138   138	H.S. (22) 31	15 14 13 12 11 31 30 29 28 27	14 13 12 11 11 0 9 8 7 6 5 4 3 2 1 1	原 H.S.		4 3 2 1 0
Terminal No. Wire	Color of Wire	Signal Name	Terminal No. Color of Wire	Color of Wire	Signal Name	Terminal No. Color of Wire	lo. Color o	of Signal Name
131	Α	BAT BCM FUSE	17	٦	ı	-	ГG	ı
134	В	GND 2	18	Ь	ı	2	ГG	-
139	W	BAT POWER F/L						
143	В	GND 1						

ABLIA7062GB

**EXL-101** 2015 QX60 NAM Revision: August 2014

Connector No. E33  Connector Name WIRE TO WIRE  Connector Color WHITE    5   4     3   2   1	Terminal No.         Color of Wire         Signal Name           5         R         -           6         L         -           11         G         -           12         W         -	Connector No. E44  Connector Name JOINT CONNECTOR-E01  Connector Color WHITE  H.S.	Terminal No. Color of Wire Signal Name 5 R - 12 P - 13 P - 19 Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y Y
Connector No.   E28	Terminal No.         Color of Wire         Signal Name           5M         Y         -           6M         L         -           7M         P         -           8M         R         -	Connector No. E38 Connector Name STOP LAMP SWITCH Connector Color WHITE	Terminal No. Color of Signal Name  1 Y
Connector No. M181 Connector Name JOINT CONNECTOR-M36 Connector Color WHITE	Terminal No. Color of Wire Signal Name  1 W	Connector No. E35 Connector Name WIRE TO WIRE Connector Color GRAY  H.S.	Terminal No. Color of Wire Signal Name

ABLIA5006GB

Α

В

С

 $\mathsf{D}$ 

Е

F

G

Н

J

Κ

EXL

 $\mathbb{N}$ 

Ν

0

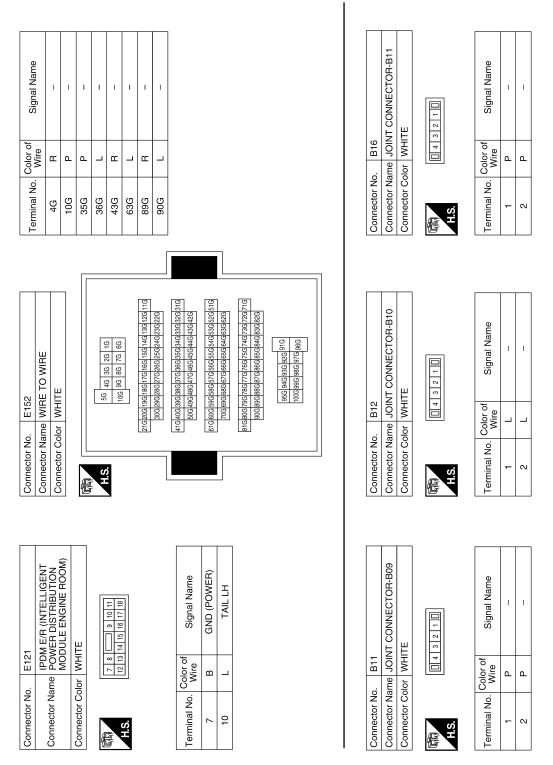
Р

Connector No. Connector Name Connector Color	Vo. E45 Vame JOINT	Connector No. E45 Connector Name JOINT CONNECTOR-E12 Connector Color BLUE	Connector No. Connector Name Connector Color	o. E70 ame JOINT olor BLACK	Connector No. E70  Connector Name JOINT CONNECTOR-E14  Connector Color BLACK	Connector No. Connector Name Connector Color	o. E71 ame JOINT (	Connector No. E71  Connector Name JOINT CONNECTOR-E15  Connector Color BLACK
H.S.	12 11 10 9 8	8 7 6 5 4 3 2 1	H.S.	9	4 3 2 1	H.S.	9	5 4 3 2 1
Terminal No. 1 1 4 4 7 7 10	Color of Wire L	Signal Name	Terminal No.	Color of Wire P	Signal Name -	Terminal No.	Color of Wire L	Signal Name
Connector No. Connector Color	Vo. E77	E77 TRAILER TURN RELAY LH BLUE	Connector No. Connector Color Connector Color H.S.	ame TRAIL olor BLUE	Connector No. E78 Connector Name TRAILER TURN RELAY RH Connector Color BLUE	Connector No. E119 Connector Name POWE MODUL Connector Color WHITE	E119   PDM   PDM	E119  POWER DISTRIBUTION MODULE ENGINE ROOM)  WHITE  22 23 24 25 26 27 28 29 30 31 32 33 34 40 41 42 43 44 45 46 47 48 49 50
Terminal No.	Color of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name	Terminal No.	Color of Wire	Signal Name
-	Ъ	1	-	۵	ı	28	Ъ	CAN-L
2	ш	1	2	_	1	29	_	CAN-H
ღ	۵	I	ო	۵	I	41	В	GND (SIGNAL)
2	>	I	2	ŋ	I	43	7	IGN SIGNAL

Signal Name	I	1	1	1	
Color of Wire	Ь	ш	Д	Μ	
Terminal No.	-	2	က	5	

ABLIA5007GB

**EXL-103** 2015 QX60 NAM Revision: August 2014



ABLIA5008GB

						ı
6	Connector Name FUSE BLOCK (J/B)	HTE	27	of Signal Name	1	
B29	ne FU	or WF	2T 6T	Solor o Wire	>	
Connector No.	Connector Nar	Connector Color WHITE	H.S.	Terminal No. Wire	+	
	Connector Name JOINT CONNECTOR-B20			Signal Name	1	ı
B21	ne JOINT	or WHITE	4 3 2	Solor of Wire	BR	BB
Connector No. B21	Connector Nar	Connector Color WHITE	南南 H.S.	Terminal No. Color of Wire	-	8
	CTOR-B12			ame		
	NECTC		2 1 0	Signal Name	1	ı
B17	JOINT CON	WHITE	0 4 3	or of 'ire		_
Connector No. B17	Connector Name JOINT CONNEC	Connector Color WHITE		Terminal No. Color of Wire	_	7

				$\overline{}$
WHITE WHITE  To signal Name  To signal Name	1	ı	I	ı
	≯	G	G	>
tor No tor No	2	က	9	7

B33	le WIRE TO WIRE	ır BLACK	1 2	Color of Signal Name Wire	I В	
Connector No.	Connector Name	Connector Color	国 H.S.	Terminal No.	-	2

Connector No.	ŏ	<u>o</u>		B32	32											
Connector Name WIRE TO WIRE	٥	an	e e	∣≥	₫	<u> </u>	6	∣₹	≝	١						
Connector Color WHITE	o o	8	'n	∣≥	Ξ	쁘										
Æ							$\parallel \parallel \parallel$	- IN	- 17	- 117						
Į.	16	16 15 14 13 12 11	14	13	12	F	9	6	80	7	9	2	4	3	2	-
5	32	32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17	စ္က	29	28	27	26	22	24	23	22	21	20	6	8	17

Signal Name	I	1
Color of Wire	٦	Р
Terminal No.	18	19

ABLIA7063GB

Α

В

С

D

Е

F

G

Н

ı

J

Κ

EXL

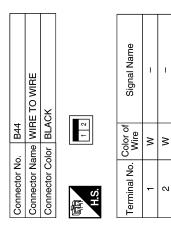
 $\mathbb{N}$ 

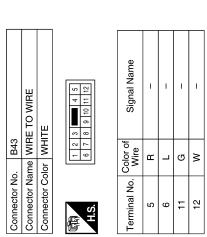
Ν

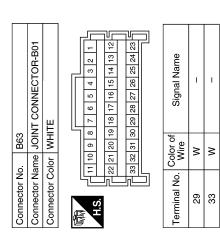
0

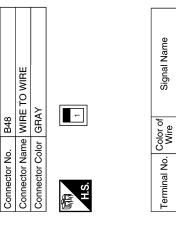
Р

Connector No.	). B45	
Connector Name		WIRE TO WIRE
Connector Color	lor WHITE	TE
	8 1	2 3 <b> </b>
H.		
Terminal No.	Color of Wire	Signal Name
2	BR	1
2	۵	ı
9	٦	ı
6	GR	1
10	M	1
11	*	1
13	<b>\</b>	1
16	В	1









ABLIA7064GB

≥

Α

В

С

D

Е

F

G

Н

J

Κ

EXL

 $\mathbb{N}$ 

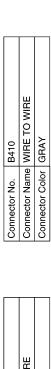
Ν

0

Р

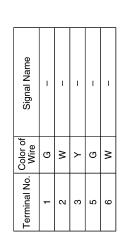
Connector No. B101  Connector Color WHITE  Connector Color WHITE  M.S.   1   2   3   4   5   6   7   8   9   10   11   12   13   14   15   16   17   18   18   18   18   18   18   18	Terminal No. Color of Wire Signal Name 17 L – 18 P –	Connector No. B124  Connector Color WHITE  Connector Color WHITE  MITE  To 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 14 15 16 14 15 16 14 15 18 14 18 18 18 18 18 18 18 18 18 18 18 18 18	Signal Name
Signal Name		Connector No. B103 Connector Name JOINT CONNECTOR-B15 Connector Color WHITE	Signal Name
Color of Wire Wire BR BR P P		o. B103 ame JOINT ( olor WHITE	Color of Wire
8A 68A 79A 89A 90A		Connector No. Connector Color Connector Color	Terminal No.
Connector No. B69  Connector Color GRAY  A.S. A A BA A A A A A A A A A A A A A A A A	15 25 25 15 15 15 15 15 15 15 15 15 15 15 15 15	Connector No. B102  Connector Name JOINT CONNECTOR-B14  Connector Color WHITE  ILS.	Terminal No. Color of Wire Signal Name

Revision: August 2014 EXL-107 2015 QX60 NAM



1 4 5 C S

E



**TRAILER TOW** 

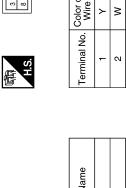


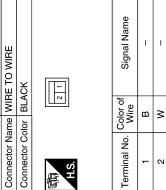
Connector No.

B404

Connector No.

Signal Name	-	ı	ı	-	ı
Color of Wire	У	8	g	Э	Ν
Terminal No.   Color of Wire	1	2	3	9	7







Connector Name WIRE TO WIRE

B411

Connector No.

Connector Color BLACK



2 1

Signal Nar	1	I
Color of Wire	۸	٦
Terminal No.	1	2





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

ABLIA7066GB

Α

В

С

 $\mathsf{D}$ 

Е

Connector No.	). B451	-
Connector Name WIRE TO WIRE	ame WIF	IE TO WIRE
Connector Color BLACK	olor BLA	CK
၏ H.S.		
Terminal No.	Color of Wire	Signal Name
-	В	1
2	Μ	1

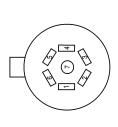
0	WIRE TO WIRE	٨.	2 2 4	Signal Name	ı	1	ı	ı	ı
. B450	me WIR	lor GRAY		Color of Wire	ū	M	Υ	g	M
Connector No.	Connector Name	Connector Color	诵 H.S.	Terminal No.	-	2	3	5	9

1	Connector Name TRAILER BACK-UP RELAY	E		Signal Name	ı	1	1	I
. B431	me TR/	lor BLL		Color of Wire	ŋ	В	٨	ГG
Connector No.	Connector Na	Connector Color BLUE	南 H.S.	Terminal No.	-	2	3	5

ABLIA5013GB

F G Н Κ EXL M Ν 0 Ρ



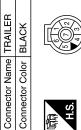


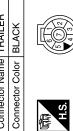
Signal Name	STOP/TURN LH	GROUND	ELECTRIC BRAKE	STOP/TURN RH	BATTERY	RUNNING LAMPS	BACK-UP LAMPS
Color of Wire	1	ı	ı	ı	-	ı	-
Terminal No. Wire	-	2	3	4	9	9	7



B453

Connector No.



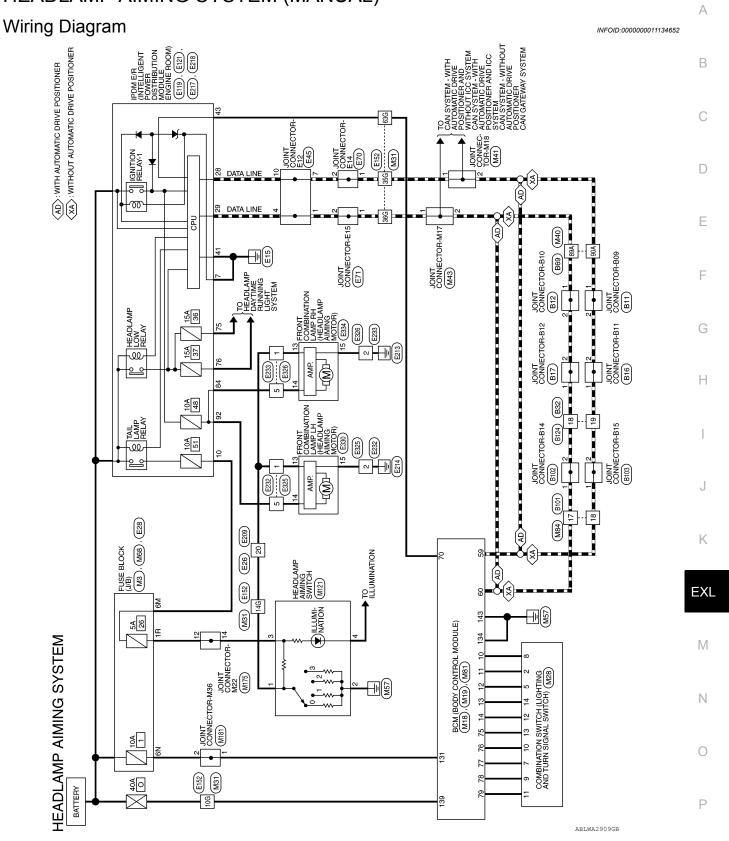




Signal Name	ı	1	1	ı	-	1	1
Color of Wire	>	В	ŋ	ŋ	Μ	Μ	У
Terminal No.	-	2	3	4	5	9	7

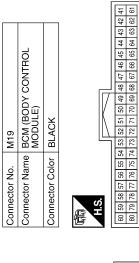
ABLIA7067GB

# HEADLAMP AIMING SYSTEM (MANUAL)

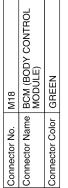


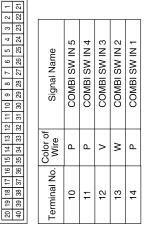
# HEADLAMP AIMING SYSTEM CONNECTORS

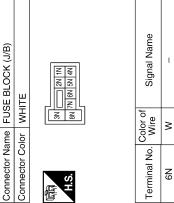
Connector No.	M3	Conne
	(i) 1	



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	۵	L	Ь	BG	Ь	Ь	>	W
Terminal No.	59	09	20	75	9/	22	78	79







Signal Name	ı	ı	1	ı	ı	1	ı	ı	1	-
Color of Wire	۵	>	Ь	۵	<b>X</b>	Ь	<b>X</b>	Ь	BG	M
Terminal No. Wire	2	5	7	80	6	10	11	12	13	14

ABLIA5015GB

M41 JOINT CONNECTOR-M18 WHITE	0 4 3 2 1 0	Signal Name	ı	1											
	4	Color of Wire	۵	а.											
Connector No. Connector Name Connector Color	原 R.S.	Terminal No.	-	2											
								ī							
M40 WIRE TO WIRE GRAY	1A 2A 3A 4A SA 6A 7A 8A 9A 10A	11A 12A 13A 14A 15A 16A 17A 18A 19A 20A 21A	22A 23A 24A 25A 26A 27A 28A 29A 30A	31 A 32A 33A 34A 35A 36A 37A 36A 39A 40A 41A 42A 43A 44A 45A 46A 47A 48A 49A 50A	514 524 534 544 554 564 574 584 594 604 614 624 634 644 654 685 687 684 694 704	714 724 734 744 754 764 774 784 794 894 894 814 824 834 844 854 864 874 884 894 994	91A 92A 93A 94A 95A 96A 97A 98A 98A 100A		Signal Name	I	ı				
		11A 12A 13	22A 23	31A 32A 33	51A 52A 53 62A 63	71A 72A 73 82A 83			Color of Wire	_	۵				
Connector No. Connector Name Connector Color	R.S.								Terminal No.	89A	90A				
								ī							
M31 WIRE TO WIRE	16 26 36 46 56 66 76 86 96 106	116 126 136 146 156 166 176 186 196 206 216	22G23G24G25G26G27G28G29G30G	31G32G33G34G35G36G37G38G39G40G41G 42G43G44G45G46G47G48G49G50G	510 520 530 540 550 560 570 580 690 600 610 620 630 640 650 660 670 680 690 700	71 G 72 G 73 G 74 G 75 G 78 G 77 G 78 G 79 G 81 G 82	916 926 936 946 956 966 976 966 996 1006		Signal Name	I	ı	ı	_	I	
		116126130	22G230	31G32G330 42G430	51G 52G 530 62G 630	71G72G73(			Color of Wire	×	>	Ъ	L	Ь	
Connector No. Connector Name Connector Color	所 H.S.								Terminal No.	10G	14G	35G	36G	63G	

В

Α

С

D

Е

F

G

Н

1

J

Κ

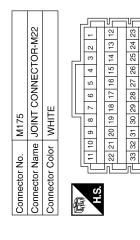
EXL

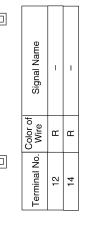
 $\mathbb{N}$ 

Ν

0

			1		1		T	
	Connector Name BCM (BODY CONTROL MODULE)	TE	142   141   140   138   138   138	Signal Name	BAT BCM FUSE	GND 2	BAT POWER F/L	GND 1
M81	ne BCM MOE	or WHITE	137   136   135   134 143   142   14	Color of Wire	>	В	>	В
Connector No.	Connector Nar	Connector Color	南 H.S.	Terminal No. Wire	131	134	139	143
Conne	Conne	Conne	H.S.	Termi	_		_	_
				Φ				
	J/B)		2R 1R 9R 8R	Name				





	FUSE BLOCK (J/B)	BROWN	78   हम   इस   हम   18   18   18   18   18   18   18   1	Signal Name	-
. M68			7R 6R 5R 4R [1 16R   15R   14R   13R   1	Color of Wire	ш
Connector No.	Connector Name	Connector Color	赋 H.S.	Terminal No.	118

Connector No.	M121
Connector Name	Connector Name HEADLAMP AIMING S
Connector Color WHITE	WHITE

WITCH

Signal Name		1	I	I
Color of	>	В	ص	В
Terminal No.	-	2	က	4

Connector No.	. M43		
Connector Na	Ine JOII	Connector Name   JOINT CONNECTOR-M17	
Connector Color WHITE	lor WH	ITE	
原动 H.S.	4	4 3 2 1	
Terminal No. Wire	Color of Wire	Signal Name	
1	٦	ı	
2	_	1	

				Γ <u>-</u>	_
_			1		8
				60	6
				4	32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17
				2	2
				9	প্ল
			- 17	_	೫
	<u> </u>		l IV	8	24
	≥			15 14 13 12 11 10 9	52
	9			9	56
		끧		Ξ	27
M84		Ξ		12	28
Ž	∣≥	≥		13	29
	ē	ī		4	98
0.	ad	응		15	31
Z	Z	Ő		16 1	82
Connector No.	Connector Name WIRE TO WIRE	Connector Color WHITE		É	Ċ E

Signal Name	ı	-	
Color of Wire	Г	Ь	
Terminal No.	17	18	

ABLIA5017GB

M181	Connector No.	E26		Connector No.	. E28	
JOINT CONNECTOR-M36	Connector Name WIRE TO WIRE	e WIRE	TO WIRE	Connector Name		FUSE BLOCK (J/B)
Solor WHITE	Connector Color WHITE	or WHIT	ш	Connector Color WHITE	lor WHIT	ш
0 4 3 2 1 0	H.S.	1 2 3 4 5 13 14 15 16 17	6 7 8 9 10 11 12 18 19 20 21 22 23 24	南 H.S.	4M 3M [10M 9M 8	2M 1M 6M 5M
Color of Signal Name	Terminal No. Wire	Solor of Wire	Signal Name	Color of Terminal No. Wire	Color of Wire	Signal Name
	20	BG	ı	W9	_	1

	Connector Name JOINT CONNECTOR-E15	ÓK		Signal Name	_	1
. E71	me JOII	lor BLA	6 6	Color of Wire	Т	٦
Connector No.	Connector Na	Connector Color BLACK	H.S.	Terminal No. Wire	-	2

	JOINT CONNECTOR-E14	BLACK	S   S   S   S   S   S   S   S   S   S	Signal Name	_	ı
. E70			4 5 9	Color of Wire	Ь	۵
Connector No.	Connector Name	Connector Color	H.S.	Terminal No.	1	2

Connector No.	E45
Connector Name	Connector Name JOINT CONNECTOR-E12
Connector Color BLUE	BLUE
(12   11   10   H.S.	12 11 10 9 8 7 6 5 4 3 2 1

Terminal No. Wire Signal Name  1					
Color of Wire   L   L   L   L   A   L   L   T   L   T   T   T   T   T   T		ı	1	1	_
Terminal No. 1 4 7 10	Color of Wire	٦	_	۵	Ь
	Terminal No.	-	4	7	10

ABLIA3605GB

Α

В

С

D

Е

F

G

Н

J

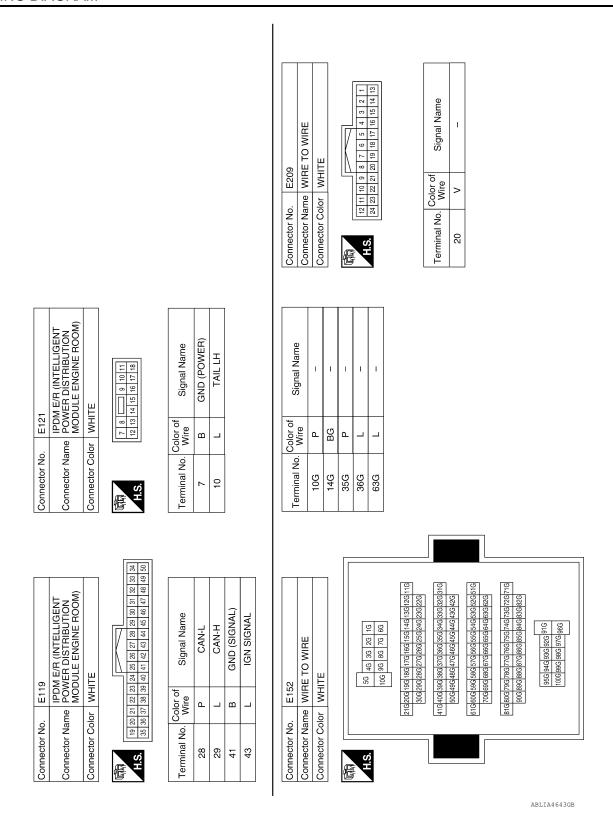
Κ

EXL

M

Ν

0



Α

В

С

 $\mathsf{D}$ 

Е

F

G

Н

J

Κ

WIRE	Signal Name	WIRE 8
Connector No. E232 Connector Name WIRE TO WIRE Connector Color BLACK  H.S. (4 3 2 1)  H.S. (8 7 6 5)	Terminal No. Color of Wire 2 B B 5 L	Connector No. E326 Connector Name WIRE TO WIRE Connector Color GRAY  TH.S. E34  H.S. E384
Connector No. E218 Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM) Connector Color WHITE  H.S. ES SH SS ST S	Terminal No. Color of Signal Name  84 SB H/L LEVELIZER RH  92 L H/L LEVELIZER LH	Connector No. E325 Connector Name WIRE TO WIRE Connector Color BLACK
Connector No. E217  Connector Name POWER DISTRIBUTION MODULE ENGINE ROOM)  Connector Color WHITE  The post of the	Terminal No. Color of Signal Name 75 R HEADLAMP LO RH 76 L HEADLAMP LO LH	Connector No. E233 Connector Name WIRE TO WIRE Connector Color GRAY

8 2 8	Signal Name	ı	ı	ı
In the second se	Color of Wire	>	В	SB
H.S.	Terminal No. Wire	1	2	5

\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Signal Name	1	ı	1
lor Bl A		Color of Wire	>	В	٦
Connector Color BI ACK	明 H.S.	Terminal No. Wire	1	2	2

Signal Name	1	1	1
Color of Wire	۸	В	SB
Terminal No.	-	2	5

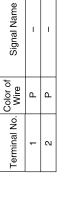
ABLIA5018GB

M N

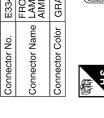
Ρ

Revision: August 2014 EXL-117 2015 QX60 NAM

Signal Name	1	-	
Color of Wire	Д	Ь	
Terminal No.	1	2	









0	FRONT COMBINATION LAMP LH (HEADLAMP AIMING MOTOR)	٨٨	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	Signal Name	ı	1	1
. E330		lor GRAY		Color of Wire	>	٦	В
Connector No.	Connector Name	Connector Color	原 H.S.	Terminal No.	13	14	15

Connector No.	, B17	
Connector Name		JOINT CONNECTOR-B12
Connector Color	lor WHITE	ТЕ
lda.	4	3 2 1 0
Terminal No. Wire	Color of Wire	Signal Name
-	_	ı
2	٦	1

	Connector Name JOINT CONNECTOR-B11	ITE	4 3 2 1 1	Signal Name
. B16	me JOI	or WHITE	4	Color of Wire
Connector No.	Connector Nai	Connector Color	S. H.	Terminal No.

۵ | ۵

Connector No.	B12
Connector Name	Connector Name JOINT CONNECTOR-B10
Connector Color WHITE	WHITE
所 H.S.	[] 4   3   2   1   []

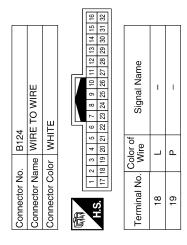
4 3 2 1	Signal Name	ı
4	Color of Wire	٦
是 H.S.	Terminal No.	-

ABLIA5019GB

N

				Α
Signal Name	1	1	ONNECTOR-B15 Signal Name	В
Color of Sig	Г	<u>_</u>		D
Terminal No.	89A	90A	Connector No. B103 Connector Name JOINT of Connector Color WHITE  H.S. Terminal No. Wire 1 2 P 2	Е
		_		F
			Al 34   124   114	G
OF H			5A	Н
Connector No. B69	Color GRAY	_	Sa   4a   3a   2a   1a   1a   1a   1a   1a   1a   1	I
Connector No.	Connector Color		Connector No. Connector No. Connector Name Connector Color 1 1 2 A.S.	J
	Т	7	18 18 12 1	K
adiw OT	— Н Н		Vame	EXL
lo. B32	color WHITE	_	No. Color of MHTE T Color of Mire P No. Color of MHTE T Color of Mire P No. Color of MHTE T Color of Mire P No. Color of MHTE T T S S S S S S S S S S S S S S S S S	N
Connector No. B32	Connector Color		Terminal No.   Color of   Signal II	0
			ABLIA5020GB	

Revision: August 2014 EXL-119 2015 QX60 NAM



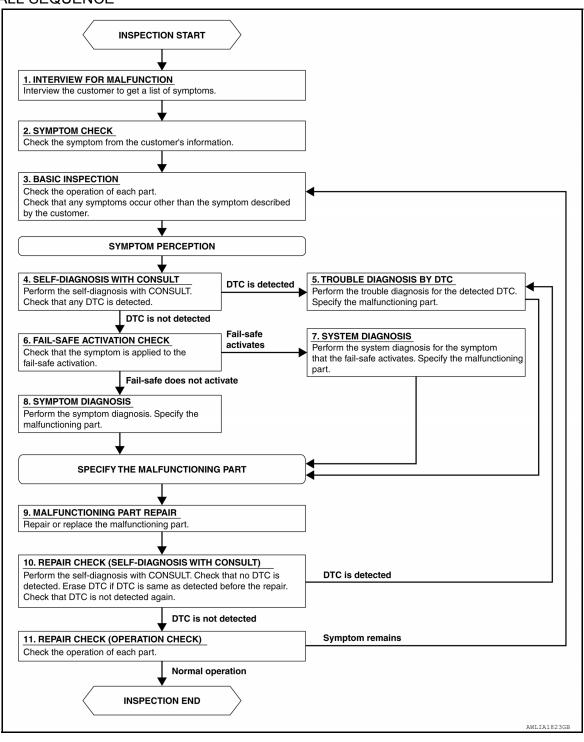
ABLIA5021GB

# **BASIC INSPECTION**

# DIAGNOSIS AND REPAIR WORKFLOW

Work Flow

#### **OVERALL SEQUENCE**



Α

D

Е

F

G

Н

Κ

EXL

M

Ν

0

< BASIC INSPECTION > [XENON TYPE]

#### **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-DIAGNOSIS WITH CONSULT

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

#### Is any DTC detected?

YES >> GO TO 5.

NO >> GO TO 6.

#### ${f 5}$ . 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. Refer to EXL-148, "Symptom Table".

>> GO TO 9.

#### 9. MALFUNCTION PART REPAIR

Repair or replace the malfunctioning part.

>> GO TO 10.

# 10. REPAIR CHECK (SELF-DIAGNOSIS WITH CONSULT)

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

Is any DTC detected?

DIAGNOSIS AND REPAIR WORKFLOW	[XENON TYPE]
< BASIC INSPECTION >	[XENON TIPE]
YES >> GO TO 5. NO >> GO TO 11.	
11.REPAIR CHECK (OPERATION CHECK)	
Check the operation of each part.	
Does it operate normally?	I
YES >> Inspection End.	
NO >> GO TO 3.	(
	I
	(
	I
	I
	Ε
	1
	I
	(

#### POWER SUPPLY AND GROUND CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

# DTC/CIRCUIT DIAGNOSIS

# POWER SUPPLY AND GROUND CIRCUIT BCM (BODY CONTROL MODULE)

BCM (BODY CONTROL MODULE): Diagnosis Procedure

INFOID:0000000011544367

Regarding Wiring Diagram information, refer to BCS-54, "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	O (40A)
131	BCM battery fuse	1 (10A)

#### Is the fuse or fusible link blown?

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

NO >> GO TO 2

# 2. CHECK POWER SUPPLY CIRCUIT

- 1. Disconnect BCM connector M81.
- 2. Check voltage between BCM connector M81 terminals 131, 139 and ground.

BCM		Ground	Voltage	
Connector	Terminal	Ground	(Approx.)	
M81	131		Rattery voltage	
IVIO 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 M81 terminals 134, 143 and ground.

BCM		Ground	Continuity	
Connector	Terminal	Ground	Continuity	
M81	134		Voc	
IVIO I	143	_	Yes	

#### 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-21, "Wiring Diagram".

#### POWER SUPPLY AND GROUND CIRCUIT

#### < DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

В

D

Е

F

Н

# 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), K (40A)

#### Is the fusible link blown?

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

NO >> GO TO 2

# 2. CHECK POWER SUPPLY CIRCUIT

- Disconnect IPDM E/R connectors E118 and E120.
- 2. Check voltage between IPDM E/R connectors and ground.

IPDM E/R		Ground	Voltage (Approx.)	
Connector	Terminal	Giodila	(Approx.)	
E118	1			
E110	2	_	Battery voltage	
E120	3			

#### Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace harness or connectors.

# 3. CHECK GROUND CIRCUIT

- Disconnect IPDM E/R connectors E119 and E121.
- Check continuity between IPDM E/R connectors and ground.

IPDM E/R		Ground	Continuity	
Connector	Terminal	Glound	Continuity	
E121	7		Yes	
E119	41	_	165	

#### Is the inspection result normal?

YES >> Inspection End.

NO >> Repair or replace harness or connectors. EXL

Ν

Р

**EXL-125** 2015 QX60 NAM Revision: August 2014

K

# HEADLAMP (HI) CIRCUIT

Description INFOID:0000000011134656

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:0000000011134657

# 1. CHECK HEADLAMP (HI) OPERATION

#### **NWITHOUT CONSULT**

- 1. Start IPDM E/R auto active test. Refer to <a href="PCS-8">PCS-8</a>, "Diagnosis Description".
- 2. Check that the headlamp switches to the high beam.

#### **WITH CONSULT**

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

HI: Headlamp switches to the high beam.

OFF : Headlamp OFF

#### Does the headlamp switch to the high beam?

YES >> Headlamp (HI) circuit is normal.

NO >> Refer to EXL-126, "Diagnosis Procedure".

#### Diagnosis Procedure

INFOID:0000000011134658

Regarding Wiring Diagram - Refer to EXL-22, "Wiring Diagram".

# 1. CHECK HEADLAMP (HI) FUSES

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

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

#### Is the fuse open?

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

NO >> GO TO 2.

# 2.CHECK HEADLAMP (HI) OUTPUT VOLTAGE

#### **®CONSULT ACTIVE TEST**

- 1. Turn the ignition switch OFF.
- Disconnect the front combination lamp harness connector E331 or E327.
- Turn the ignition switch ON.
- Select EXTERNAL LAMP of IPDM E/R active test item.
- With EXTERNAL LAMP ON, check the voltage between the combination lamp harness connector and ground.

(+)			( )	Voltage
	Connector	Terminal	(-)	voltage
RH	E331	3	Ground	Battery voltage
LH	E327	3	Giouria	

#### **HEADLAMP (HI) CIRCUIT**

#### < DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

Α

В

D

Е

F

Н

#### Is battery voltage present?

YES >> GO TO 4.

NO >> GO TO 3.

# 3.CHECK HEADLAMP (HI) CIRCUIT FOR OPEN

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

	IPDM E/R			Front combination lamp	
Con	nector	Terminal	Connector	Terminal	Continuity
RH	E217	80	E331	2	Voc
LH	EZII	81	E327	3	Yes

#### Does continuity exist?

YES >> Replace IPDM E/R. Refer to PCS-32, "Removal and Installation".

NO >> Repair the harnesses or connectors.

# 4. CHECK FRONT COMBINATION LAMP (HI) GROUND CIRCUIT

Check continuity between the front combination lamp harness connector terminal 4 and ground.

	Connector	Terminal	_	Continuity
RH	E331	4	Ground	Yes
LH	E327	7	Ground	163

#### Does continuity exist?

YES >> Replace the headlamp bulb.

NO >> Repair or replace the harness or connector.

EXL

K

М

Ν

0

[XENON TYPE]

# HEADLAMP (LO) CIRCUIT

Description INFOID:0000000011134659

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.

#### Component Function Check

INFOID:0000000011134660

# 1. CHECK HEADLAMP (LO) OPERATION

#### **NWITHOUT CONSULT**

- 1. Start IPDM E/R auto active test. Refer to PCS-8, "Diagnosis Description".
- 2. Check that the headlamp is turned ON.

#### NOTE:

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

#### (P)CONSULT

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

LO : Headlamp ON OFF : Headlamp OFF

#### Is the headlamp turned ON?

YES >> Headlamp (LO) is normal.

NO >> Refer to EXL-128, "Diagnosis Procedure".

#### Diagnosis Procedure

INFOID:0000000011134661

Regarding Wiring Diagram information - Refer to EXL-22, "Wiring Diagram".

# 1. CHECK HEADLAMP (LO) FUSES

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

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

#### Is the fuse open?

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

NO >> GO TO 2.

# 2.CHECK HEADLAMP (LO) OUTPUT VOLTAGE

#### (P)CONSULT

- 1. Turn the ignition switch OFF.
- Disconnect the front combination lamp harness connector E332 or E328.
- Turn the ignition switch ON.
- 4. Select EXTERNAL LAMP of IPDM E/R active test item.
- With EXTERNAL LAMP ON, check the voltage between the front combination lamp harness connector E332 or E328 terminal 1 and ground.

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

#### **HEADLAMP (LO) CIRCUIT**

#### < DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

Α

В

D

Е

Н

RH	E332	1	Ground	Rattery voltage
LH	E328	·	Oround	Battery voltage

#### Is battery voltage present?

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 E217.
- 3. Check continuity between the IPDM E/R harness connector and the front combination lamp harness connector E332 or E328.

	IPDM E/R		Front combination lamp		Continuity
Coni	nector	Terminal	Connector	Terminal	Continuity
RH	E217	75	E332	1	Yes
LH	EZII	76	E328	-   	165

#### Does continuity exist?

YES >> Replace IPDM E/R. Refer to PCS-32, "Removal and Installation".

NO >> Repair the harness or connector.

# 4. CHECK FRONT COMBINATION LAMP (LO) GROUND CIRCUIT

Check continuity between the front combination lamp harness connector E332 or E328 terminal 2 and ground.

Coni	nector	Terminal	_	Continuity
RH	E332	2	Ground	Yes
LH	E328	2	Ground	163

#### Does continuity exist?

YES >> Perform xenon headlamp diagnosis. Refer to EXL-130, "Diagnosis Procedure".

NO >> Repair the harness or connector.

EXL

K

Ν

0

[XENON TYPE]

#### XENON HEADLAMP

Description INFOID:0000000011134662

#### **OPERATION**

Refer to EXL-130, "Description".

#### PRECAUTIONS FOR TROUBLE DIAGNOSIS

- Installation or removal of the connector must be done with the lighting switch OFF.
- When the lamp is illuminated (when the lighting switch is ON), do not touch the harness, HID control unit, inside of the lamp or the lamp metal parts.
- To check illumination, temporarily install lamp in the vehicle. Be sure to connect power at the vehicle-side connector.
- If the malfunction can be traced directly to the electrical system, first check for items such as blown fuses
  and fusible links, broken wires or loose connectors, pulled-out terminals and improper connections.
- · Do not work with wet hands.
- Using a tester for HID control unit circuit trouble diagnosis is prohibited.
- Disassembling the HID control unit or harnesses (bulb socket harness, ballast harness) is prohibited.
- Immediately after illumination, the light intensity and color will fluctuate this is normal.
- When the bulb has reached the end of its lifetime, the brightness may drop significantly, it may flash repeatedly or the light may turn a reddish color.

#### Diagnosis Procedure

INFOID:0000000011134663

#### 1. CHECK XENON BULB

Install a known good bulb to the applicable headlamp. Check that the headlamp operates.

#### Is the inspection result normal?

YES >> Replace the xenon bulb.

NO >> GO TO 2.

# 2. CHECK HID CONTROL UNIT

Install a known good HID control unit to the applicable headlamp. Check that the headlamp operates.

#### Is the inspection result normal?

YES >> Replace HID control unit.

NO >> Inspection End.

#### DAYTIME RUNNING LIGHT RELAY CIRCUIT

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

INFOID:0000000011134665

Α

D

Е

Н

#### DAYTIME RUNNING LIGHT RELAY CIRCUIT

Description INFOID:0000000011134664

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-31, "Wiring Diagram".

# 1. CHECK DAYTIME RUNNING LIGHT RELAY VOLTAGE SUPPLY

- Turn the ignition switch OFF.
- Disconnect the daytime running light relay harness connector E4.
- 3. Turn the ignition switch ON.
- 4. Check the voltage between the following daytime running light relay harness connector E4 terminals and ground.

(	+)	( )	Voltage
Connector Terminal		(-)	voltage
	2		
E4	5	Ground	Battery voltage
	7		

#### Is the inspection results normal?

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

2.check daytime running light relay circuit

- 1. Turn the ignition switch OFF.
- 2. Disconnect IPDM E/R harness connector E121.
- Check continuity between the IPDM E/R harness connector E121 and the daytime running light relay harness connector E4.

Daytime running light relay		IPDM E/R		Continuity
Connector	Terminal	Connector Terminal		Continuity
	2			
E4	5	E121	14	Yes
	7			

4. Check continuity between the IPDM E/R harness connector E121 and ground.

Connector	Terminal	(—)	Continuity
E121	14	Ground	No

#### Is the inspection results normal?

YES >> Replace IPDM E/R. Refer to PCS-32, "Removal and Installation".

NO >> Repair or replace the harnesses or connectors.

# 3.CHECK DAYTIME RUNNING LAMP RELAY COIL CIRCUIT

 Check continuity between the IPDM E/R harness connector E218 and daytime running light relay harness connector E4.

EXL

K

ΕXL

M

. .

Ν

#### DAYTIME RUNNING LIGHT RELAY CIRCUIT

#### < DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

IPDM	IPDM E/R		Daytime running light relay	
Connector	Terminal	Connector Terminal		Continuity
E218	85	E4	1	Yes

2. Check continuity between the IPDM E/R harness connector E218 and ground.

Connector	Terminal	Ground	Continuity
E218	85	Giodila	No

#### Does continuity exist?

YES >> GO TO 4.

NO >> Repair or replace the harnesses or connectors.

# 4. CHECK DAYTIME RUNNING LIGHT RELAY

Check the daytime running light relay. Refer to EXL-132, "Component Inspection".

#### Is the inspection results normal?

YES >> GO TO 5.

NO >> Replace relay.

# 5.CHECK DAYTIME RUNNING LAMP CIRCUIT FOR OPEN

- Turn the ignition switch OFF.
- 2. Disconnect the front fog lamp harness connector E303 or E304 in question.
- 3. Check continuity between the daytime running light relay harness connector E4 and the front fog lamp harness connector E303 or E304.

Front fog lamp		Daytime running light relay		Continuity
Connector	Terminal	Connector Terminal		Continuity
LH E303	2	E4	6	Yes
RH E304	3	L4	3	165

#### Is the inspection results normal?

YES >> GO TO 6.

NO >> Repair or replace the harnesses or connectors.

# 6.CHECK DAYTIME RUNNING LAMP GOUND CIRCUIT FOR OPEN

- Turn the ignition switch OFF.
- 2. Disconnect front fog lamp harness connector E303 or E304 in question.
- 3. Check continuity between the front fog lamp harness connector E303 or E304 terminal 4 and ground.

Connector	Terminal	(-)	Continuity
LH E303	4	Ground	Yes
RH E304	4	Ground	ies

#### Does continuity exist?

YES >> Inspection End.

NO >> Repair or replace the harnesses or connectors.

# Component Inspection

INFOID:0000000011134666

# 1. CHECK DAYTIME RUNNING LIGHT RELAY

- 1. Turn ignition switch OFF.
- Remove daytime running light relay.
- Check the continuity between daytime running light relay terminals 3 and 5 and 6 and 7 when voltage is supplied between terminals 1 and 2.

#### **DAYTIME RUNNING LIGHT RELAY CIRCUIT**

#### < DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

Terminals	Voltage	Continuity
3 and 5	ON	Yes
3 and 5	OFF	No
6 and 7	ON	Yes
o and r	OFF	No

Α

В

С

 $\mathsf{D}$ 

Е

F

G

Н

K

**EXL** 

M

Ν

0

Р

Is the inspection result normal?

YES

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

Revision: August 2014

#### **HEADLAMP AIMING SYSTEM (MANUAL)**

< DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

# HEADLAMP AIMING SYSTEM (MANUAL)

Description INFOID:0000000011134667

The manual headlamp aiming system uses a headlamp aiming switch to adjust the axis of the headlamp aiming motor. The headlamp aiming switch has four settings, each with a different resistance value. The headlamp aiming motor adjusts to the proper axis based off the position of the headlamp aiming switch.

#### Component Inspection

INFOID:0000000011134668

# 1.CHECK HEADLAMP AIMING SWITCH

- 1. Disconnect headlamp aiming switch.
- 2. Check resistance between terminal 1 and terminal 2.

Headlamp a	Headlamp aiming switch		Resistance
Terminal		Switch position	(Approx.)
		0	160 Ω
1	2	1	402 Ω
1	2	2	
		3	1100 Ω

#### Is the inspection result normal?

YES >> Headlamp aiming switch is normal.

NO >> Replace the headlamp aiming switch. Refer to EXL-170, "Removal and Installation".

#### Diagnosis Procedure

INFOID:0000000011134669

Regarding Wiring Diagram information, refer to EXL-111, "Wiring Diagram".

# 1. CHECK HEADLAMP AIMING MOTOR FUSES

- Turn the ignition switch OFF.
- 2. Check that the fuse is not open.

Unit	Location	Fuse No.	Capacity
Headlamp aiming motor	IPDM E/R	48	10A

#### Is the inspection result normal?

YES >> GO TO 2

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

# 2.CHECK HEADLAMP AIMING MOTOR POWER SUPPLY CIRCUIT FOR OPEN OR SHORT

- 1. Turn ignition switch OFF.
- Disconnect IPDM E/R harness connector E218, headlamp aiming motor LH harness connector E330 or headlamp aiming motor RH harness connector E334.
- 3. Check continuity between IPDM E/R harness connector E218 and headlamp aiming motor LH harness connector E330 or headlamp aiming motor RH harness connector E334.

IPDI	M E/R	Headlamp aiming motor			Continuity
Connector	Terminal	Connector		Terminal	Continuity
E210	92	LH	E330	14	Yes
E210	E218 84	RH	E334		res

<sup>4.</sup> Check continuity between the IPDM E/R harness connector and ground.

#### **HEADLAMP AIMING SYSTEM (MANUAL)**

#### < DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

Α

В

D

Е

F

Н

IP	IPDM E/R		Continuity	
Connector	Terminal	_	Continuity	
E218	92	Ground	No	
E210	84	Giouna	NO	

#### Is the inspection result normal?

YES >> GO TO 3

NO >> Repair or replace the harness or connector.

# 3.check headlamp aiming switch signal for open or short circuit

1. Disconnect headlamp aiming switch harness connector M121.

2. Check continuity between the headlamp aiming switch harness connector M121 and headlamp aiming motor LH harness connector E330 or headlamp aiming motor RH harness connector E334.

Headlamp a	aiming switch	Headlamp aiming motor			Continuity
Connector	Terminal	Connector		Terminal	Continuity
M121	1	LH	E330	13	Voo
IVI I Z I	ı	RH	E334	13	Yes

3. Check continuity between the headlamp aiming switch harness connector M121 and ground.

Headlamp a	Headlamp aiming switch		Continuity	
Connector	Terminal	(-)	Continuity	
M121	1	Ground	No	

#### Is the inspection result normal?

YES >> GO TO 4

NO >> Repair or replace the harness or connector.

#### $oldsymbol{4}.$ CHECK HEADLAMP AIMING MOTOR GROUND CIRCUIT

Check continuity between headlamp aiming motor LH harness connector E330 or headlamp aiming motor RH harness connector E334 and ground.

Headlamp aiming motor			()	Continuity	
Connector		Terminal	(-)	Continuity	
LH	E330	15	Ground	Yes	
RH	E334	15	Giouna	165	

#### Is the inspection result normal?

YES >> Inspect the headlamp aiming motors.

NO >> Repair or replace the harness or connector.

EXL

K

Ν

[XENON TYPE]

#### FRONT FOG LAMP CIRCUIT

Description INFOID:0000000011134670

The IPDM E/R (intelligent power distribution module engine room) controls the front fog lamp relay based on inputs from the BCM via 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:0000000011134671

#### 1. CHECK FRONT FOG LAMP OPERATION

#### **NUMBER OF THE PROPERTY OF THE**

- Activate IPDM E/R auto active test. Refer to <u>PCS-8, "Diagnosis Description"</u>.
- 2. Check that the front fog lamp is turned ON.

#### (P)WITH CONSULT

- 1. Select EXTERNAL LAMPS of IPDM E/R active test item.
- 2. While operating the test items, Check that the front fog lamp is turned ON.

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

#### Is the front fog lamp turned ON?

YES >> Front fog lamp circuit is normal.

NO >> Refer to EXL-136, "Diagnosis Procedure".

#### Diagnosis Procedure

INFOID:0000000011134672

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

# 1. CHECK FRONT FOG LAMP FUSE

- 1. Turn the ignition switch OFF.
- Check if the following fuse is blown.

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

#### Is the fuse open?

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

NO >> GO TO 2

# 2.CHECK FRONT FOG LAMP OUTPUT VOLTAGE

- 1. Turn the ignition switch OFF.
- Disconnect the front fog lamp harness connector E305 or E306.
- 3. Turn the ignition switch ON.
- 4. Turn the front fog lamps ON.
- Check the voltage between the fog lamp harness connector E305 or E306 terminal 1 and ground.

(+)			( )	Voltage
C	connector	Terminal	(-)	(Approx.)
LH	E305	1	Ground	Rattery voltage
RH	E306	ı	Giouna	Battery voltage

#### Is battery voltage present?

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

#### FRONT FOG LAMP CIRCUIT

#### < DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

Α

В

D

Е

F

Н

# 3.CHECK FRONT FOG LAMP OPEN CIRCUIT

- 1. Turn the ignition switch OFF.
- 2. Disconnect IPDM E/R harness connector E217.
- 3. Check continuity between the IPDM E/R harness connector E217 and the front fog lamp harness connector E305 or E306.

	IPDM E/R		Front fog lamp		Continuity
Coni	nector	Terminal	Connector	Terminal	Continuity
LH	E217	79	E305	1	Yes
RH	E217	78	E306		165

#### Does continuity exist?

YES >> Replace IDPM E/R. Refer to PCS-32, "Removal and Installation".

NO >> Repair or replace the harnesses or connectors.

# 4. CHECK FRONT FOG LAMP GROUND CIRCUIT

- 1. Disconnect the front fog lamp connector.
- 2. Check continuity between the front fog lamp harness connector E305 or E306 terminal 2 and ground.

Conr	nector	Terminal	_	Continuity
LH	E305	305	Ground	Yes
RH	E306	2	Ground	res

#### Does continuity exist?

YES >> Inspect the fog lamp bulb.

NO >> Repair or replace the harnesses or connectors.

EXL

K

Ν

0

#### PARKING LAMP CIRCUIT

Description INFOID:0000000011134673

The IPDM E/R (intelligent power distribution module engine room) controls the tail lamp relay based on inputs from the BCM via the CAN communication lines. When the tail lamp relay is energized, power flows through fuse 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:0000000011134674

#### 1. CHECK PARKING LAMP OPERATION

#### **NWITHOUT CONSULT**

- 1. Activate IPDM E/R auto active test. Refer to PCS-8, "Diagnosis Description".
- 2. Check that the parking lamp is turned ON.

#### (P)WITH CONSULT

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

TAIL : Parking lamp ON
Off : Parking lamp OFF

#### Is the parking lamp turned ON?

YES >> Parking lamp circuit is normal.

NO >> Refer to EXL-141, "Diagnosis Procedure".

#### Diagnosis Procedure

INFOID:0000000011134675

Regarding Wiring Diagram information, refer to EXL-70, "Wiring Diagram".

# 1. CHECK PARKING LAMP FUSES

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

Unit	Location	Fuse No.	Capacity
Parking lamps	IPDM E/R	51	10A
r arking lamps	IF DIVI L/IX	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 combination lamp connectors, front side marker lamp connectors, rear combination lamp connectors and license plate lamp connectors.
- 2. Turn the ignition switch ON.
- Turn the parking lamps ON.
- 4. With the parking lamps ON, check voltage between the front combination lamp connector and ground.

(+)			(-)	Voltage (Approx.)	
	Connector	Terminal	(-)	(Approx.)	
LH	E235	7	Ground	Battery voltage	
RH	E240	T T	Giodila	Dattery Voltage	

#### **PARKING LAMP CIRCUIT**

#### < DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

Α

В

D

Е

F

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

(+)			(-)	Voltage
	Connector	Terminal	(-)	(Approx.)
LH	E329	Q	Ground	Rattery voltage
RH	E333	9	Ground	Battery voltage

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

(+)			(-)	Voltage
	Connector	Terminal	( )	(Approx.)
LH	B406	2	Ground	Battery voltage
RH	B407	2		

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

(+)		(-)	Voltage (Approx.)	
	Connector	Terminal	(-)	(Approx.)
LH	D561	2	Ground	Battery voltage
RH	D562	2		

#### Are the inspection results normal?

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

# 3. CHECK PARKING LAMP CIRCUIT (OPEN)

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

IPDM E/R		Front comb	Continuity		
Conne	ector	Terminal	Connector	Terminal	Continuity
LH	E218	90	E235	7	Yes
RH	LZIO	90	E240	ľ	163

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

IPDM E/R		Front side	Continuity		
Co	nnector	Terminal	Connector	Terminal	Continuity
LH	E218	90	E329	a	Yes
RH			E333	9	163

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

IPDM E/R			Rear combination lamp		Continuity
Conne	ector	Terminal	Connector	Terminal	Continuity
LH	E121	10	B406	2	Yes
RH	E121	9	B407	2	165

Revision: August 2014 EXL-139 2015 QX60 NAM

EXL

J

K

Ν

0

#### **PARKING LAMP CIRCUIT**

[XENON TYPE]

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

IPDM E/R		License plate lamp		Continuity	
	Connector	Terminal	Connector	Terminal	Continuity
LH	E121	10	D561	2	Yes
RH	- L121	10	D562	2	ies

#### Are the inspection results normal?

YES >> Replace IPDM E/R. Refer to PCS-32, "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 harness connector and ground.

(+)			( )	Continuity
	Connector	Terminal	(-)	Continuity
LH	E235	Q	Ground	Yes
RH	E240	0	Ground	

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

(+)			(-)	Continuity
	Connector	Terminal	(-)	Continuity
LH	E329	10	Ground	Yes
RH	E333	10		

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

(+)			(-)	Continuity
	Connector	Terminal	(-)	Continuity
LH	B406	2	Ground	Yes
RH	B407	3	Ground	162

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

(+)			( )	Continuity
	Connector	Terminal	(-)	Continuity
LH	D561	1	Ground	Yes
RH	D562	1	Ground	

#### 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 >

[XENON TYPE]

Α

D

Е

#### TURN SIGNAL LAMP CIRCUIT

Description INFOID:0000000011134676

The BCM monitors inputs from the combination switch (lighting and turn signal 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

INFOID:0000000011134677

# (P)CONSULT

1. Select FLASHER of BCM (FLASHER) active test item.

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

LH : Turn signal lamps (LH) ON RH : Turn signal lamps (RH) ON Off : Turn signal lamps OFF

#### Is the inspection result normal?

YES >> Turn signal lamp circuit is normal.

>> Refer to EXL-141, "Diagnosis Procedure". NO

#### Diagnosis Procedure

Regarding Wiring Diagram information, refer to EXL-61, "Wiring Diagram".

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.

1. CHECK TURN SIGNAL LAMP BULB

# 2.CHECK TURN SIGNAL LAMP OUTPUT VOLTAGE

Turn the ignition switch OFF.

- 2. Disconnect the front combination lamp harness connector or the rear combination lamp harness connector in question.
- 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.)	

EXL

K

INFOID:0000000011134678

M

Ν

0

#### TURN SIGNAL LAMP CIRCUIT

[XENON TYPE]

#### < DTC/CIRCUIT DIAGNOSIS >

RH	E239			
LH	E234	5	Ground	(V) 15 10 5 0

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

(+)			(-)	Voltage (Approx.)	
Connector Terminal		(-)			
RH	B409				
LH	B408	4	Ground	(V) 15 10 1 s	

#### Is voltage reading as specified?

YES >> GO TO 5.

NO >> GO TO 3.

# 3.CHECK TURN SIGNAL LAMP CIRCUIT FOR OPEN

- 1. Turn the ignition switch OFF.
- Disconnect BCM harness connector M20 or M80.
- Check continuity between the BCM harness connector M80 and the front combination lamp harness connector.

BCM			Front combination lamp		Continuity
Connector Termin		Terminal	Connector	Terminal	Continuity
LH	M80	117	E234	5	Yes
RH	IVIOU	105	E239	3	165

4. Check continuity between the BCM harness connector M20 and the rear combination lamp harness connector.

BCM			Rear combination lamp		Continuity
Connector		Terminal	Connector	Terminal	Continuity
LH	M20	103	B408	4	Yes
RH	IVIZU	92	B409	4	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 M80 and ground.

#### **TURN SIGNAL LAMP CIRCUIT**

#### < DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

Α

В

D

Е

F

Н

ВСМ				Continuity
Connector		Terminal	Ground	Continuity
LH	M80	117	Ground	No
RH	IVIOU	105		NO

2. Check continuity between the BCM harness connector M20 and ground.

BCM				Continuity
Connector Terminal		Ground		
LH	M20	103	Ground	No
RH	IVIZU	92		INO

#### Are the inspection results normal?

YES >> Replace BCM. Refer to BCS-79, "Removal and Installation".

NO >> Repair or replace the harness or connectors.

# 5. CHECK TURN SIGNAL LAMP GROUND CIRCUIT

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

-	ront combination lamp	( )	Continuity	
Connec	etor	Terminal	(-)	Continuity
LH E234		6	Ground	Yes
RH	E239	0	Giouna	165

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

	Rear combination lamp	(-)	Continuity		
Connector		Terminal	(-)	Continuity	
LH	LH B408		Ground	Yes	
RH	B409	5	Giouna	165	

#### Are continuity results as specified?

YES >> Replace the malfunctioning lamp.

NO >> Repair or replace the harness or connectors.

EXL

K

M

Ν

0

Р

Revision: August 2014 EXL-143 2015 QX60 NAM

[XENON TYPE]

#### **OPTICAL SENSOR**

Description INFOID:0000000011134679

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

#### Component Function Check

INFOID:0000000011134680

# 1. CHECK OPTICAL SENSOR SIGNAL TO BCM

#### (P)CONSULT

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

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

<sup>\*:</sup>Outside light varies. 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-144, "Diagnosis Procedure".

#### Diagnosis Procedure

INFOID:0000000011134681

Regarding Wiring Diagram information, refer to <u>EXL-43</u>, "Wiring Diagram".

# 1. CHECK OPTICAL SENSOR POWER SUPPLY INPUT

- 1. Turn the ignition switch OFF.
- 2. Disconnect the optical sensor harness connector M15.
- 3. Turn the ignition switch ON.
- Turn the lighting switch to AUTO.
- 5. Check the voltage between the optical sensor harness connector M15 and ground.

(-	+)	(-)	Voltage	
Connector Terminal		(-)	(Approx.)	
M15	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.
- 2. Check continuity between the optical sensor harness connector M15 and ground.

(	+)	(-)	Continuity	
Connector Terminal		(-)	Continuity	
M15	3	Ground	Yes	

#### Is the inspection result normal?

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

# 3.CHECK OPTICAL SENSOR POWER SUPPLY CIRCUIT

1. Turn the ignition switch OFF.

## **OPTICAL SENSOR**

#### < DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

Α

В

D

Е

Н

2. Disconnect the BCM harness connector M18.

3. Check continuity between optical sensor harness connector M15 and BCM harness connector M18.

Optica	l sensor	ВСМ		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
M15	1	M18	3	Yes	

Is the inspection result normal?

YES >> GO TO 4.

NO >> Repair or replace the harness or connectors.

4. CHECK OPTICAL SENSOR POWER SUPPLY FOR SHORT CIRCUIT

Check continuity between optical sensor harness connector M15 terminal 1 and ground.

(+)		(_)	Continuity
Connector	Terminal	(-)	Continuity
M15	1	Ground	No

#### Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-79, "Removal and Installation".

NO >> Repair or replace harness or connector.

## CHECK OPTICAL SENSOR GROUND FOR OPEN CIRCUIT

1. Turn ignition switch OFF.

Disconnect the BCM harness connector M18.

Check continuity between optical sensor harness connector M15 terminal 3 and BCM harness connector M18 terminal 17.

Optica	l sensor	BCM		BCM		Continuity
Connector	Terminal	Connector	Terminal	Continuity		
M15	3	M18	17	Yes		

### Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-79, "Removal and Installation".

NO >> Repair or replace harness or connector.

## **6.**CHECK OPTICAL SENSOR SIGNAL OPEN CIRCUIT

Turn ignition switch OFF.

Disconnect optical sensor connector and BCM connector.

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

Optica	l sensor	ВСМ		Continuity	
Connector	Terminal	Connector	Terminal	Continuity	
M15	2	M18	4	Yes	

Check continuity between optical sensor harness connector and ground.

Connector	Terminal	(-)	Continuity
M15	2	Ground	No

#### Is the inspection result normal?

YES >> Replace the optical sensor. Refer to <a href="EXL-167">EXL-167</a>, "Removal and Installation".

NO >> Repair or replace harness or connectors.

EXL

K

IV

Ν

NI

0

F

## HAZARD SWITCH

## **Component Function Check**

INFOID:0000000011134682

## $1.\mathsf{check}$ hazard switch signal by consult

### **®CONSULT DATA MONITOR**

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

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

## Is the inspection result normal?

YES >> Hazard switch circuit is normal.

NO >> Refer to EXL-146, "Diagnosis Procedure".

## Diagnosis Procedure

INFOID:0000000011134683

Regarding Wiring Diagram information, refer to EXL-61, "Wiring Diagram".

## 1. CHECK HAZARD SWITCH SIGNAL INPUT

- Turn ignition switch OFF.
- 2. Disconnect A/C and AV switch assembly harness connector M98.
- 3. Turn ignition switch ON.
- 4. Check voltage between A/C and AV switch assembly harness connector M98 and ground.

_ <del>`</del>	eembly (hazard switch)  Terminal	(-)	Voltage (Approx.)
M98	16	Ground	(V) 15 10 5 0 10ms  JPMIA0154GB

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> GO TO 2.

## $2.\mathsf{CHECK}$ HAZARD SWITCH SIGNAL OPEN CIRCUIT

- 1. Turn ignition switch OFF.
- Disconnect BCM harness connector M18.
- 3. Check continuity between A/C and AV switch assembly harness connector and BCM harness connector.

Hazard	Hazard switch BCM		BCM	
Connector	Terminal	Connector	Terminal	Continuity
M98	16	M18	36	Yes

#### Is the inspection result normal?

YES >> GO TO 3.

NO >> Repair or replace the harness or connectors.

## **HAZARD SWITCH**

## < DTC/CIRCUIT DIAGNOSIS >

[XENON TYPE]

Α

В

D

Е

F

Н

# 3. CHECK HAZARD SWITCH SIGNAL SHORT CIRCUIT

Check continuity between A/C and AV switch assembly harness connector and ground.

Hazard	Hazard switch		Continuity
Connector	Terminal	Ground	Continuity
M98	16		No

#### Is the inspection result normal?

YES >> Replace BCM. Refer to BCS-79, "Removal and Installation".

NO >> Repair or replace the harness or connectors.

## 4. CHECK HAZARD SWITCH GROUND OPEN CIRCUIT

Check continuity between A/C and AV switch assembly harness connector and ground.

Hazard switch			Continuity
Connector	Connector Terminal		Continuity
M98	1		Yes

## Is the inspection result normal?

YES >> Replace A/C and AV switch assembly. Refer to EXL-169. "Removal and Installation".

NO >> Repair or replace the harness or connectors.

EXL

K

M

Ν

0

Р

Revision: August 2014 EXL-147 2015 QX60 NAM

[XENON TYPE]

## SYMPTOM DIAGNOSIS

## **EXTERIOR LIGHTING SYSTEM SYMPTOMS**

Symptom Table INFOID:0000000011134684

#### **CAUTION:**

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

Symp	otom	Possible cause	Inspection item
Headlamp does not switch to the high beam.	One side	Fuse     Harness between IPDM E/R and the front combination lamp     Front combination lamp (High beam relay)     IPDM E/R     Harness between the front combination lamp and ground	Headlamp (HI) circuit Refer to <u>EXL-126</u> .
	Both sides	_	Symptom diagnosis BOTH SIDE HEADLAMPS DO NOT SWITCH TO HIGH BEAM Refer to EXL-152.
High beam indicator lamp is lamp switched to the high l		BCM     Combination meter	Combination meter     Data monitor HI-BEAM IND     BCM (HEAD LAMP)     Active test "HEADLAMP"
	One side	Front combination lamp (High beam relay)	_
Headlamp does not switch to the low beam.	Both sides	Combination switch (lighting and turn signal switch)     Harness between the combination switch and BCM     BCM	Combination switch (lighting and turn signal switch) Refer to BCS-78.
		High beam request signal BCM IPDM E/R	IPDM E/R Data monitorHL HI REQ
		IPDM E/R	<del>-</del>
Headlamp does not turn ON.	One side	Fuse     Xenon bulb     Harness between IPDM E/R and the front combination lamp     Front combination lamp (xenon headlamp)     IPDM E/R     Harness between the front combination lamp and ground	Headlamp (LO) circuit Refer to EXL-128.
	Both sides	_	Symptom diagnosis BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON Refer to EXL-153.
Headlamp does not turn	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-78.
OFF.	The ignition switch is turned OFF (After activating the battery saver).	IPDM E/R	_

## **EXTERIOR LIGHTING SYSTEM SYMPTOMS**

< SYMPTOM DIAGNOSIS >

[XENON TYPE]

Symp	otom	Possible cause	Inspection item
Headlamp is not turned ON AUTO.	N/OFF with lighting switch	Combination switch (lighting and turn signal switch)     Harness between combination switch and BCM     BCM	Combination switch Refer to BCS-78.
4010.		Optical sensor     Harness between optical sensor and BCM     BCM	Optical sensor Refer to EXL-144.
		Fuse     Harness between IPDM E/R and the daytime running light relay     Harness between daytime run-	Symptom diagnosis
Daytime running light syste (if equipped)	em does not activate.	ning light relay and the front fog lamp  Harness between the front fog lamp and ground  Daytime running light bulb  IPDM E/R  Daytime running light relay  BCM	Daytime running light system inoperative. Refer to EXL-156.
Headlamp aiming motor	One side	Fuse     Harness between IPDM E/R and headlamp aiming motor     Headlamp aiming motor     IPDM E/R	Headlamp aiming switch Refer to EXL-134.
does not operate.	Both sides	Headlamp aiming switch     Harness between aiming switch     and headlamp aiming motor     IPDM E/R	Front combination lamp (headlamp aiming motor) Refer to EXL-134.
Front fog lamp is not turned ON.	One side	Front fog lamp bulb Harness between IPDM E/R and front fog lamp Front fog lamp IPDM E/R	Front fog lamp circuit Refer to EXL-136.
unieu ON.	Both sides	_	Symptom diagnosis BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON Refer to EXL-136.
Parking lamp is not turned ON.	One side	Parking lamp bulb Harness between IPDM E/R and front/rear combination lamp Harness between front/rear combination lamp and ground Front/rear combination lamp IPDM E/R	Parking lamp circuit Refer to EXL-138.
	Both sides	_	Symptom diagnosis PARKING, LICENSE PLATE AND TAIL LAMPS ARE NOT TURNED ON Refer to EXL-154.
Turn signal lamp does not blink.	Indicator lamp is normal. (The applicable side performs the high flasher activation).	Hazard BCM and each turn signal lamp     Turn signal lamp bulb	Turn signal lamp circuit Refer to <u>EXL-141</u> .

Revision: August 2014 EXL-149 2015 QX60 NAM

## **EXTERIOR LIGHTING SYSTEM SYMPTOMS**

## < SYMPTOM DIAGNOSIS >

[XENON TYPE]

Symptom		Possible cause	Inspection item
	One side	Combination meter	_
Turn signal indicator lamp	Both sides (Always)	Turn signal indicator lamp signal BCM Combination meter	Combination meter     Data monitor TURN IND     BCM (FLASHER)     Active test FLASHER
(Does vating lamp w	Both sides (Does blink when activating hazard warning lamp with the ignition switch OFF)	Combination meter power supply and ground circuit     Combination meter	Combination meter Power supply and ground circuit Refer to MWI-76.
<ul> <li>Hazard warning lamp does not activate.</li> <li>Hazard warning lamp continues activating (Turn signal is normal).</li> </ul>		Hazard switch     Harness between the hazard switch and BCM     BCM	Hazard switch Refer to <u>EXL-146</u> .

### NORMAL OPERATING CONDITION

< SYMPTOM DIAGNOSIS > [XENON TYPE]

## NORMAL OPERATING CONDITION

Description A

#### XENON HEADLAMP

- Brightness and the color of light may change slightly immediately after turning the headlamp ON until the xenon bulb becomes stable. This is normal.
- Illumination time lag may occur between right and left. This is normal.

#### **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 causes for the control difference. This is normal.

Е

В

С

D

F

G

Н

Κ

EXL

M

Ν

0

## BOTH SIDE HEADLAMPS DO NOT SWITCH TO HIGH BEAM

< SYMPTOM DIAGNOSIS >

## BOTH SIDE HEADLAMPS DO NOT SWITCH TO HIGH BEAM

Description INFOID:000000011134686

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

## Diagnosis Procedure

INFOID:0000000011134687

[XENON TYPE]

## 1.combination switch (lighting and turn signal switch) inspection

Check the combination switch (lighting and turn signal switch). Refer to <u>BCS-7</u>, "COMBINATION SWITCH READING SYSTEM: System Description".

#### Is the combination switch (lighting and turn signal switch) normal?

YES >> GO TO 2

NO >> Repair or replace the malfunctioning part.

## 2.CHECK HEADLAMP (HI) REQUEST SIGNAL INPUT

#### (P)CONSULT DATA MONITOR

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

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

### Is the item status normal?

YES >> GO TO 3

NO >> Replace BCM. Refer to <u>BCS-79</u>, "Removal and Installation".

## 3.HEADLAMP (HI) CIRCUIT INSPECTION

Check the headlamp (HI) circuit. Refer to EXL-126, "Diagnosis Procedure".

#### Is the headlamp (HI) circuit normal?

YES >> Replace IPDM E/R. Refer to PCS-32, "Removal and Installation".

NO >> Repair or replace the malfunctioning part.

## **BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON**

< SYMPTOM DIAGNOSIS > [XENON TYPE]

## BOTH SIDE HEADLAMPS (LO) ARE NOT TURNED ON

Description INFOID:0000000011134688

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

## Diagnosis Procedure

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

Check the combination switch (lighting and turn signal switch). Refer to BCS-7, "COMBINATION SWITCH READING SYSTEM: System Description".

Is the combination switch (lighting and turn signal switch) normal?

YES >> GO TO 2.

NO >> Repair or replace the malfunctioning part.

2.CHECK HEADLAMP (LO) REQUEST SIGNAL INPUT

## **©CONSULT DATA MONITOR**

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

Monitor item	Condition		Monitor status
HL LO REQ	Lighting switch	2nd ON	ON
THE EO NEQ Eighting Switch	OFF	OFF	

### Is the item status normal?

YES >> GO TO 3.

NO >> Replace BCM. Refer to BCS-79, "Removal and Installation".

## 3.HEADLAMP (LO) CIRCUIT INSPECTION

Check the headlamp (LO) circuit. Refer to EXL-128, "Diagnosis Procedure".

#### Is the headlamp (LO) circuit normal?

YES >> Replace IPDM E/R. Refer to PCS-32, "Removal and Installation".

NO >> Repair or replace the malfunctioning part.

EXL

K

Α

В

D

Е

F

INFOID:0000000011134689

M

Ν

0

Р

Revision: August 2014 EXL-153 2015 QX60 NAM

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

< SYMPTOM DIAGNOSIS >

[XENON TYPE]

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

Description INFOID:0000000011134690

The parking, license plate, tail lamps and side marker lamps do not turn ON with the combination switch in any setting.

## Diagnosis Procedure

INFOID:0000000011134691

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

Check the combination switch (lighting and turn signal switch). Refer to <u>BCS-78</u>, "Symptom Table".

Is the combination switch (lighting and turn signal switch) 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 of IPDM E/R DATA MONITOR item.
- 2. While operating the lighting switch, check the monitor status.

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

#### Is the item status normal?

YES >> GO TO 3

NO >> Replace BCM. Refer to BCS-79, "Removal and Installation".

## 3.PARK LAMP CIRCUIT INSPECTION

Check the parking lamp circuit. Refer to EXL-138, "Diagnosis Procedure".

### Is the tail lamp circuit normal?

YES >> Replace IPDM E/R. Refer to PCS-32, "Removal and Installation".

NO >> Repair or replace the malfunctioning part.

## BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

< SYMPTOM DIAGNOSIS > [XENON TYPE]

## BOTH SIDE FRONT FOG LAMPS ARE NOT TURNED ON

Description INFOID:0000000011134692

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

Diagnosis Procedure

INFOID:0000000011134693

Α

В

D

Е

F

Н

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

Check the combination switch (lighting and turn signal switch). Refer to BCS-78, "Symptom Table".

Is the combination switch (lighting and turn signal switch) normal?

YES >> GO TO 2

NO >> Repair or replace the malfunctioning part.

2.CHECK FRONT FOG LAMP REQUEST SIGNAL INPUT

## (P)WITH CONSULT DATA MONITOR

- 1. Select FR FOG REQ of IPDM E/R DATA MONITOR item.
- 2. With 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 2nd)	OFF	OFF

## Is the monitor item status normal?

YES >> GO TO 3

NO >> Replace BCM. Refer to BCS-79, "Removal and Installation".

## 3.FRONT FOG LAMP CIRCUIT INSPECTION

Check the front fog lamp circuit. Refer to EXL-136, "Diagnosis Procedure".

#### Is the front fog lamp circuit normal?

YES >> Replace IPDM E/R. Refer to PCS-32, "Removal and Installation".

NO >> Repair or replace the malfunctioning part.

EXL

K

M

Ν

 $\cup$ 

Р

Revision: August 2014 EXL-155 2015 QX60 NAM

## **DAYTIME LIGHT SYSTEM INOPERATIVE**

< SYMPTOM DIAGNOSIS >

[XENON TYPE]

## DAYTIME LIGHT SYSTEM INOPERATIVE

Description INFOID:0000000011134694

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 the engine is operating.

## Diagnosis Procedure

INFOID:0000000011134695

## 1.check daytime running light operation

- Perform BCM(HEADLAMP) DAYTIME RUNNING LIGHT active test. Refer to <u>BCS-17</u>, "<u>HEADLAMP</u>".
- 2. Check that the daytime running lights turn on.

#### Is the inspection results normal?

YES >> Replace BCM. Refer to BCS-79, "Removal and Installation".

NO >> GO TO 2

## 2.CHECK DAYTIME RUNNING LIGHT RELAY FUSE

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

Unit	Fuse No.	Capacity
Daytime running light	43	10 A

#### Is the inspection result normal?

YES >> GO TO 3.

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

## 3.CHECK DAYTIME RUNNING LIGHT BULBS

Check the daytime running light bulbs are not open.

#### Is the inspection result normal?

YES >> GO TO 4.

NO >> Replace the bulbs.

## 4. PERFORM DAYTIME RUNNING LIGHT CIRCUIT INSPECTION

Check the daytime running light circuit. Refer to EXL-131, "Diagnosis Procedure".

## Is the inspection results normal?

YES >> Replace IPDM E/R. Refer to PCS-32, "Removal and Installation".

NO >> Repair or replace the malfunctioning part.

### **HEADLAMP AIMING ADJUSTMENT**

< PERIODIC MAINTENANCE >

[XENON TYPE]

Α

D

Е

Н

## PERIODIC MAINTENANCE

## HEADLAMP AIMING ADJUSTMENT

Inspection INFOID:0000000011134696

#### 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.
- Confirm headlamp aiming switch is set to "0" (zero) position.
- · Aim each headlamp individually and ensure other headlamp beam pattern is blocked from screen.

#### NOTE:

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

#### AIMING ADJUSTMENT SCREW

EXL

M

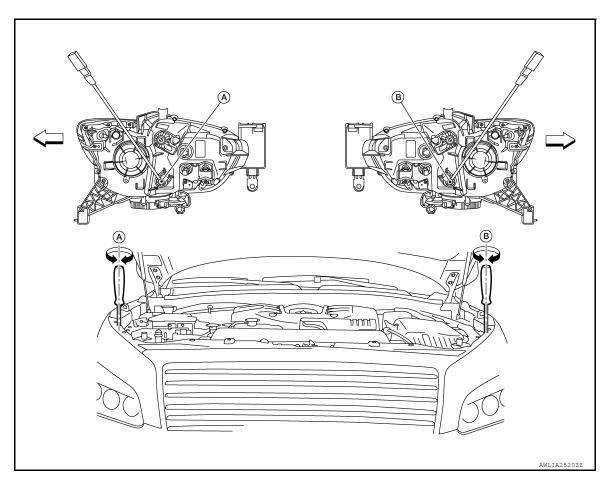
Ν

0

Р

Revision: August 2014 EXL-157 2015 QX60 NAM

K



- A. Headlamp RH HI/LO (UP/DOWN) adjustment screw
- B. Headlamp LH HI/LO (UP/DOWN) ad- <a href="https://www.energescondings.com/">DOWN) ad- <a href="https://www.energescondings.com/">Center justment screw</a>

## Aiming Adjustment Procedure

INFOID:0000000011134697

Α

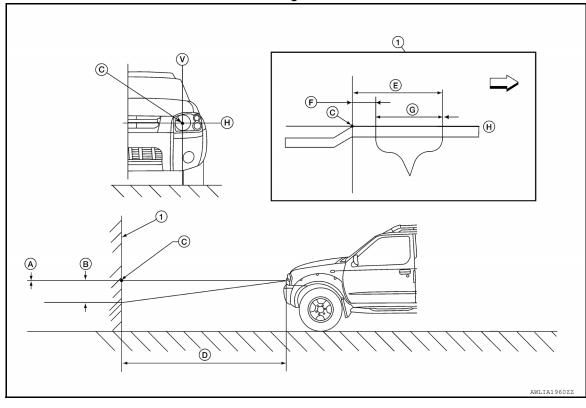
В

D

Е

Н





- 1. Adjustment screen
- C. Headlamp bulb center (H-V point)
- A. Highest cutoff line height

Aim evaluation area

- D. Distance of headlamp aiming screen from vehicle 7.62 m (25 ft)
- B. Lowest cutoff line height
- Maximum aim evaluation distance from vertical center on aiming screen 399 mm (3°R)

Horizontal aiming evaluation line

- Minimum aim evaluation distance from vertical center on aiming screen 133 mm (1°R)
- V. Vertical aiming evaluation line

A (Highest cutoff line height)

B (Lowest cutoff line height)

< ☐ Right

0.1° up

53.2 mm (2.1 in) 0.4° down

-13.3 mm (0.5 in)

#### LOW BEAM AND HIGH BEAM

#### NOTE:

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

#### **CAUTION:**

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

- Place the screen on the same level and flat surface as the vehicle. NOTE:
  - Surface should be free of any debris that would cause a difference between the headlamp center and the adjustment screen.
- Face the front of the vehicle to the screen and measure distance between the headlamp center and the screen surface.

EXL

K

M

Ν

0

Р

Revision: August 2014 EXL-159 2015 QX60 NAM

### **HEADLAMP AIMING ADJUSTMENT**

< PERIODIC MAINTENANCE >

[XENON TYPE]

### Distance between the headlamp center and the screen (D) : 7.62 m (25 ft)

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

Aiming Adjustment

INFOID:0000000011134698

Α

В

D

Е

F

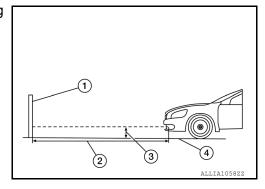
## FRONT FOG LAMP AIMING ADJUSTMENT

## THORT TOO EARTH AUMITO ABOOCHWEN

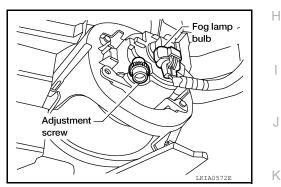
NOTE:

Check the following conditions before performing the aiming adjustment.

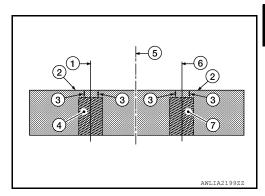
- Keep all tires inflated to correct pressure.
- · Place vehicle on level ground.
- See that vehicle is unloaded (except for full levels of coolant, engine oil and fuel, and spare tire, jack, and tools). Have the driver or equivalent weight placed in driver seat.
- When performing adjustment, if necessary, cover the headlamps and opposite fog lamp.
- 1. Set the distance between the screen and the center of the fog lamp lens as shown.
  - (1) Aiming screen or a matte white surface
  - (2) 7.62 m (25 ft)
  - (3) Floor to center of fog lamp lens
  - (4) Floor



- Turn front fog lamps ON.
- 3. Access adjustment screw from underneath front bumper. Use a suitable tool to adjust. Turn screw clockwise to raise pattern and counterclockwise to lower pattern. Adjust front fog lamps using adjusting screw so that the top edge of the high intensity zone is 100 mm (4 in) below the height of the fog lamp centers as shown.



- (1) Vertical center line of left fog lamp.
- (2) Lamp center above ground.
- (3) 100 mm (4 in) (0.76 deg) below lamp center above ground.
- (4) Left fog lamp high intensity area.
- (5) Vehicle center axis.
- (6) Vertical center line of right fog lamp.
- (7) Right fog lamp high intensity area.



EXL

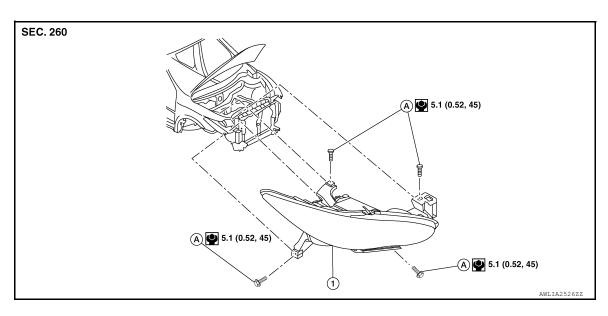
M

Ν

## REMOVAL AND INSTALLATION

## FRONT COMBINATION LAMP

Exploded View



1. Front combination lamp

A. Bolt

## Removal and Installation

INFOID:0000000011134700

#### FRONT COMBINATION LAMP

#### Removal

#### **CAUTION:**

Disconnect the battery negative terminal or remove the fuse.

- 1. Remove front bumper fascia. Refer to <a href="EXT-17">EXT-17</a>, "Removal and Installation".
- 2. Release the clips and pawls using a suitable tool and remove hood ledge finisher.
- 3. Remove front combination lamp bolts.
- 4. Pull front combination lamp forward.
- 5. Disconnect the harness connectors from the front combination lamp and remove.

## Installation

Installation is in the reverse order of removal.

#### NOTE:

After installation, perform headlamp aiming adjustment. Refer to EXL-159, "Aiming Adjustment Procedure".

#### **XENON BULB**

Removal

#### **WARNING:**

To prevent burns, never touch the glass surface of the bulb with bare hands because the surface is very hot just after the lamp is turned OFF.

#### **CAUTION:**

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

### FRONT COMBINATION LAMP

## < REMOVAL AND INSTALLATION >

[XENON TYPE]

Α

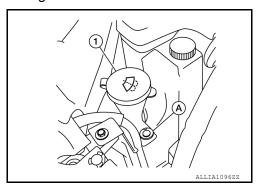
В

D

Е

Н

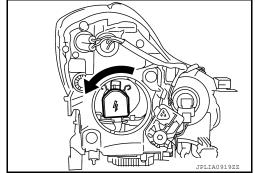
- Release the clips and pawls using a suitable tool and remove hood ledge finisher.
- 2. Remove the washer tank inlet tube clip (A) from the coolant reservoir and pull the washer tank inlet tube (1) from the washer tank (RH only).



- Rotate plastic cover counterclockwise and unlock from the front combination lamp.
- 4. Rotate xenon bulb socket counterclockwise and unlock from the front combination lamp.
- 5. Remove retaining spring and then remove xenon bulb from the front combination lamp.

#### **CAUTION:**

Do not break the xenon bulb ceramic tube when replacing



#### Installation

Installation is in the reverse order of removal.

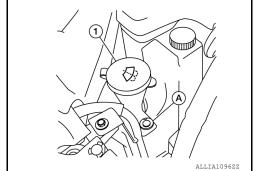
#### NOTE:

After installation, perform headlamp aiming adjustment. Refer to EXL-159, "Aiming Adjustment Procedure".

#### PARKING LAMP BULB

#### Removal

- Release the clips and pawls using a suitable tool and remove hood ledge finisher.
- 2. Remove the washer tank inlet tube clip (A) from the coolant reservoir and pull the washer tank inlet tube (1) from the washer tank (RH only).



- 3. Rotate parking lamp socket counterclockwise and unlock from the front combination lamp.
- 4. Remove parking lamp bulb from bulb socket.

#### Installation

Installation is in the reverse order of removal.

#### FRONT TURN SIGNAL LAMP BULB

#### Removal

- 1. Release the clips and pawls using a suitable tool and remove hood ledge finisher.
- Rotate front turn signal lamp socket counterclockwise and unlock from the front combination lamp.
- Remove front turn signal lamp bulb from bulb socket. 3.

#### Installation

**EXL-163** Revision: August 2014 2015 QX60 NAM K

**EXL** 

M

Ν

0

## FRONT COMBINATION LAMP

## < REMOVAL AND INSTALLATION >

[XENON TYPE]

Installation is in the reverse order of removal.

### FRONT SIDE MARKER LAMP BULB

#### Removal

- 1. Release the clips and pawls using a suitable tool and remove hood ledge finisher.
- 2. Rotate the front side marker lamp socket counterclockwise and unlock from the front combination lamp.
- 3. Remove the front side marker lamp bulb from the bulb socket.

#### Installation

Installation is in the reverse order of removal.

Α

В

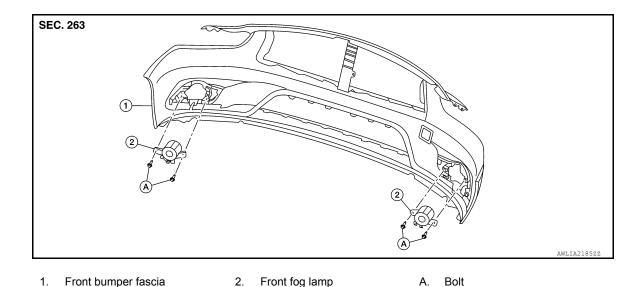
D

Е

Н

## FRONT FOG LAMP

Exploded View



Removal and Installation

INFOID:0000000011134702

#### FRONT FOG LAMP

### Removal

- Remove bumper fascia. Refer to <u>EXT-17</u>, "Removal and Installation".
- 2. Disconnect the harness connector from the front fog lamp and daytime running lamp (if equipped).
- 3. Remove front fog lamp bolts.
- 4. Remove front fog lamp.

#### Installation

Installation in the reverse order of removal.

#### NOTE:

After installation, perform fog lamp aiming adjustment. Refer to EXL-161, "Aiming Adjustment".

#### FRONT FOG LAMP BULB

Removal

## WARNING:

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

- Do not touch the glass surface of the bulb with bare hands or allow oil or grease to get on it to prevent damage to the bulb.
- Do not leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.
- 1. Partially remove front fender protector. Refer to <u>EXT-28</u>, "FENDER PROTECTOR: Removal and Installation".

EXL

K

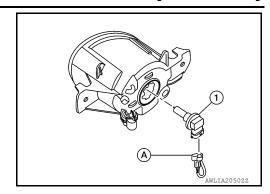
M

Ν

0

#### < REMOVAL AND INSTALLATION >

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



#### Installation

Installation is in the reverse order of removal.

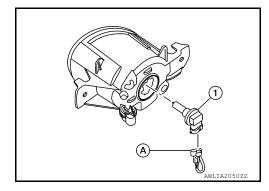
## DAYTIME LAMP BULB (CANADA ONLY)

Removal

#### **WARNING:**

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

- Do not touch the glass surface of the bulb with bare hands or allow oil or grease to get on it to prevent damage to the bulb.
- Do not leave bulb out of lamp reflector for a long time because dust, moisture smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.
- 1. Partially remove front fender protector. Refer to <u>EXT-28</u>, "FENDER PROTECTOR: Removal and Installation".
- 2. Disconnect the harness connector from the front fog lamp (A).
- 3. Rotate bulb (1) counterclockwise and remove.



#### Installation

Installation is in the reverse order of removal.

### [XENON TYPE]

Α

В

D

Е

F

Н

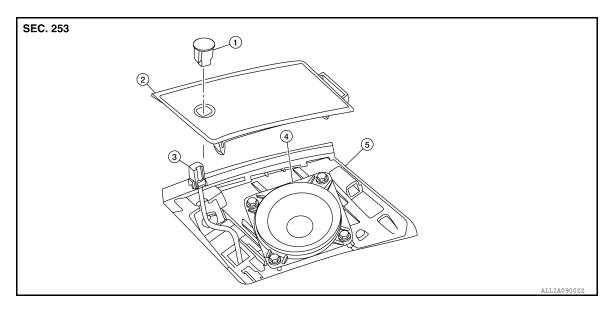
J

K

INFOID:0000000011134704

## **OPTICAL SENSOR**

Exploded View



- Optical sensor
- . Instrument panel tweeter grille 3. Optical sensor harness connector (RH)
- 4. Instrument panel tweeter (RH) 5
- . Instrument panel

### Removal and Installation

### **REMOVAL**

- 1. Release the instrument panel tweeter grille (RH) using a suitable tool.
- 2. Insert a suitable tool between the optical sensor and the instrument panel tweeter grille (RH). Release the optical sensor and lift upward.
- 3. Disconnect the harness connector from the optical sensor and remove.

#### **INSTALLATION**

Installation is in the reverse order of removal.

EXL

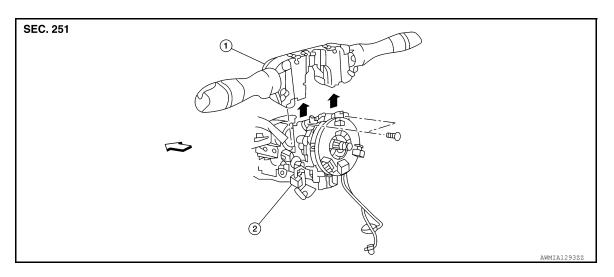
M

Ν

0

## **LIGHTING & TURN SIGNAL SWITCH**

Exploded View



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

## Removal and Installation

INFOID:0000000011134706

### **REMOVAL**

- 1. Remove the steering wheel. Refer to ST-47, "Removal and Installation".
- 2. Remove the steering column covers. Refer to IP-17, "Removal and Installation".
- 3. Remove the combination switch screws.
- 4. Disconnect the harness connector from the combination switch.
- 5. Remove the combination switch.

#### **INSTALLATION**

Installation is in the reverse order of removal.

## **HAZARD SWITCH**

< REMOVAL AND INSTALLATION >

[XENON TYPE]

## HAZARD SWITCH

## Removal and Installation

INFOID:0000000011134707

The hazard switch is integrated in the multifunction switch. Refer to AV-137, "Removal and Installation - A/C and AV Switch Assembly" (BASE AUDIO), AV-303, "Removal and Installation - A/C and AV Switch Assembly" (BOSE AUDIO W/O NAVIGATION), AV-586, "Removal and Installation - A/C and AV Switch Assembly" (BOSE AUDIO WITH NAVIGATION W/O SURROUND), AV-884, "Removal and Installation - A/C and AV Switch Assembly" (BOSE AUDIO WITH NAVIGATION WITH SURROUND) or AV-1057, "Removal and Installation - A/C and AV Switch Assembly" (TELEMATICS SYSTEM).

D

Α

В

Е

F

G

Н

K

EXL

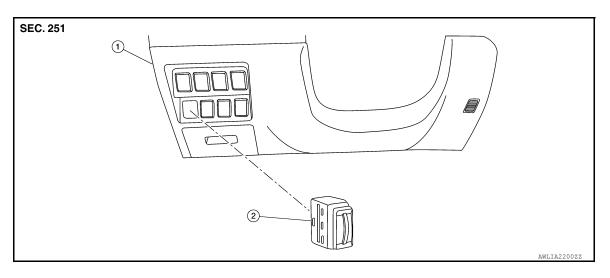
M

Ν

0

## **HEADLAMP AIMING SWITCH**

Exploded View



- 1. Instrument lower panel LH
- 2. Headlamp aiming switch
- ( ) Pawl

## Removal and Installation

INFOID:0000000011134709

## **REMOVAL**

- 1. Remove instrument lower panel LH. Refer to IP-25, "Removal and Installation".
- 2. While pressing pawls, push the headlamp aiming switch to remove.

### **INSTALLATION**

Installation is in the reverse order of removal.

Α

В

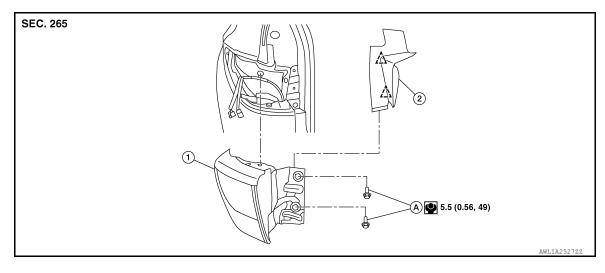
D

Е

Н

## REAR COMBINATION LAMP

**Exploded View** INFOID:0000000011134710



Rear combination lamp

Rear combination lamp bolt cover

A. Bolt

,^∖ Clip

## Removal and Installation

INFOID:0000000011134711

## REAR COMBINATION LAMP

Release metal clip and pawls using a suitable tool and remove rear combination lamp bolt cover.

- 2. Remove rear combination lamp bolts.
- Pull rear combination lamp rearward.
- 4. Disconnect the harness connector from the rear combination lamp and remove rear combination lamp.

#### Installation

Removal

Installation is in the reverse order of removal.

## REAR TURN SIGNAL LAMP BULB

#### **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 bulb out of lamp reflector for a long time because dust, moisture, smoke, etc. may affect the performance of lamp. When replacing bulb, be sure to replace it with new one.

#### Removal

- Remove rear combination lamp. Refer to EXL-171, "Removal and Installation"
- Rotate the rear turn signal lamp socket counterclockwise and remove.
- Remove the bulb from rear turn signal lamp socket.

### Installation

Installation is in the reverse order of removal.

#### **CAUTION:**

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

**EXL** 

K

M

Ν

Р

**EXL-171** Revision: August 2014 2015 QX60 NAM

## **HIGH-MOUNTED STOP LAMP**

< REMOVAL AND INSTALLATION >

[XENON TYPE]

## HIGH-MOUNTED STOP LAMP

## Removal and Installation

INFOID:0000000011134712

#### **REMOVAL**

1. Remove rear spoiler. Refer to EXT-42, "Removal and Installation".

#### **INSTALLATION**

Installation is in the reverse order of removal.

## HIGH-MOUNTED STOP LAMP BULB

The high-mounted stop lamp bulb is LED and is serviced as part of the high-mounted stop lamp. Refer to <a href="EXL-172">EXL-172</a>, "Removal and Installation"

[XENON TYPE]

## **BACK-UP LAMP**

## **Exploded View**



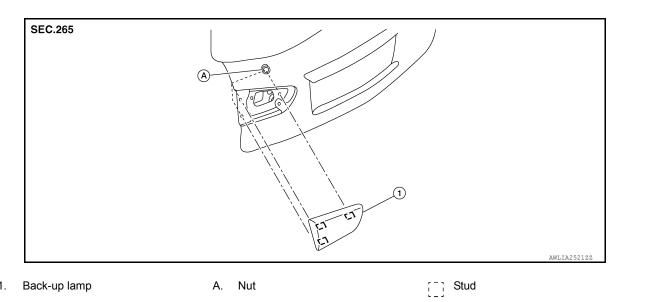
Α

В

D

Е

Н



Removal and Installation

INFOID:0000000011134714

#### **BACK-UP LAMP**

#### Removal

- Remove back door lower finisher. Refer to INT-35, "BACK DOOR LOWER FINISHER: Removal and Installation".
- Disconnect the harness connector from the back-up lamp.
- Remove back-up lamp nuts, and then remove back-up lamp. 3.

#### Installation

Installation is in the reverse order of removal.

#### **BACK-UP LAMP BULB**

#### **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 bulb out of lamp reflector for a long time because dust, moisture, smoke, etc. may affect the performance of lamp.

#### Removal

- Release pawls using a suitable tool and remove back door trim access panel.
- Rotate back-up lamp socket counterclockwise and remove. 2.
- 3. Remove back-up lamp bulb from bulb socket.

#### Installation

Installation is in the reverse order of removal.

**EXL** 

K

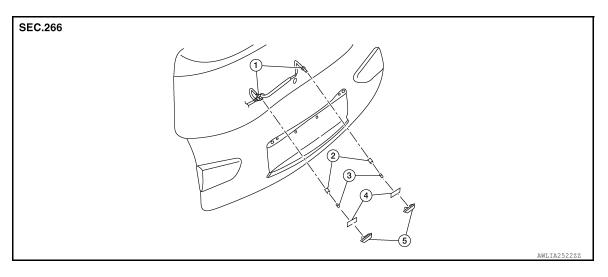
M

Ν

0

## LICENSE PLATE LAMP

Exploded View



- 1. License plate lamp harness
- 4. License plate lamp gasket
- 2. License plate lamp socket
- License plate lamp
- License plate lamp bulb

#### Removal and Installation

INFOID:0000000011134716

#### LICENSE PLATE LAMP

#### Removal

- 1. Remove back door outer finisher. Refer to EXT-44, "Removal and Installation".
- 2. Release pawls using a suitable tool and remove license plate lamp.

#### Installation

Installation is in the reverse order of removal.

#### LICENSE PLATE LAMP BULB

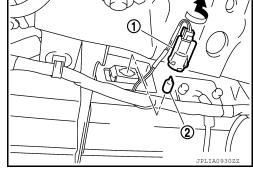
#### **WARNING:**

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.

#### Removal

- 1. Remove back door lower finisher. Refer to <a href="INT-35">INT-35</a>, "BACK DOOR LOWER FINISHER: Removal and <a href="Installation"</a>.
- 2. Rotate license plate lamp socket (1) counterclockwise and remove.
- 3. Remove license plate lamp bulb (2) from bulb socket.



## LICENSE PLATE LAMP

DEMOVAL	A NOTA LIATON >	

Installation is in the reverse order of removal.

[XENON TYPE]

\_\_\_\_

Α

В

С

 $\mathsf{D}$ 

Е

F

G

Н

J

Κ

EXL

M

Ν

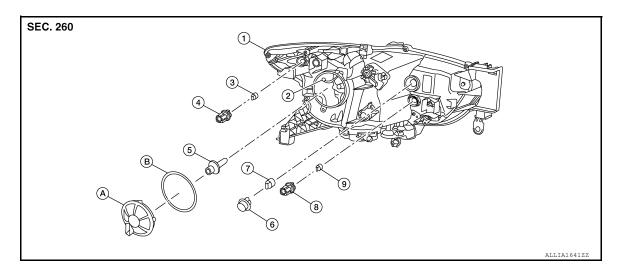
0

Ρ

## UNIT DISASSEMBLY AND ASSEMBLY

## FRONT COMBINATION LAMP

Exploded View



- 1. Front combination lamp
- 4. Side marker lamp socket
- 7. Front turn signal lamp bulb
- A. Seal packing

- 2. Retaining spring
- 5. Xenon bulb
- 8. Parking lamp socket
- B. Plastic cover

- Side marker lamp bulb
- 6. Front turn signal lamp socket
- 9. Parking lamp bulb

## Disassembly and Assembly

INFOID:0000000011134718

#### DISASSEMBLY

#### **WARNING:**

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

#### **CAUTION:**

- Disconnect the negative battery terminal or remove the fuse.
- 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.

#### **CAUTION:**

HID control unit and xenon bulb socket cannot be disassembled.

- 1. Remove front combination lamp. Refer to EXL-162, "Removal and Installation"
- 2. Rotate plastic cover counterclockwise and remove.
- 3. Rotate xenon bulb socket counterclockwise and remove.
- 4. Unlock retaining spring and remove xenon bulb.
- 5. Rotate parking lamp socket counterclockwise and remove.
- 6. Remove parking lamp bulb from parking lamp socket.
- 7. Rotate front turn signal lamp socket counterclockwise and remove.
- 8. Remove front turn signal lamp bulb from front turn signal lamp socket.
- 9. Rotate side marker lamp socket counterclockwise and remove.
- 10. Remove side marker lamp bulb from side marker lamp socket.

#### **ASSEMBLY**

Assembly is in the reverse order of disassembly.

#### **CAUTION:**

After installing the bulb, install the plastic cover and the bulb socket securely for watertightness. NOTE:

## FRONT COMBINATION LAMP

< UNIT DISASSEMBLY AND ASSEMBLY >

[XENON TYPE]

After installation, perform headlamp aiming adjustment. Refer to EXL-159, "Aiming Adjustment Procedure"

Α

В

С

 $\mathsf{D}$ 

Е

F

G

Н

J

Κ

**EXL** 

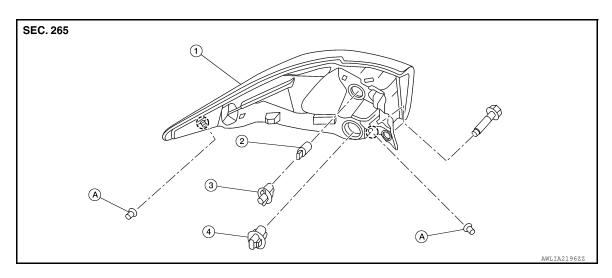
 $\mathbb{N}$ 

Ν

0

## REAR COMBINATION LAMP

Exploded View



- 1. Rear combination lamp
- 2. Rear turn signal bulb
- 4. Rear LED lamp harness connector A. Grommet

- 3. Rear turn bulb socket
- ( ) Locating pin

## Disassembly and Assembly

INFOID:0000000011134720

#### **CAUTION:**

Disconnect the battery negative terminal or remove the fuse.

#### DISASSEMBLY

- 1. Remove rear combination lamp. Refer to EXL-171, "Removal and Installation"
- 2. Rotate the rear turn signal lamp socket counterclockwise and remove.
- 3. Remove the bulb from rear turn signal lamp socket.

### **ASSEMBLY**

Assembly is in the reverse order of disassembly.

## **SERVICE DATA AND SPECIFICATIONS (SDS)**

< SERVICE DATA AND SPECIFICATIONS (SDS)

[XENON TYPE]

INFOID:0000000011134721

LED

Α

В

D

Е

F

Н

# SERVICE DATA AND SPECIFICATIONS (SDS)

## SERVICE DATA AND SPECIFICATIONS (SDS)

**Bulb Specifications** 

High-mounted stop lamp

Item		Wattage (W)*
Front combination lamp	Headlamp (HI/LO)	35
	Front turn signal lamp	21
	Parking lamp	5
	Side marker lamp	5
Front fog lamp		55
Day time running lamp (Canada o	nly)	19
	Stop lamp/Tail lamp	LED
Rear combination lamp	Rear turn signal lamp	21
	Side marker lamp	LED
Back-up lamp		18
License plate lamp		5

<sup>\*:</sup> Always check with the Parts Department for the latest parts info.

K

**EXL** 

N

0