# **LAMP**

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# **LAMP**

# GENERAL INFORMATION

# 1. LAMP SPECIFICATIONS

# 1) Exterior Lamps

Descrip	otion	Numbers	Specification
Headlamp	High beam	2	H1-55W
	Low beam	2	H7-55W
	Turn signal lamp	2	P21W
	Position lamp	-	LED
Front fog light		2	H16-19W
Rear fog light		2	21W
Side repeater		-	LED
Rear combination lamp	Tail lamp		LED
	Turn signal lamp	2	PY21W
امانه (مسئولیت <sub>ه</sub>	Back-up lamp	2	W16W
امانه (مستونیت ه	Stop lamp	2	P21W
License plate lamp	مانه دیجیتال رتع	2 اولین سا	W5W
High mounted stop lamp			LED
Puddle lamp		2	LED

# 2) Interior Lamps

Description	Numbers	Specification
Front room lamp	2	10W
Glove box lamp	1	5W
Center room lamp	1	10W
Luggage lamp	1	10W
Door courtesy lamp	2	5W



## 2. AUTOMATIC LIGHT SENSOR SPECIFICATIONS

Pin No.	Specification
Operating voltage	9 V to 16 V
Load	Max. 200 mA (relay load)
Operating temperature	−30°C to 85°C
Storage temperature	-40℃ to ±120℃
Mounting location	Top center of inner side of windshield glass

## 3. DRL UNIT SPECIFICATIONS

Item	Specifications
Rated voltage	DC 12 V
Operating voltage	DC 9V ~ 16V
Operating temperature	-30℃ ~ 85℃
Insulating resistance	DC 500 V at insulating resistance of 1 MΩ
Dark current	Max. 1 mA (with ignition switch off)
Mounting location	Under passenger seat

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### ♣ NOTE

#### ▶ LED

- The LED stands for "Light Emitting Diode" or "Luminescent Diode." LED is a semiconductor diode that emits incoherent narrow-spectrum light when electrically biased in the forward direction of the p-n junction, as in the common LED circuit. In short, it is an element that converts electric signals into light signals. Yellow, blue, red and white LEDs are currently available.
  - The followings are the advantages of LED.
- It is not glaring and doesn't have short circuit unlike the conventional lamps.
   It is semi-permanent and doesn't generate heat.
   Its power consumption is much lower than those of conventional bulbs.

#### **▶** Luminous Intensity

- Luminous intensity is a measure for the amount of light which passes through the unit area per time unit. The SI unit of luminous intensity is the candela (cd), an SI base unit.

#### **▶** Luminance

- Luminance describes the amount of light that passes through or is emitted from a particular area, and falls within a given solid angle. It is measured in sb or nt.

#### ► Intensity of illumination

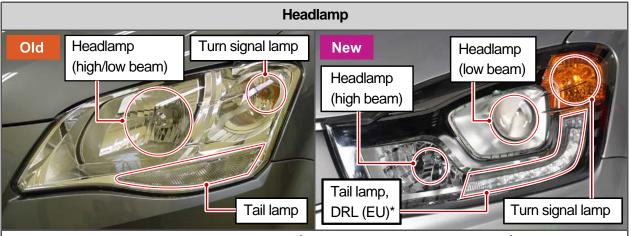
- This indicates the amount of light reaching a given area. Measuring unit is lux (lx) and it is not directly proportional to the brightness of the area as the reflection rate is not included.

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### 4. MAJOR CHANGES

#### ▶ Front side



- Headlamp design and its function changed (2 lamp system → 4 lamp system)
- Headlamp (high/low beam) dualized and tail lamp changed to LED type





**LAMP** 

Modification basis	
Application basis	
Affected VIN	

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#### ► Rear side





- Rear combination lamp design and its function changed
- Tail lamp (stop lamp) changed to LED type

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#### **▶** Indoor



- Door courtesy lamp design changed due to modified front door trim



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# **OVERVIEW AND OPERATING PROCESS**

# 1. EXTERIOR LAMP

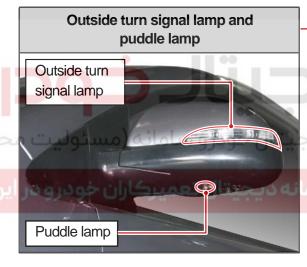
### 1) Overview

Exterior lamps can be divided into front, rear and side lamps as follows.

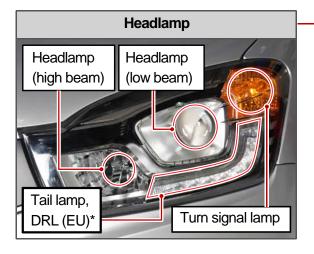
- Front lamp: headlamp and fog lamp
- Rear lamp: combination lamp, license lamp, high mounted stop lamp and reflex reflector lamp
- Side lamp: outside turn signal lamp and puddle (approach) lamp

# 2) Layout

#### ▶ Front side







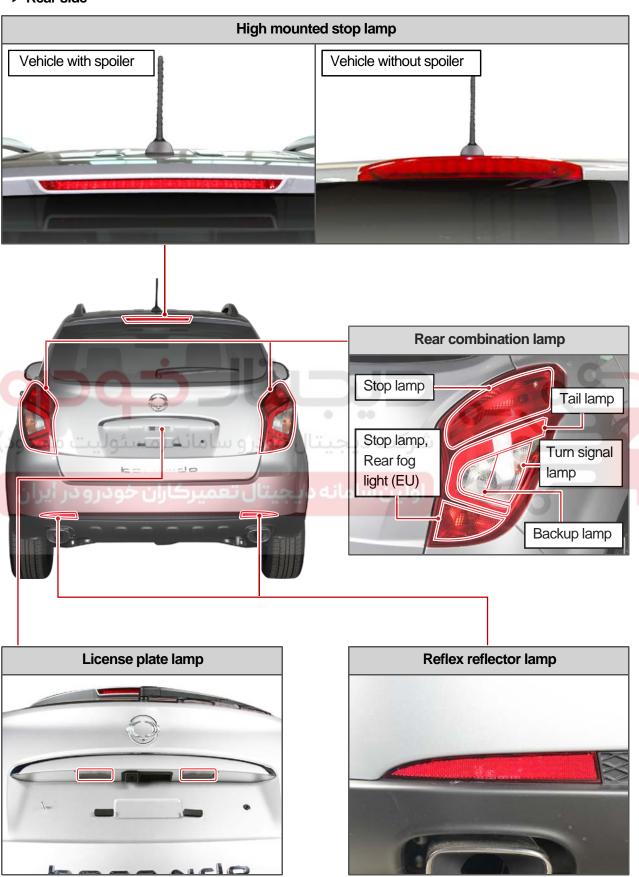


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#### ▶ Rear side



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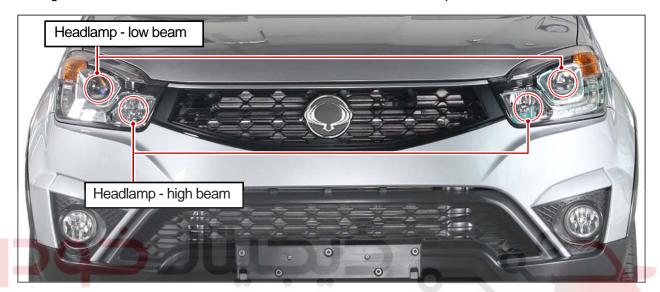
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# 3) Operating Process

### (1) Headlamp (high/low beam) operation process

The headlamp is usually operated by the multifunction switch or by the REKES or smart key through the BCM.

The BCM controls the headlamp and tail lamp according to the signal from the AUTO light sensor through LIN communication when the multifunction switch is in "AUTO" position.



# **₿** NOTE

#### **▶** DRL (Day Time Running Light)

DRL is the function to turn on the high beam and tail lamp without any intervention from the light switch. DRL turns off the lamps when turning off the light switch. This is an additional safety device to prevent the accident.

Modification basis	
Application basis	
Affected VIN	

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### (2) Tail lamp

#### **▶** Front







The tail lamp is operated by the BCM when the BCM receives a signal from the multifunction switch.

#### ► Tail lamp warning

- 1. The buzzer sounds for 10 seconds with the interval of 0.02 s ON and 1.38 s OFF when opening the driver door with the key removed (without SKM)/with IGN OFF or ACC (with SKM) and tail lamp ON. The buzzer stops its operation when turning off the tail lamp or closing the driver door during buzzer
- 2. operation. The buzzer stays ON when turning the tail lamp on again after turning it off during buzzer operation.

#### ► Tail lamp auto turn-off

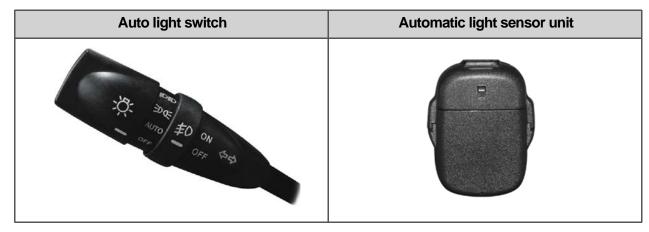
- When opening and closing the driver door after turning off the ignition with the tail lamp ON, the tail lamps go off automatically.
- The tail lamps come on again when inserting the ignition key (without SKM) and turning on the ignition (with SKM) after tail lamp auto OFF.
- The tail lamp should not go off when turning on the tail lamp switch with the ignition key removed (without SKM) and with power off or ACC ON (with SKM).

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Modification basis	
Application basis	
Affected VIN	

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### (3) Auto light (LIN)



The auto light sensor unit is installed to the back side of the ECM mirror located upper center of the windshield, and detects the illuminance change. The BCM communicates with the auto light sensor when the ignition is turned on, and turns on or off the tail lamp and headlamp automatically according to the signals from the sensor when the multifunction switch is set to AUTO light.

The BCM communicates with the rain sensor even if the multifunction switch is in tail lamp.



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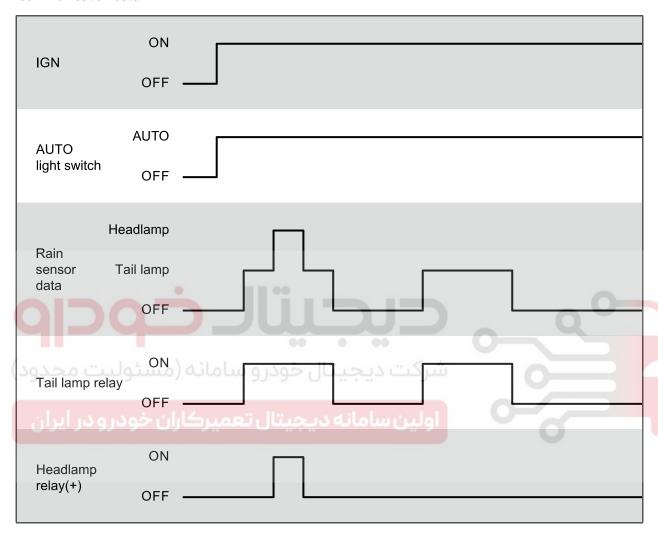
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#### ► Control by BCM

The rain sensor & AUTO light module communicates with BCM with IGN ON. When the AUTO light switch is in the AUTO position, the BCM controls the tail lamp and headlamp according to the LIN communication data.



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# (4) License lamp operation process

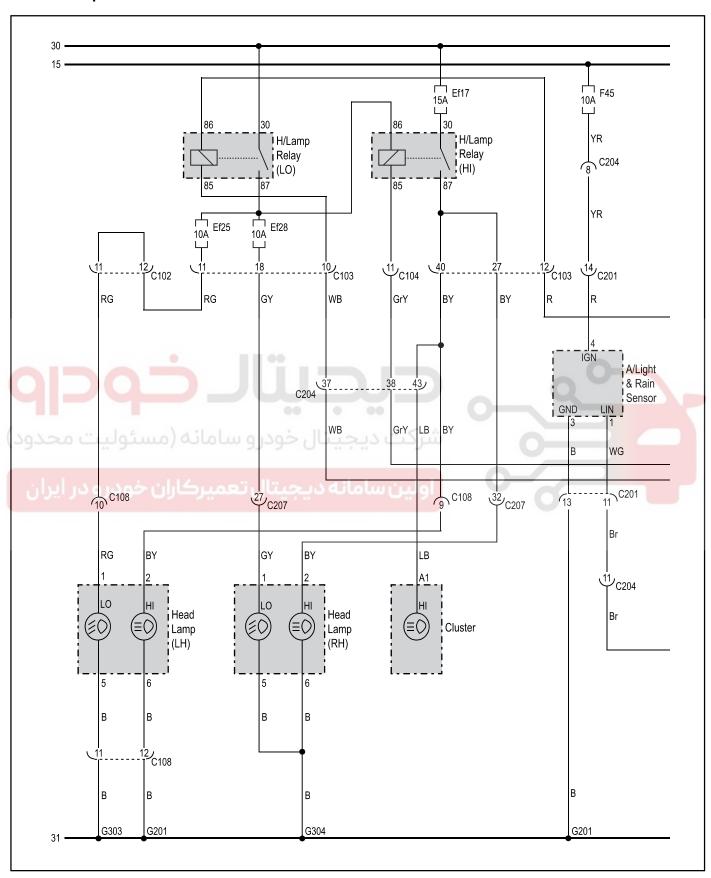


When the corresponding lamp comes on and goes off by operating the tail lamp, AUTO light, high beam and low beam on the multifunction switch, the license lamp also does.

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#### ▶ Headlamp



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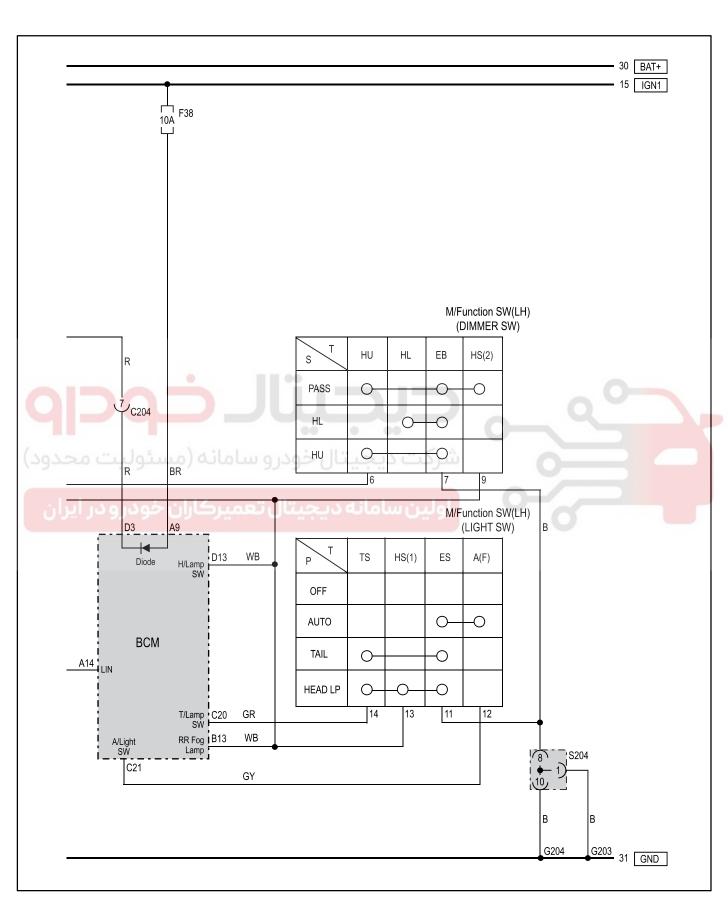
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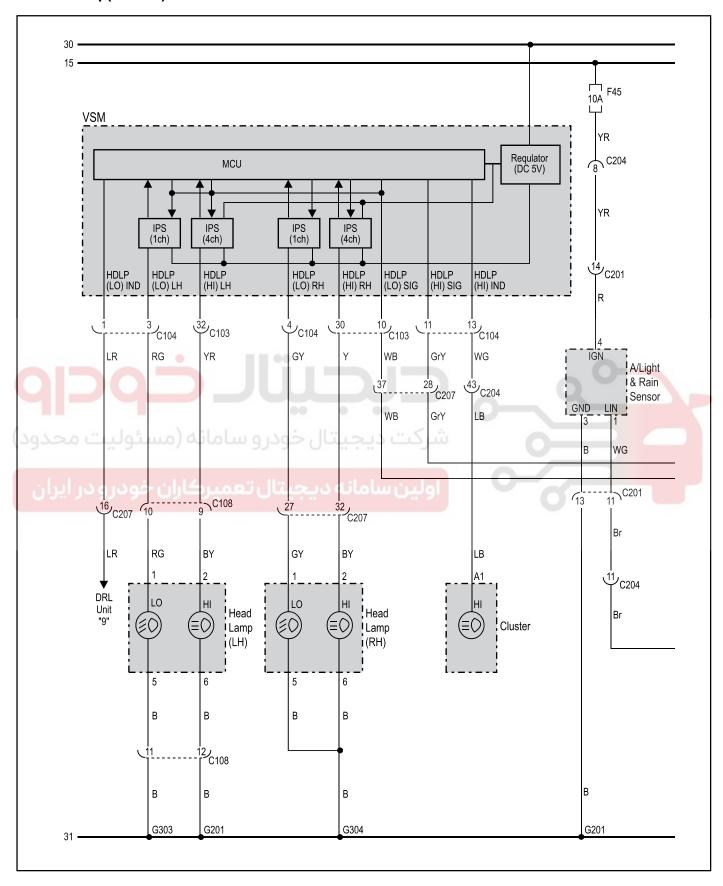
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#### ► Headlamp(W/ VSM)



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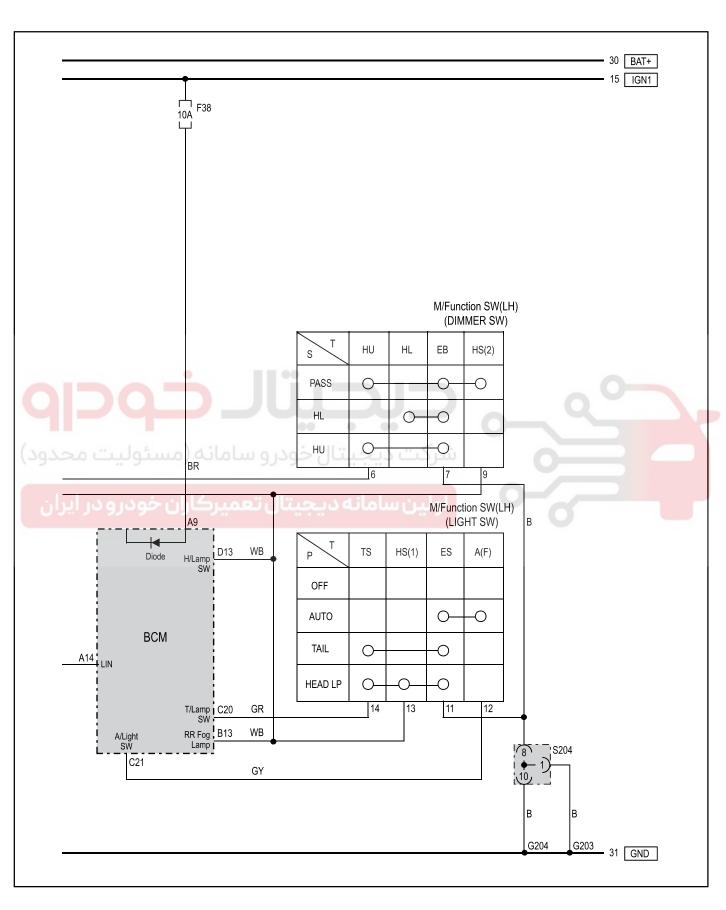
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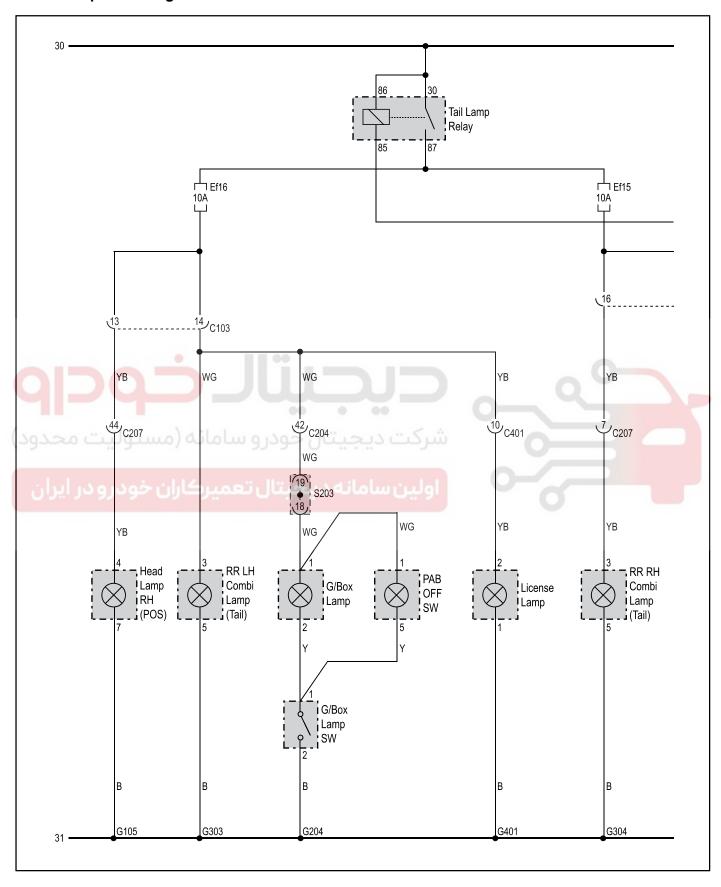
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#### ► Tail lamp circuit diagram



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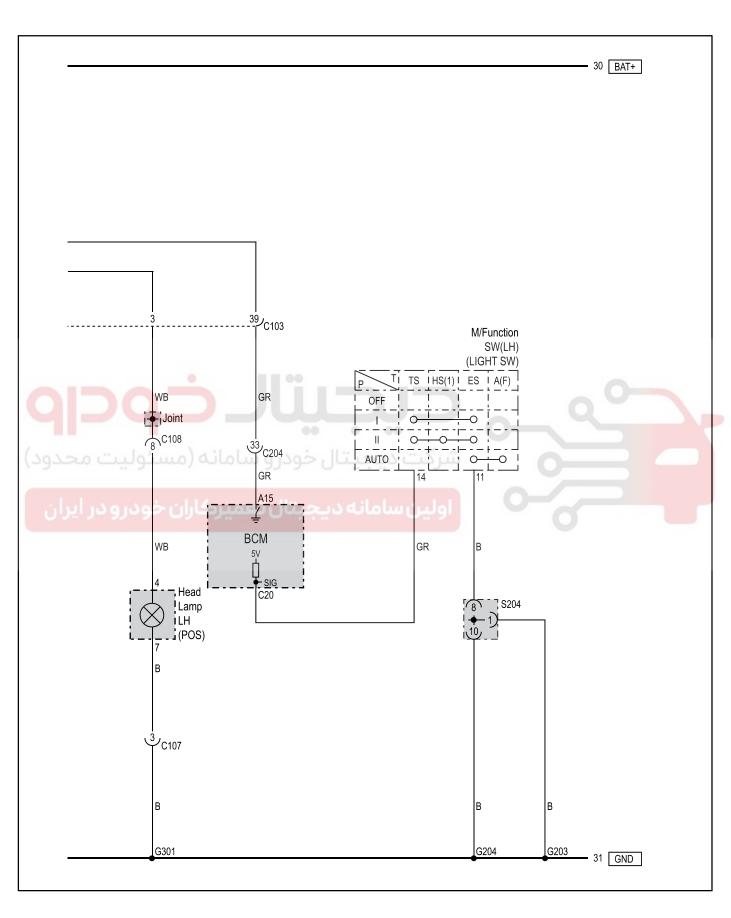
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### (5) Fog lamp

The fog lamp is operated by the fog lamp switch only when the headlamp (tail lamp) is operating. The front and rear fog lamps go off when turning the ignition switch or headlamp (tail lamp) switch to the "OFF" position.

#### **▶** Front







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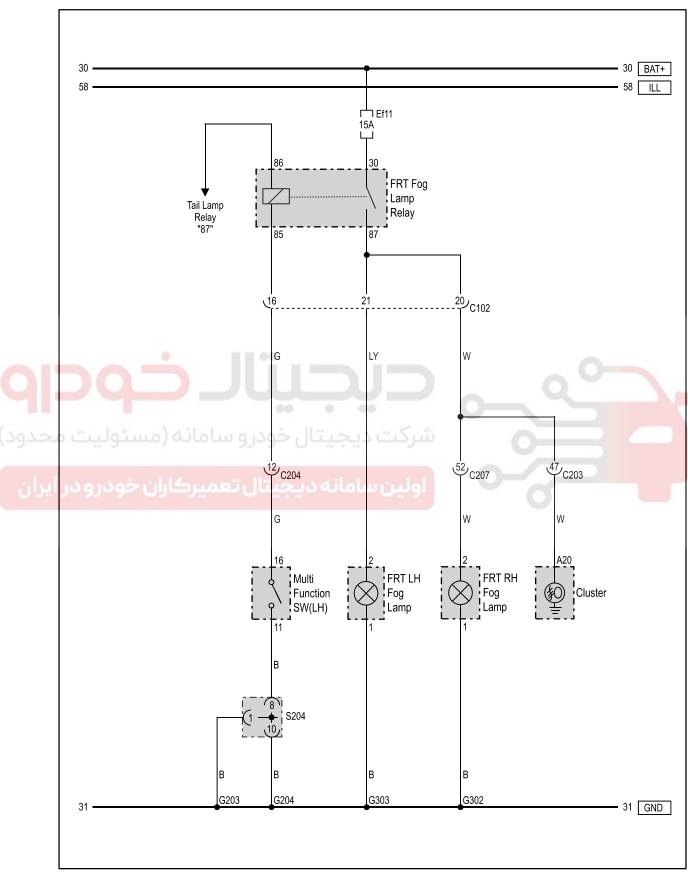
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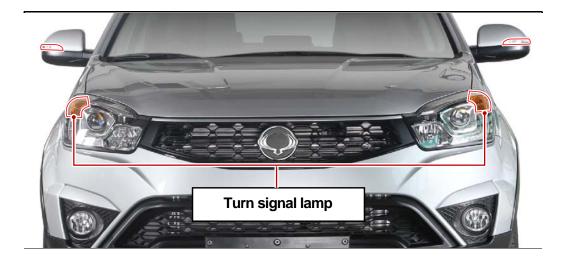
### ► Fog lamp circuit diagram





### (6) Turn signal lamp / Side repeater lamp

#### **▶** Front



▶ Rear



The turn signal lamp is operated by the BCM when the BCM receives a signal from the multifunction switch. The BCM cycles the turn signal lamp and buzzer (ON/OFF) 75 times per minute.

The turn signal lamps are operational only when IGN1 is ON.

If the turn signal lamp fails while it is illuminated, the BCM cycles the lamp and buzzer 100 times per minute.

The BCM determines that there is an open circuit if the load is 3.0 A or less, and there is a short circuit if the load is 7.0 A or more.

When turning ON the turn signal switch, the lamp blinks 3 times by the BCM. When turning OFF the switch during the operation, the turn signal lamp blinks 3 times and goes off.

When turning OFF and then immediately ON the turn signal switch during auto blinking operation of 3 times, the turn signal lamp blinks additional 3 times.

If one of the turn signal lamp is flashing and the other lamp switch is turned on, the lamp for the activated switch flashes.

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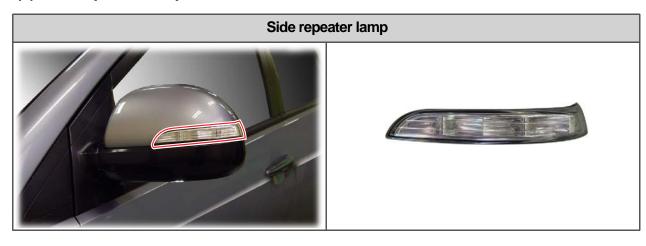
Modification basis	
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#### (7) Side repeater lamp



The side repeater lamp is operated by the BCM when the BCM receives a signal from the multifunction switch.

The BCM cycles the side repeater lamp and buzzer (ON/OFF) 75 times per minute.

The side repeater lamp operates only when IGN1 is ON.

If the side repeater lamp fails while it is illuminated, the BCM cycles the lamp and buzzer 100 times per minute.

The lamp automatically flashes 3 times when the multifunction switch is turned on. If the switch is turned off

during this operation, the lamp flashes 3 times and then goes off.

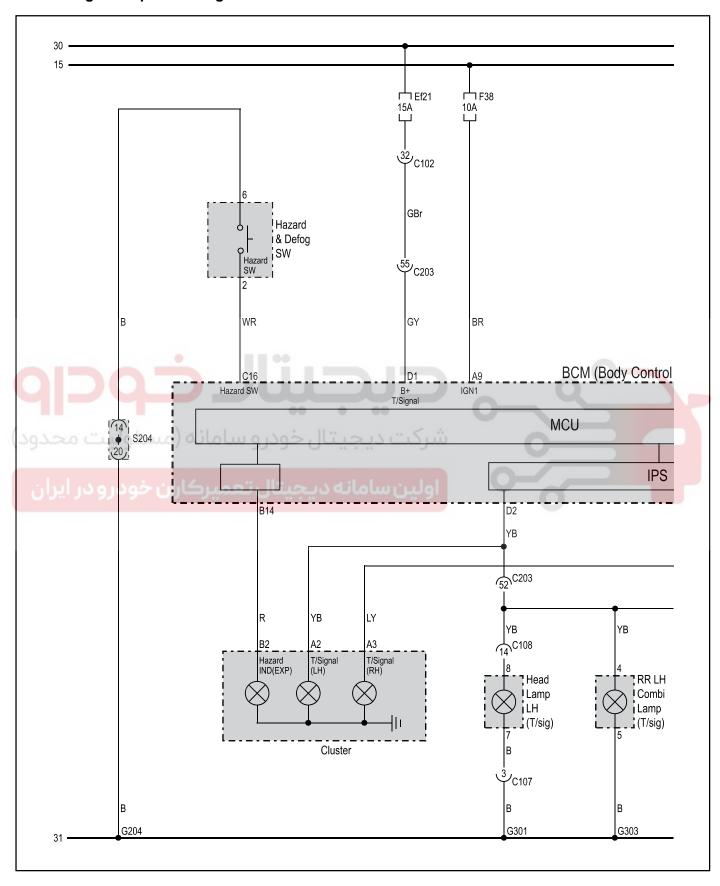
If the switch is turned off and then on during the 3 times of automatic flashing, the lamp flashes 3 more times.

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	Modification basis		



#### ► Turn signal lamp circuit diagram



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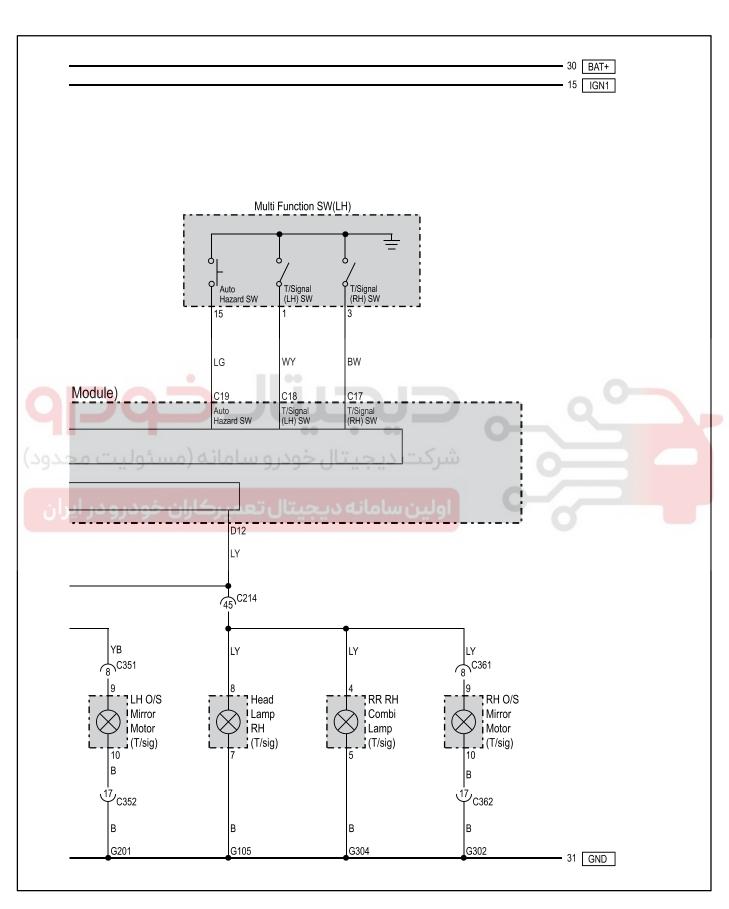
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### (8) Stop lamp operation process

Depressing the brake pedal lights on the stop lamps by a signal from the stop lamp switch fitted to the brake pedal and releasing the brake pedal turns off it.



# (9) Backup lamp operation process

When shifting the TGS lever into the "R" position with the ignition switch "ON", the backup lamps come on. If the lever is placed in other positions, the lamps go off.



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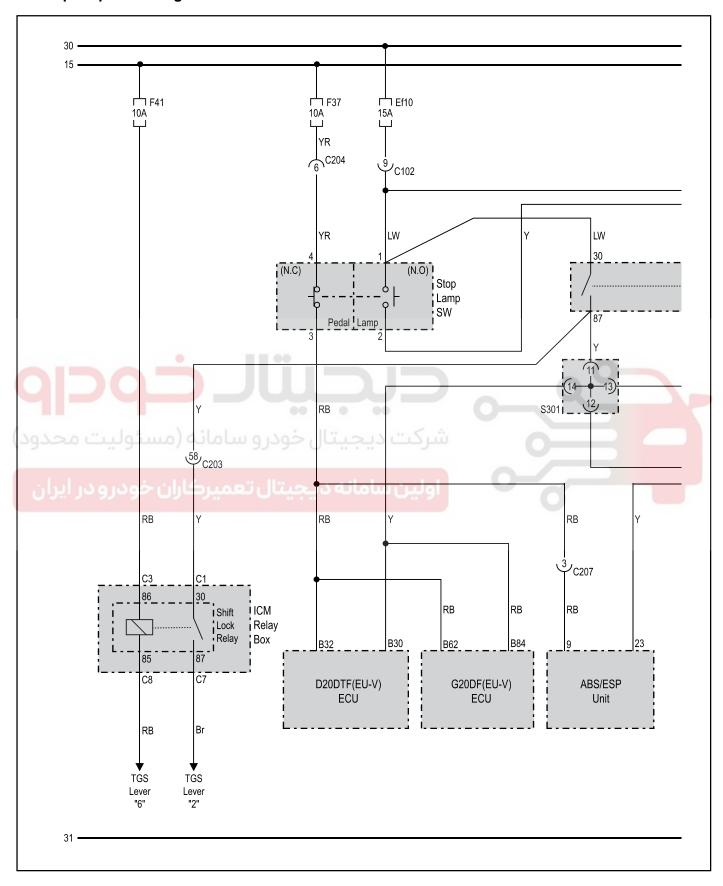
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#### ► Stop lamp circuit diagram



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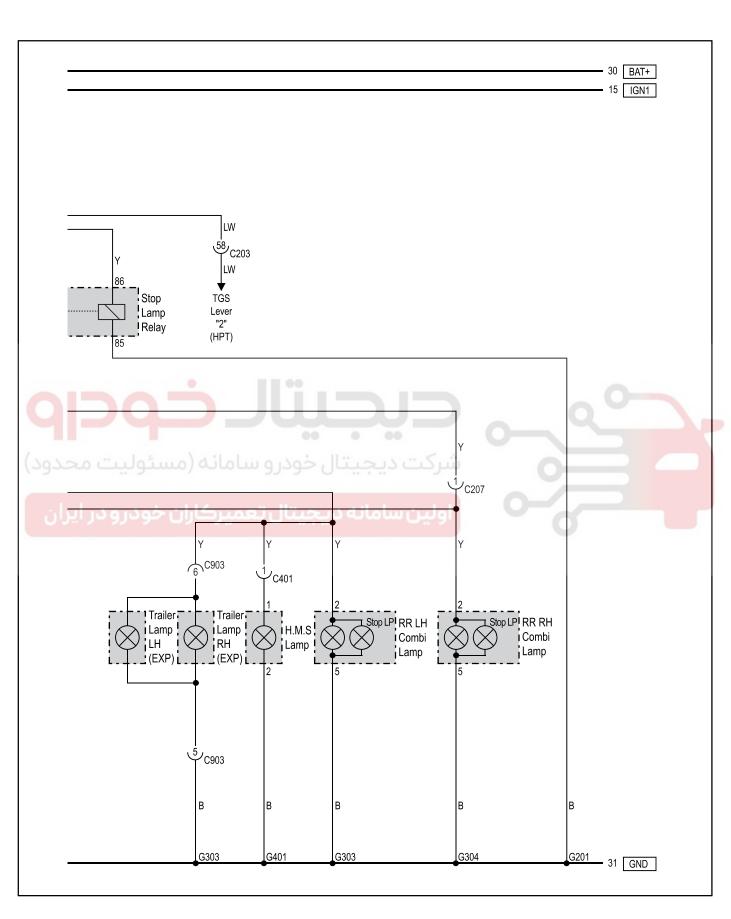
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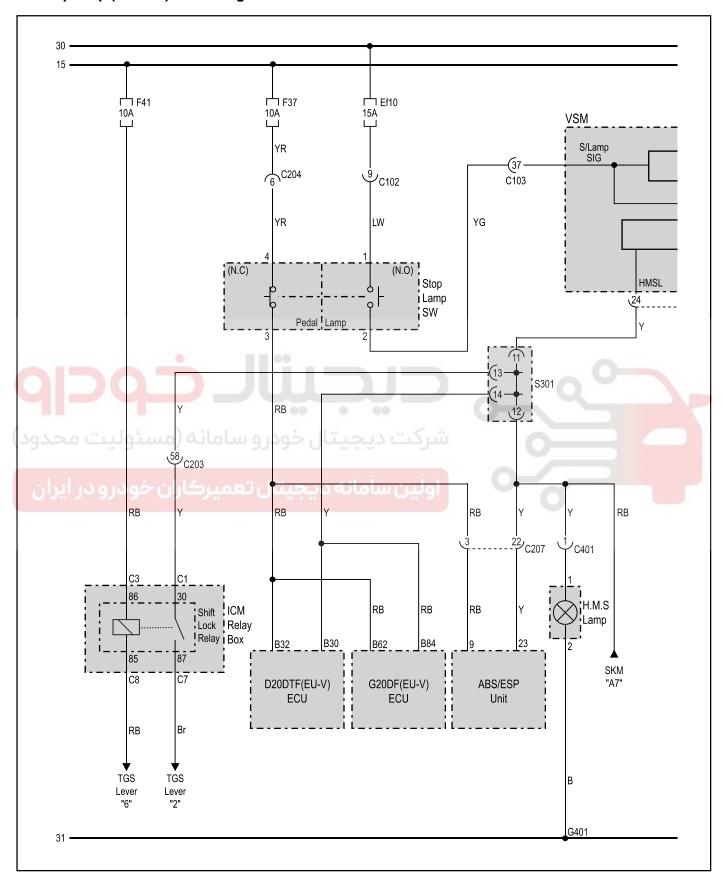
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#### ► Stop lamp (W/ VSM) circuit diagram



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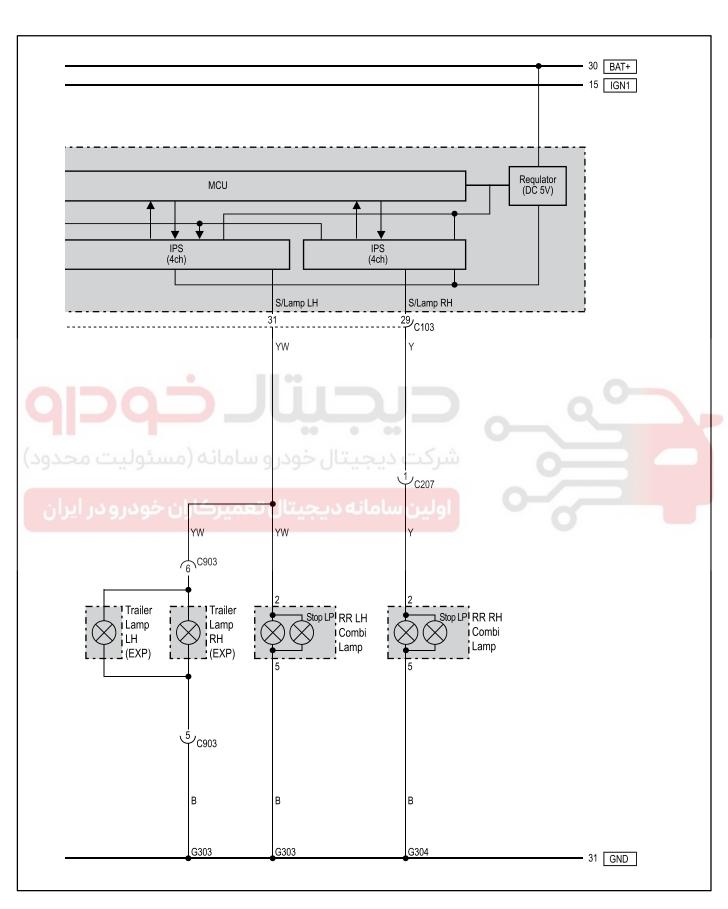
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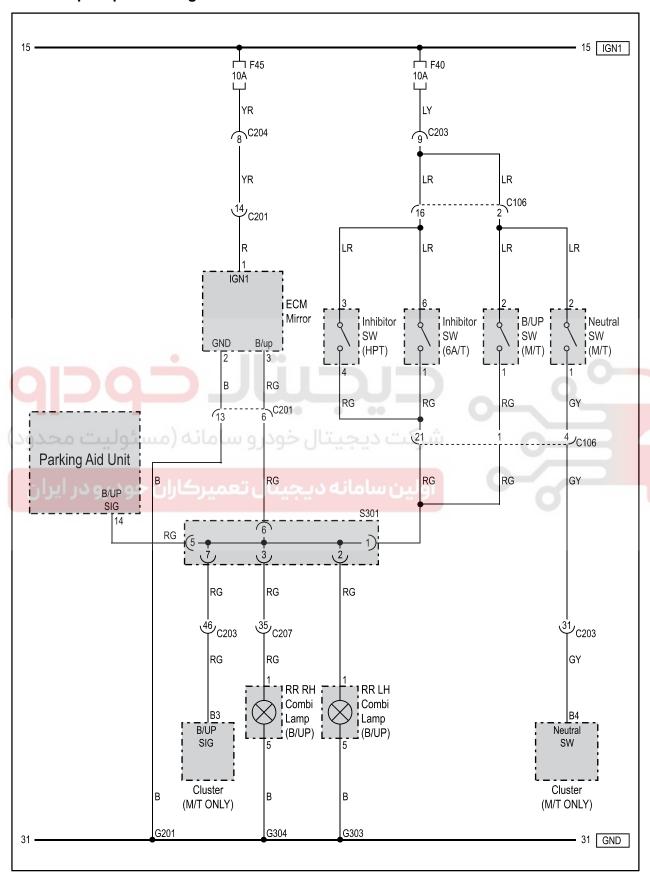
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#### ▶ Backup lamp circuit diagram



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### (10) Puddle (approach) lamp



#### ▶ Lamp control for models without SKM

#### 1. Approach lamp ON

- When receiving the UNLOCK signal in the theft deterrent mode, the approach lamps come ON for 30 seconds.
- When turning the ignition switch to OFF from ON position and opening the driver door, the approach lamps come ON.

### 2. Approach lamp OFF

- When receiving the door lock signal with the approach lamps ON, the lamps go OFF (reactivation
  of theft deterrent mode).
- When turning the ignition switch to ON position with the approach lamps ON, the lamps go OFF.

  The approach lamps go OFF after 30 seconds.

#### ► Lamp control for models with SKM

#### 1. Approach lamp ON

- When turning the ignition switch to OFF from ON position and opening the driver door, the approach lamps come ON.
- When receiving the UNLOCK signal from the smart key remote control or outside door handle switch signal in the theft deterrent mode, the approach lamps come ON for 30 seconds.
   When receiving the AUTO approach signal in the theft deterrent mode, the approach lamps come
- ON for 30 seconds.

#### 2. Approach lamp OFF

- When receiving the door lock signal from the smart key remote control or outside door handle switch signal with the approach lamps ON, the lamps go OFF (reactivation of theft deterrent mode).
- When turning the ignition switch to ON position with the approach lamps ON, the lamps go OFF. The approach lamps go OFF after 30 seconds.

Modification basis	
Application basis	
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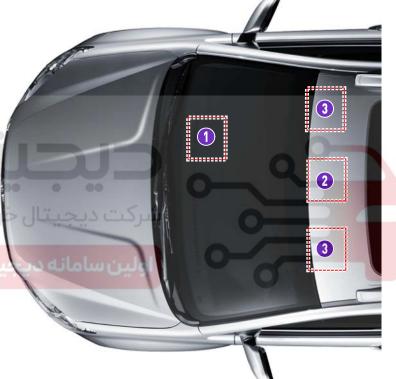
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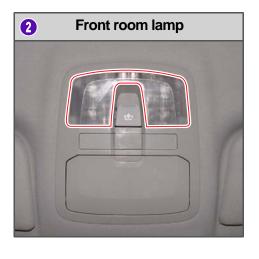
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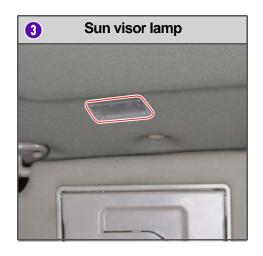
# 1) Layout











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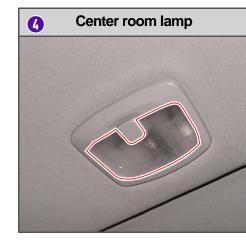
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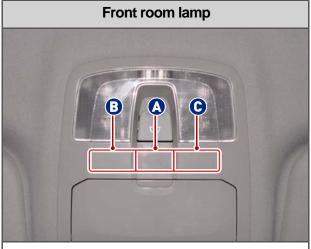
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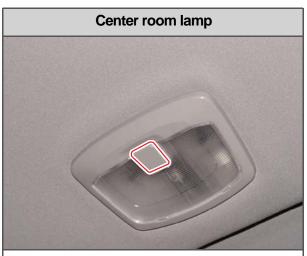


#### 2) Operation

#### (1) Front room lamp/Center room lamp



- A. Door coupled operation switch: Comes on when opening door and goes off when closing with switch pressed
- B. Driver spot lamp switch: Driver front room lamp comes on when pressing switch
- C. Passenger spot lamp switch: Passenger front room lamp comes on when pressing switch



Press switch to turn on center room lamp and press again to turn off it.

It comes on when opening the door with door coupled operation switch in the front room lamp pressed even though the switch is in "OFF" position.

Operating the front room lamp and center room lamp switches illuminates the driver/passenger side lamps and center room lamp.

#### ▶ Room lamp control by door coupled room lamp operation

- 1. If a door except the tailgate is opened after the ignition is turned off, provided that door coupled front room lamp switch is pressed, the front room lamp and center room lamp are illuminated for 2 sec. and then fade out for 3 sec.
  - If a door except the tailgate is opened and then closed while the room lamp is fading out, the room lamp is illuminated for 2 sec. and then fades out for 3 sec. If the ignition is turned on, the room lamp goes off immediately.
- 2. The front room lamp and center room lamp are illuminated for 30 sec. when the door is unlocked by the REKES or passive door UNLOCK function with IGN OFF and the ignition key removed. If the REKES or passive door UNLOCK signal is received again, the room lamps are illuminated for another 30 sec.
- 3. The room lamp goes off immediately when the REKES or passive door LOCK signal is received or the ignition switch is turned to ON position.
- 4. If the room lamp is turned on after the ignition key is removed (door open or room lamp switch is pressed), it is turned off after 10 minutes by the BCM.
- 5. When the door open state is changed or the ignition is turned on after the room lamp has been turned off automatically, the battery saver feature is reset.

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Modification basis	
Application basis	
Affected VIN	

#### (2) Luggage lamp

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The luggage lamp is turned on when the tailgate is opened with the switch operated.

This lamp is not controlled by the BCM, unlike the front/center room lamp.

#### ▶ Luggage lamp control by coupled operation switch when opening/closing tailgate

- 1. The luggage lamp comes on when the tailgate is open.
- 2. The luggage lamp goes off as soon as the tailgate is closed.

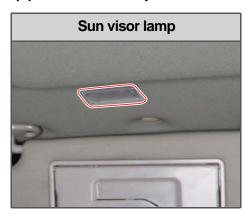
#### (3) Glove box lamp



The glove box lamp comes on when the glove box is opened after the tail lamp is illuminated.

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#### (4) Sun visor lamp



The sun visor lamp comes on when the sun visor vanity mirror cover is opened.

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#### (5) Courtesy lamp



The door courtesy lamp comes on when the driver's door or passenger's door is opened.



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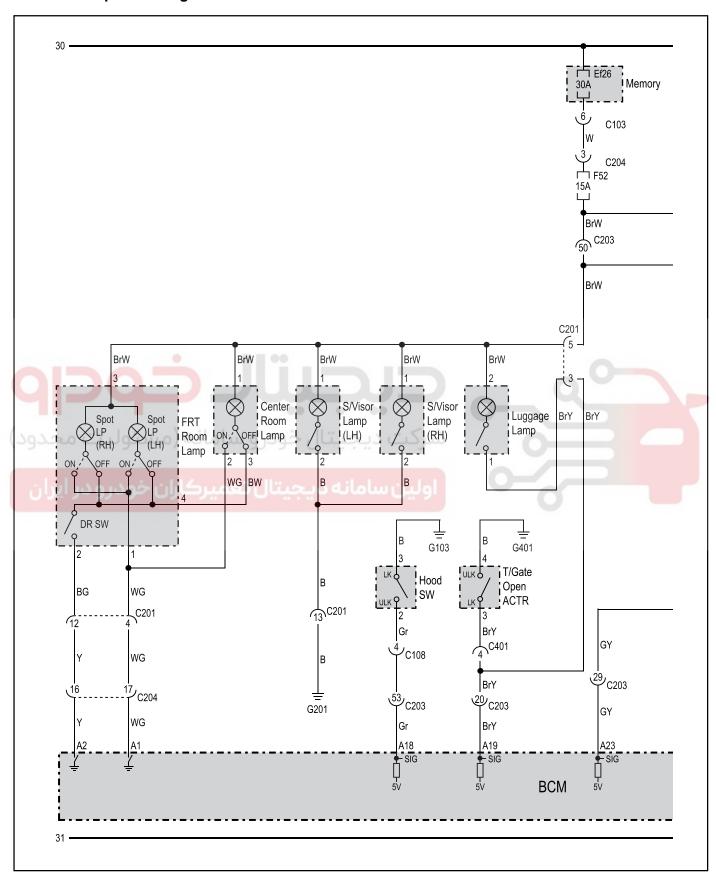
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#### ► Room lamp circuit diagram



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Modification basis
Application basis
Affected VIN

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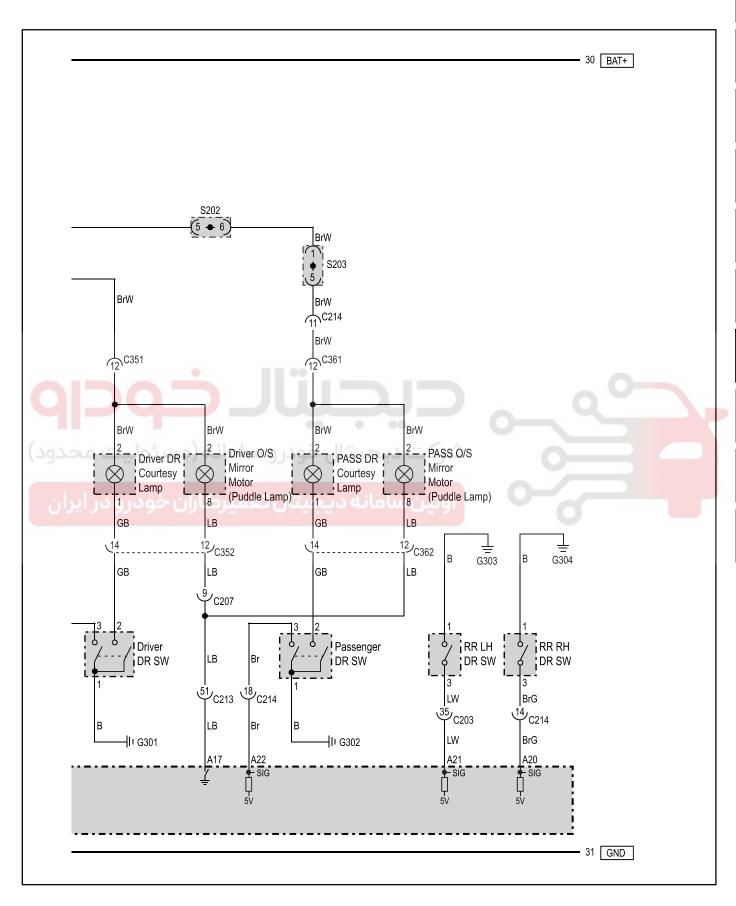
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08-44 8310-01



#### **CONFIGURATION AND FUNCTION**

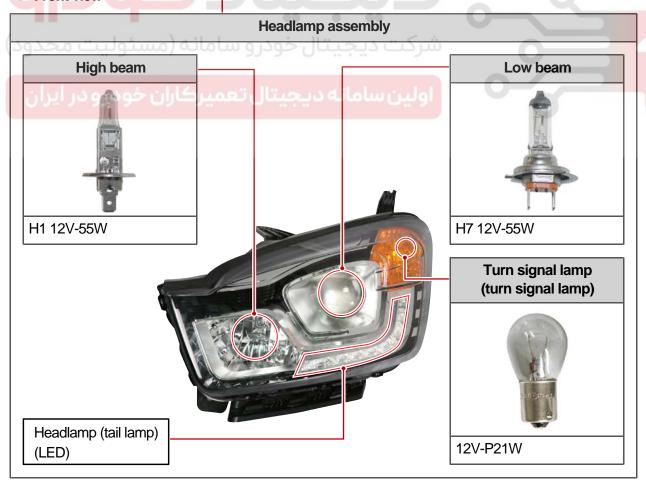
#### 8310-01 HEADLAMP

#### 1) Mounting Location & Components

The headlamp assembly consists of the high beam, low beam, tail lamp and turn signal lamp.



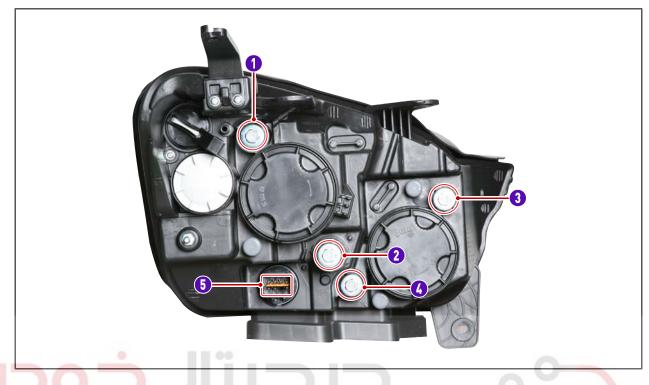
Front view



LAMP

#### ► Rear view

FOLUNDO



- 1. Low beam LH/RH adjusting screw
- 2. Low beam up/down adjusting screw
- 3. High beam left/right adjusting screw
- 4. High beam up/down adjusting screw
  - 5. Headlamp connector

### ولین سامانه دیجیتال تعمیرکاران خودرو در ایران

#### 2) Connector Functions



Pin No.	Function	Pin No.	Function
1	Low beam power (+)	5	Low beam ground (-)
2	High beam power (+)	6	High beam ground (-)
3	-	7	Turn signal lamp ground (-)
4	Tail lamp power (+)	8	Turn signal lamp power (+)

Modification basis	
Application basis	
Affected VIN	

08-46 8610-09

FOLUNGO

#### 8610-09 AUTO LIGHT AND RAIN SENSOR MODULE

#### 1) Mounting Location & Components

The AUTO light sensor (integrated with rain sensor unit) is mounted to rear side of the room mirror at top center of the front glass.





LAMP

Modification basis	
Application basis	
Affected VIN	

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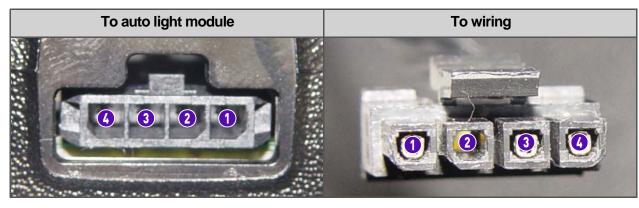
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#### 2) Function Description



Pin No.	Function		
1	LIN communication		
2	-		
3	Ground (-)		
4	Power (+)		



شرکت دیجیتال خودرو سامانه (مسئولیت محدود)

ولین سامانه دیجیتال تعمیرکاران خودرو در ایران

Modification basis	
Application basis	
Affected VIN	

08-48 8310-10

FOLUNGO

#### 8310-10 FRONT FOG LAMP

### 1) Mounting Location & Components

The front fog lamp assembly is mounted to the front bumper and consists of the fog lamp. When the ignition switch is turned to the "ON" position and headlamp is ON, turning the multifunction switch's fog lamp switch ON turns on the fog lamps.

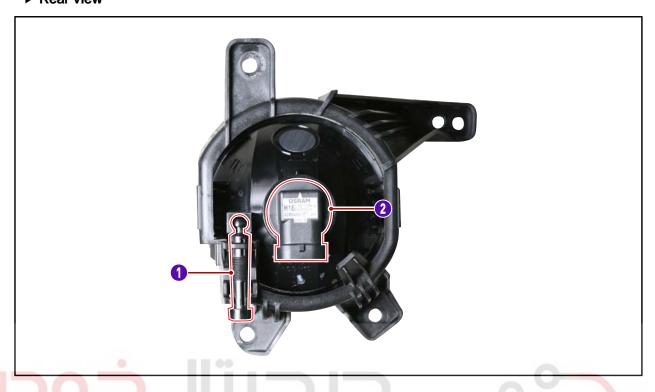


LAMP

Modification basis	
Application basis	
Affected VIN	

#### ► Rear view

FOLUNGO



- 1. Front fog lamp up/down adjusting screw
- 2. Front fog lamp connector شرکت دیجیتال خودرو سامانه (مسئولیت محدود)

### 2) Connector Functions



Pin No.	Function	
1	Fog lamp power (-)	
2	Fog lamp power (+)	

Modification basis	
Application basis	
Affected VIN	



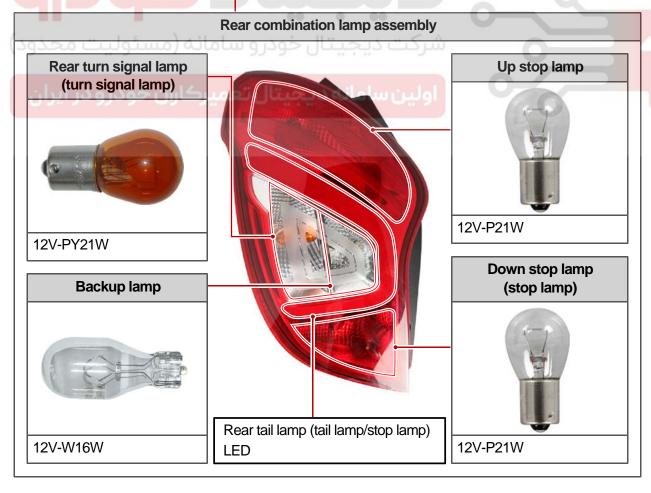
#### 8320-01 REAR COMBINATION LAMP

#### 1) Mounting Location & Components

The rear combination lamp assembly consists of the rear tail lamp, rear turn signal lamp, backup lamp and stop lamp.



#### Front view

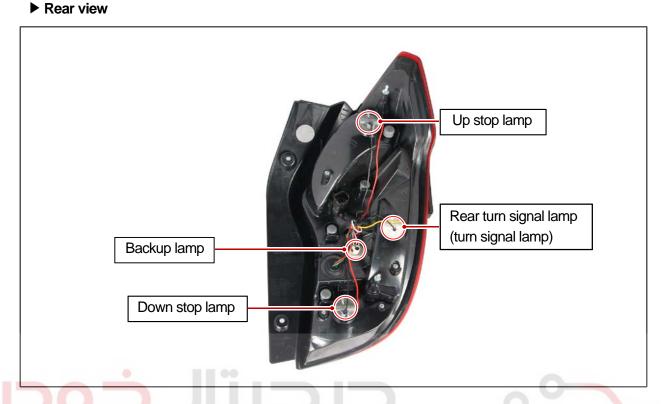


LAMP

Modification basis	
Application basis	
Affected VIN	

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## 2) Connector Functions



Pin No.	Function	Pin No.	Function
1	Backup lamp power (+)	4	Turn signal lamp power (+)
2	Stop lamp power (+)	5	Voltage
3	Tail lamp power (+)	6	-

Modification basis	
Application basis	
Affected VIN	

08-52 8610-16



### 8610-16 DRL UNIT

### 1) Mounting Location



# 2) Specifications شرکت دیجیتال خودرو سامانه

د حبتال تعمیرکال <mark>tem</mark> خودرو در ایران	Specification
Rated voltage	DC 12V
Operating voltage	DC 9V - 16V
Operating temperature	−30°C ~ +80°C
Storage temperature	−40°C ~ +85°C
Rated load	DRL lamp load: 42W / Tail lamp load: 28 W
Insulation resistance	DC 500V MEGGER 1MΩ
Dark current	MAX 1mA (IGN SW OFF)

LAMP

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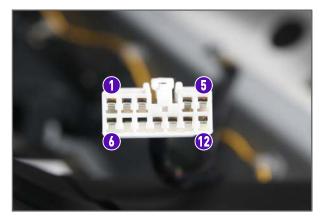
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#### 3) Functions



Pin No.	Function
1	DRL LAMP
2	TAIL LAMP
3	FRONT FOG SW
4	OIL PRESSURE SW
5	B+
6	GND
7	-
8	-
9	HEAD LAMP LOW SW
10	TAIL SW
11	IGN
12	HEAD LAMP HIGH SW OR PASSING SW

شرکت دیجیتال خودرو سامانه (مسئولیت محدود

ولین سامانه دیجیتال تعمیرکاران خودرو در ایران



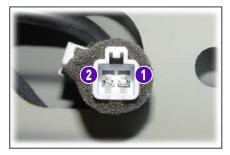


### 8320-16 HIGH MOUNTED STOP LAMP

### 1) Mounting Location



#### 2) Connector Pin Description



Pin No.	Function
1	Stop lamp ground
2	Stop lamp power

LAMP

Modification basis	
Application basis	
Affected VIN	

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### 8320-12 LICENSE PLATE LAMP

### 1) Mounting Location



## 2) Connector Pin Description



Pin No.	Function	
الويين	License plate lamp grou <mark>nd</mark>	
2	Tail lamp power	

08-56 7850-05



#### 7850-05 SIDE REPEATER LAMP

### 1) Mounting Location



#### 2) Connector Pin Description



Pin No.	Function
بن سامانه 1	Ground (outside rearview mirror connector Pin no. 10)
2	Turn signal lamp power (outside rearview mirror connector Pin no. 9)

LAMP KORANDO 2015.01 Modification basis Application basis Affected VIN

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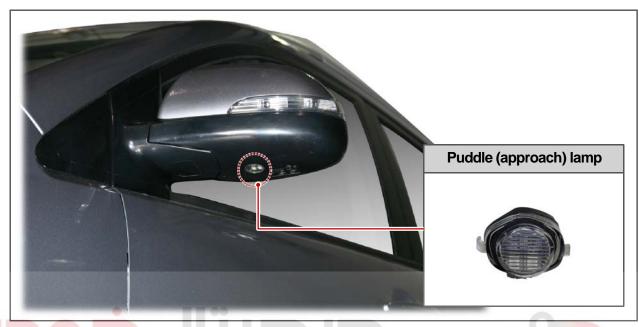
08-57

7850-00

LAMP

### 7850-00 PUDDLE (APPROACH) LAMP

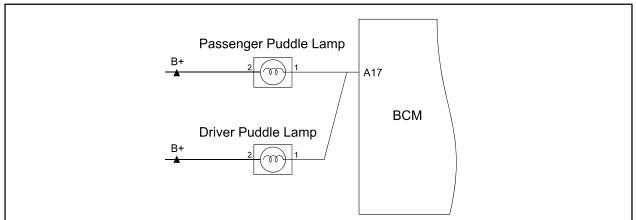
#### 1) Mounting Location



### 2) Connector Pin Description



Pin No.	Function	
اولين	Ground (outside rearview mirror con <mark>necto</mark> r Pin no. 8)	
2	B+ (outside rearview mirror connector Pin no. 2)	



Modification basis	
Application basis	
Affected VIN	

08-58 7770-20



#### 7770-20 OVERHAED CONSOLE LAMP

#### 1) Mounting Location



## 2) Features

- The front room lamp is controlled by the BCM.
- The front room lamp comes on when opening the driver or passenger door. (door coupled operation switch ON)
- After the driver's/passenger's door is closed, the front room lamp continues to illuminate for 2 sec. and then fades out for 3 sec, with the door coupled switch on.
- The front room lamp turns on/off depending on the operation of the front room lamp ON/OFF switch (spot switch).

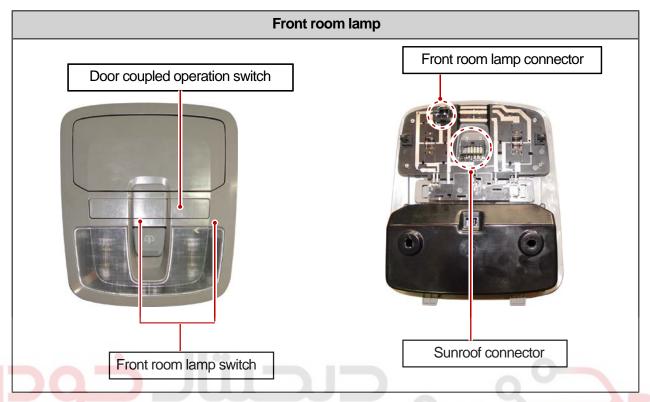
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Modification basis	
Application basis	
Affected VIN	

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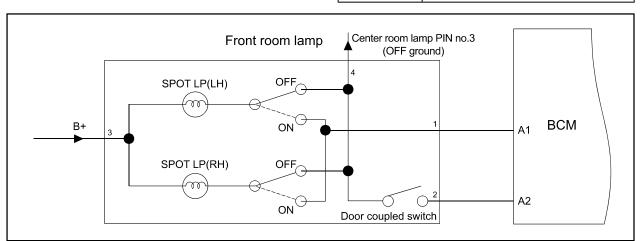
#### ► Structure



#### 3) Connector Pin Description



Pin No.	Function
1 اولیا	Ground for BCM
2	Ground for BCM
3	B+
4	Ground for BCM (Ground the center room lamp when door coupled operation is ON)



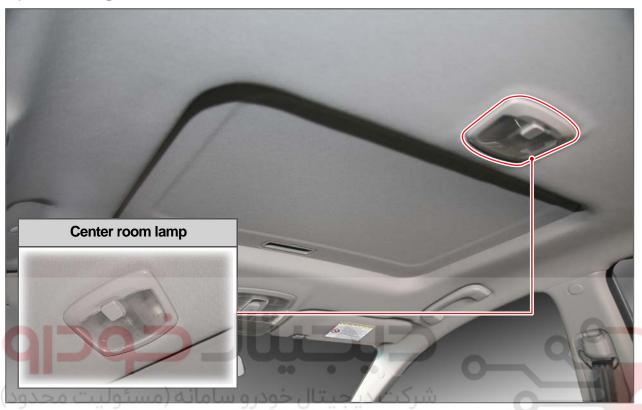
Modification basis
Application basis
Affected VIN





### 8610-01 CENTER ROOM LAMP

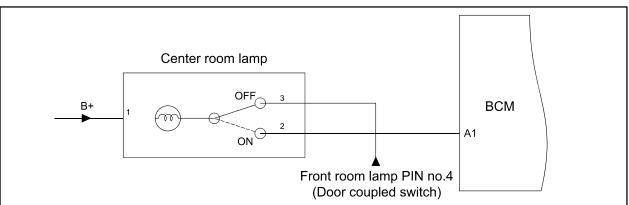
### 1) Mounting Location



2) Connector Pin Description



Pin No.	Function
1	B+
2	ON
3	OFF



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	Modification basis	
	Application basis	
	Affected VIN	

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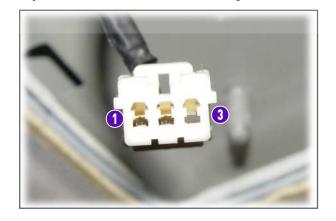
8610-01

#### 8610-01 LUGGAGE LAMP

### 1) Mounting Location



## 2) Connector Pin Description



Pin No.	Function
1	Tailgate switch ground (BCM A19)
2	B+
3	-

08-62 8610-04

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### 8610-04 GLOVE BOX LAMP

#### 1) Mounting Location & Components

The glove box lamp is mounted to the inner upper part of the glove box.



#### 2) Connector Functions

To glove box lamp	To wiring

Pin No.	Function
1	Tail lamp power
2	Glove box switch (ground)

**LAMP** 

Modification basis	
Application basis	
Affected VIN	

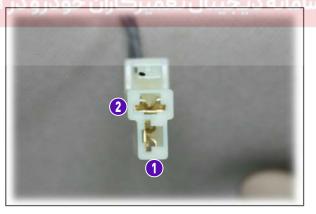
FOLUNDO

#### 8610-08 SUN VISOR LAMP

### 1) Mounting Location



### 2) Connector Pin Description



Pin No.	Function
1	B+
2	Sun visor lamp switch (ground)

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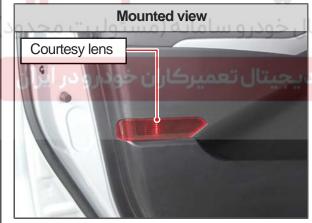
#### 7115-15 DOOR COURTESY LAMP

#### 1) Mounting Location & Components

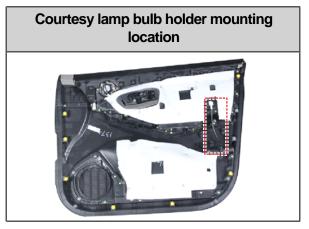
The door courtesy lamps are mounted to the driver and passenger doors. They comes on when any door is open and goes off when closed.

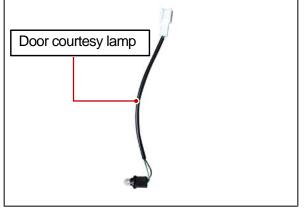










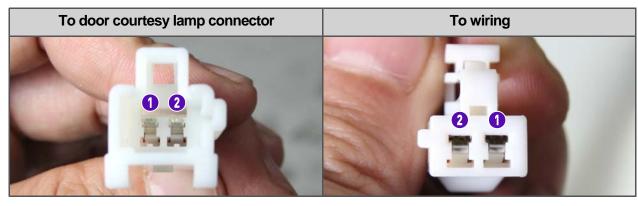


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Modification basis	
Application basis	
Affected VIN	

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#### 2) Connector Functions



Pin No.	Function
1	Power (+)
2	Ground (-)

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Application basis	
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#### REMOVAL AND INSTALLATION

#### 8310-01 HEADLAMP ASSEMBLY

Preceding work

- Disconnect the negative battery cable.





1. Remove the front bumper assembly.



#### **♣** NOTE

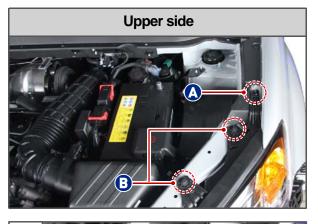
See "FRONT BUMPER" under "REMOVAL AND INSTALLATION" in "BODY EXTERIOR".

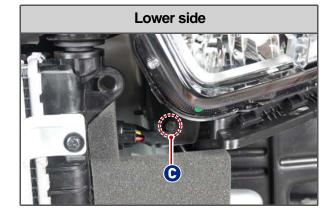
LAMP

	Modification basis	
	Application basis	
	Affected VIN	



2. Remove the mounting screw rivet (A) and 2 mounting bolts (B, 10 mm) on the upper side of the headlamp, and the mounting bolt (C, 10 mm) on the lower side of the headlamp.





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3. Disconnect the headlamp connector.



4. Remove the headlamp assembly.



5. Install in the reverse order of removal.



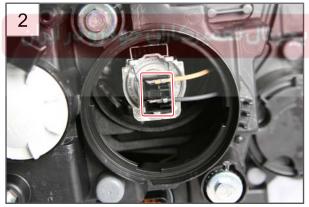
#### 1) Low Beam Bulb Replacement



1. Turn the low beam cap to the arrow direction behind the headlamp assembly to remove it.



2. Disconnect the low beam bulb connector.



3. Press the low beam bulb fixing pin to the arrow direction to detach it.

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Application basis	
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4. Remove the low beam bulb.



5. Install the new bulb in reverse order.

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Modification basis
Application basis
Affected VIN



#### 2) High Beam Bulb Replacement



1. Turn the high beam cap to the arrow direction behind the headlamp assembly to remove it.



2. Disconnect the high beam bulb connector.



3. Press the high beam bulb fixing pin to the arrow direction to detach it.



LAMP KORANDO 2015.01

Modification basis	
Application basis	
Affected VIN	

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4. Remove the high beam bulb.



5. Install the new bulb in reverse order.

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Modification basis
Application basis
Affected VIN



### 3) Front Turn Signal Lamp Bulb Replacement



1. In order to remove the turn signal lamp bulb and socket, turn those parts to the arrow direction behind the headlamp assembly.







2. Remove the turn signal lamp bulb and socket.



3. Remove the turn signal lamp bulb from the socket while pressing it downwards.

LAMP KORANDO 2015.01

	Modification basis	
	Application basis	
	Affected VIN	

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4. Install the new bulb in reverse order.



Modification basis
Application basis
Affected VIN



## 8310-01 HOW TO ADJUST HEADLAMP AIMING

### 1) How To Adjust Headlamp Aiming

Adjust the aiming of the headlamp by turning the up/down/left/right adjusting screws of the high-beam and low-beam lamps using a cross-tip screwdriver.

- ► Cautions for adjusting aiming of headlamp
  - Park the vehicle on a level ground.
  - Set the vehicle unloaded only with a driver in it and set tire inflation pressure to the specified value. Make the distance from the center of the headlamp to the screen 3 m.
  - Vertical line: passing the center of each headlamp
  - Horizontal line: passing the center of each headlamp

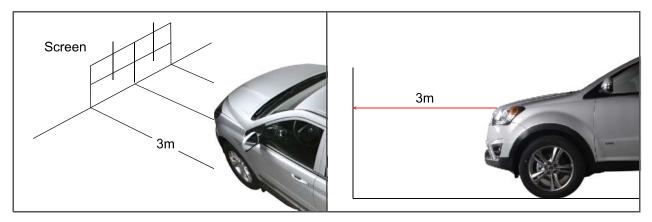
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#### (1) How to align headlamp

#### ▶ Beam setting



#### Screen alignment



LAMP

Modification basis	
Application basis	
Affected VIN	

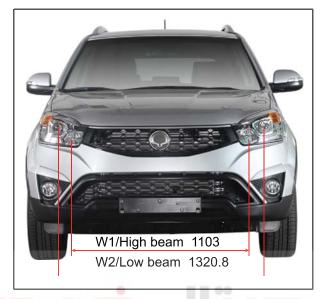
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## 2) To Adjust Headlamp Aiming

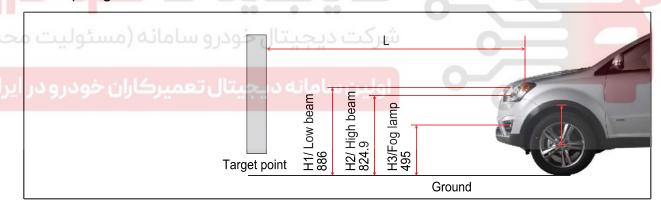
### (1) Lamp type and distance

► Distance between lamps



W1: Distance between low beams W2: Distance between high beams W3: Distance between fog lamps H1: Low beam ground clearance H2: High beam ground clearance H3: Fog lamp ground clearance

► Lamp height



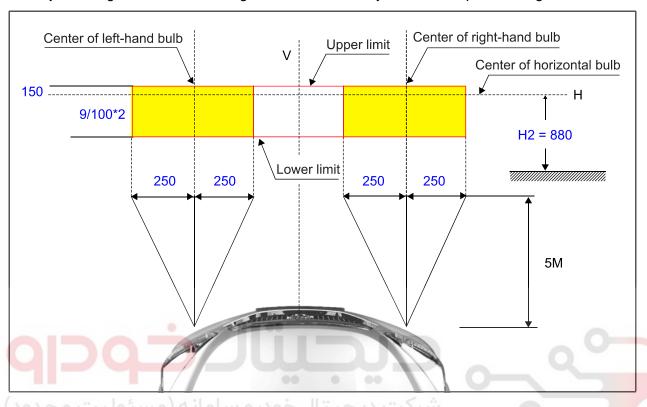
Lamp	Vehicle status	Distance (mm)					
Low beam	Unladen	H1	886	W1	1320.8	L	5000
	One occupant	H1	878.1	W1	1320.8	L	5000
High beam	Unladen	H2	824.9	W2	1103	L	5000
	One occupant	H2	817	W2	1103	L	5000
Fog lamp	Unladen	H3	495	W2	1428.6	L	5000
	One occupant	H2	487.1	W2	1428.6	L	5000

Modification basis	
Application basis	
Affected VIN	

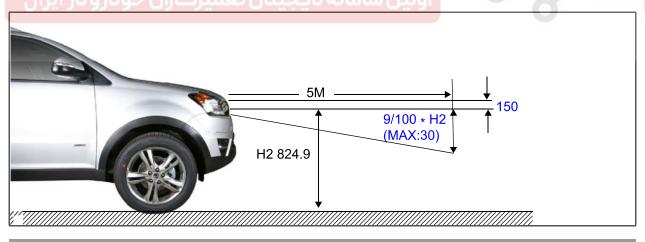


#### (2) Reference to adjust high beam

- Adjust the high beam so that the highest luminous intensity is within the specified range below.



- Adjust the high beam in reference to the low beam depending on interconnection structure between high beam and low beam.



#### **₿** NOTE

Luminous intensity: high beam Class 4: 12,000cd ~ 112,500cd

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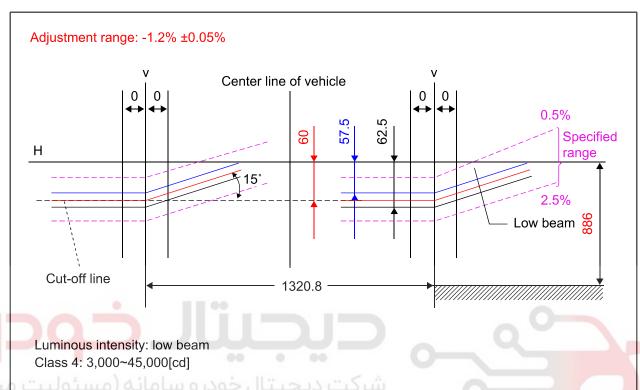
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Modification basis	
Application basis	
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#### (3) Reference to adjust low beam

- Adjust the low beam so that the aiming is within the specified range of cut-off line (see illustration below) with low beam ON.



#### NOTE

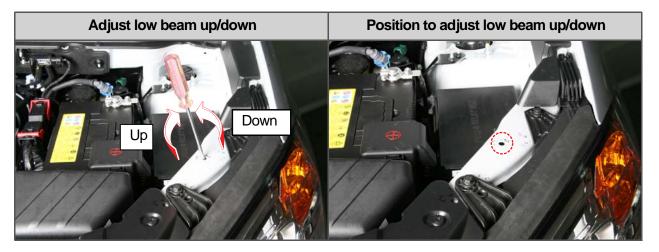
The specified adjusting range for the low beam is 5 m.

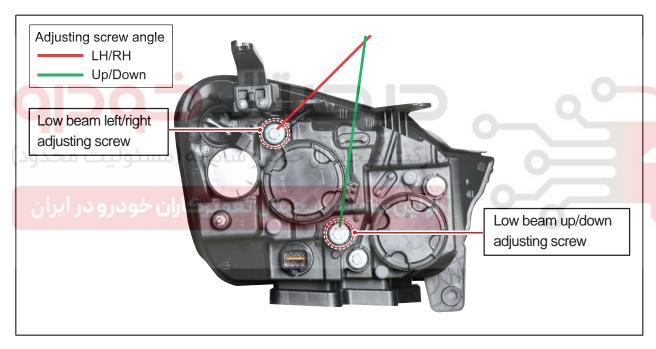
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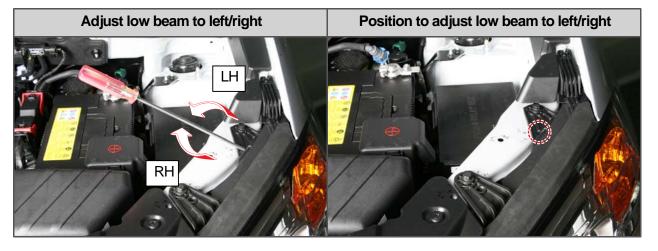
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#### (4) How to adjust headlamp (for driver side)

#### ▶ Low beam





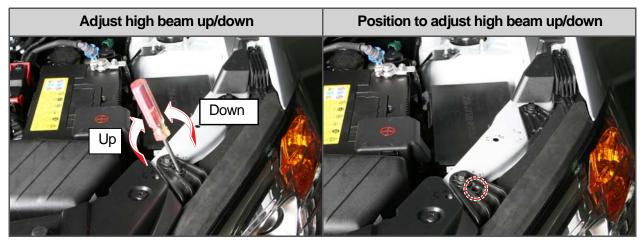


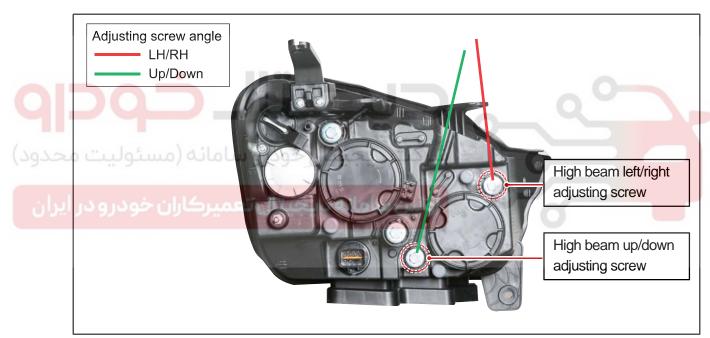
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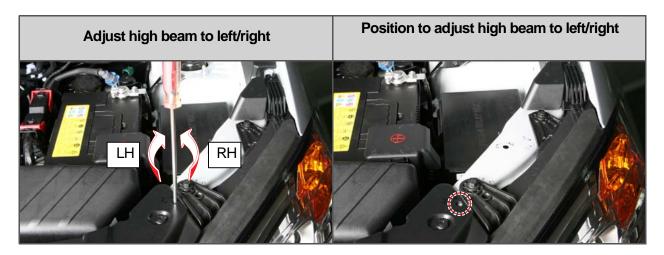
Modification basis	
Application basis	
Affected VIN	

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#### ► High beam







Modification basis	
Application basis	
Affected VIN	

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FOLUNGO

## 8610-09 AUTO LIGHT AND RAIN SENSOR MODULE

Preceding work

- Disconnect the negative battery cable.





1. Insert a screwdriver into the service hole at both sides of the styling cover to remove the cover.

#### A CAUTION

Otherwise, the cover or internal housing could be damaged.



2. Disconnect the connector from the AUTO light & rain sensor module.

Modification basis	
Application basis	
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Insert the screwdriver into the service holes at both sides of the cover to separate between the upper and lower covers.





4. Pull out the AUTO light sensor module to the arrow direction.



5. Install in the reverse order of removal.

Modification basis	
Application basis	
Affected VIN	

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## 8310-10 FRONT FOG LAMP ASSEMBLY

Preceding work

- Disconnect the negative battery cable.





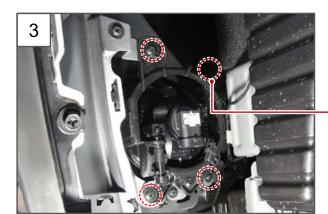
1. Remove the 5 screw rivets securing the front wheel house cover.



2. Separate the wheel house cover and disconnect the front fog lamp assembly.

	Modification basis	
	Application basis	
	Affected VIN	

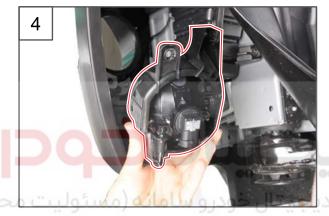
FOLUNDO



3. Unscrew the 4 mounting screws on the front fog lamp.



4. Remove the front fog lamp assembly.



5. Install in the reverse order of removal.

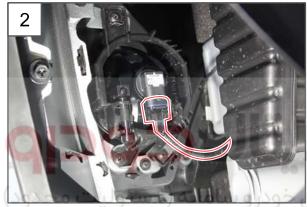




## 1) Front Fog Lamp Bulb Replacement



1. Remove the 5 screw rivets securing the front wheel house cover.



2. Separate the wheel house cover and disconnect the front fog lamp assembly.



3. Turn the fog lamp bulb to the arrow direction to remove it.





4. Install the new bulb in reverse order.

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Modification basis	
Application basis	
Affected VIN	

08-85

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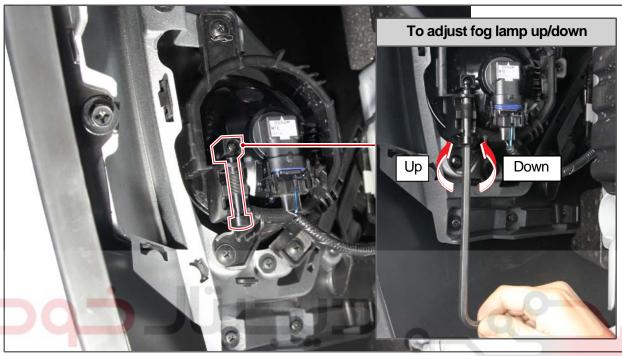
H2

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AUDIO

## 8310-10 HOW TO ADJUST FOG LAMP UP/DOWN

The fog lamp is mounted to inner side of the front bumper and adjust its height using a hexagonal bolt (6 mm).





Modification basis
Application basis
Affected VIN

LAMP

08-86 8320-01

FOLUNGO

## 8320-01 REAR COMBINATION LAMP ASSEMBLY

Preceding work

- Disconnect the negative battery cable.





1. Unscrew the 2 mounting screws for the rear combination lamp.



2. Disconnect the rear combination lamp connector.

Modification basis	
Application basis	
Affected VIN	



3. Disconnect the rear combination lamp assembly.



4. Install in the reverse order of removal.



## 1) Up Stop Lamp & Down Stop Lamp Bulb Replacement



1. Disconnect the rear combination lamp assembly.



2. Turn the stop lamp bulb socket to the arrow direction behind the rear combination lamp assembly to remove it.



3. Turn the stop lamp bulb to the arrow direction to remove it.



4. Install the new bulb in reverse order.

Modification basis	
Application basis	
Affected VIN	

FOLUNDO

## 2) Backup Lamp Bulb Replacement



1. Disconnect the rear combination lamp assembly.



Turn the backup lamp bulb socket to the arrow direction behind the rear combination lamp assembly to remove it.



3. Pull out the backup lamp bulb to the arrow direction.



4. Install the new bulb in reverse order.



Modification basis
Application basis
Affected VIN



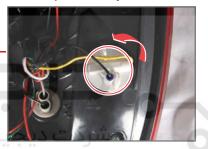
## 3) Rear Turn Signal Lamp Bulb Replacement



1. Disconnect the rear combination lamp assembly.



2. Turn the turn signal lamp bulb socket to the arrow direction behind the rear combination lamp assembly to remove it.



3. Turn the turn signal lamp bulb to the arrow direction to remove it.



4. Install the new bulb in reverse order.



Modification basis	
Application basis	
Affected VIN	

8610-16

## 8610-16 DRL UNIT

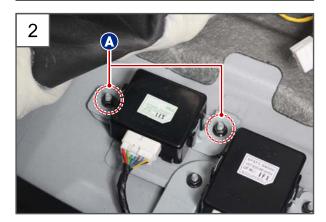




1. Remove the passenger seat assembly and lift off the floor carpet.

### **₿** NOTE

Refer to "PASSENGER SEAT ASSEMBLY" under "REMOVAL AND INSTALLATION" in "SEAT" chapter.



2. Unscrew the two DRL unit mounting nuts (A, 10 mm).

Modification basis	
Application basis	
Affected VIN	

08-92 8610-16

FOLUNGO



3. Disconnect the connector and remove the DRL unit.



4. Install in the reverse order of removal.





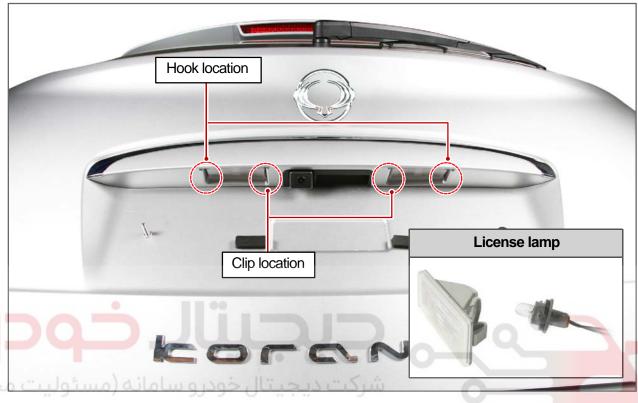
LAMP

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## 8320-12 LICENSE LAMP ASSEMBLY

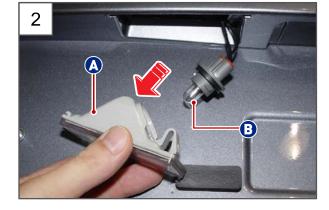
Preceding work

- Disconnect the negative battery cable.





1. Remove the inner side (clip part) of the license lamp first carefully from the tailgate rear garnish.



- 2. Move the license lamp to the right and remove the hook part.
- 3. Remove the bulb (B) from the removed license lamp (A).

Modification basis	
Application basis	
Affected VIN	

8320-12

FOLUNGO



3. Always engage the hook part (1) first and press the clip part (2) with the bulb fitted.

#### A CAUTION

Since the license lamp may be damaged when refitting in reverse order, always engage the hook part first and press the clip part.



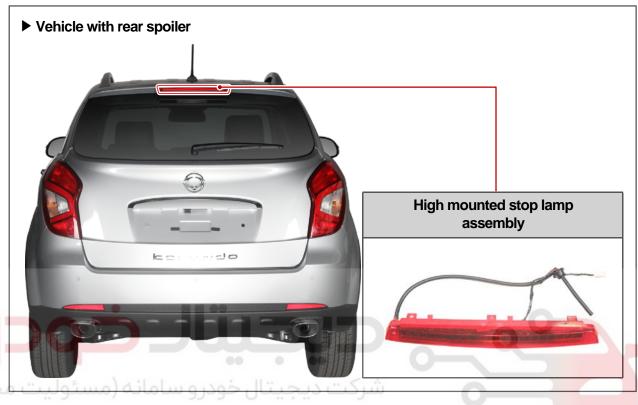


LAMP

## 8320-16 HIGH MOUNTED STOP LAMP ASSEMBLY

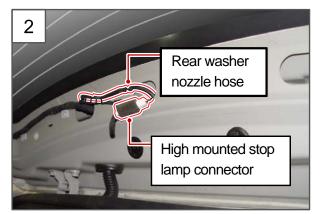
Preceding work

- Disconnect the negative battery cable.





1. Remove the upper trim of the tailgate.



2. Disconnect the high mounted stop lamp connector and washer nozzle hose.

### **A** CAUTION

Since the washer fluid may come out when disconnecting the washer nozzle hose, avoid getting the washer fluid on other parts.

	Modification basis		
	Application basis		
Affected VIN			
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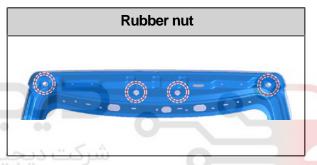


3. Remove the 4 rubber covers.



4. Remove the 4 rear spoiler mounting nuts (10 mm).



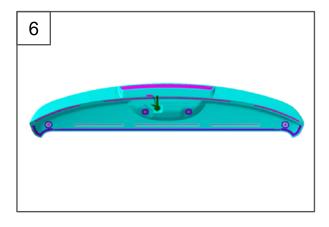


5

5. Remove the rear spoiler.

## **A** CAUTION

Make sure not to damage the paintwork and wiring during removal.



6. Remove the high mounted cover fitted to the rear spoiler.

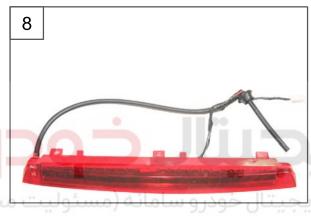
Modification basis	
Application basis	
Affected VIN	

08-97

8320-16

7

7. Unscrew the 3 mounting screws on the high mounted stop lamp.



8. Remove the high mounted stop lamp from the rear spoiler.



9. Install in the reverse order of removal.

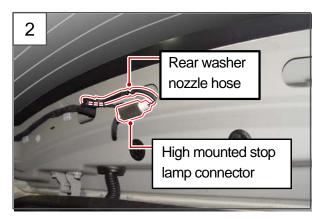
### **A** CAUTION

You must connect the nozzle hose to the high mounted stop lamp groove for installation.





1. Remove the upper trim of the tailgate.



2. Disconnect the high mounted stop lamp connector and the nozzle hose.

#### A CAUTION

Since the washer fluid may come out when disconnecting the washer nozzle hose, avoid getting the washer fluid on other parts.

LAMP

Modification basis	
Application basis	
Affected VIN	



3. Remove the 2 rubber covers.



4. Unscrew the 2 high mounted stop lamp mounting nuts (10 mm).



5. Remove the high mounted stop lamp.



Make sure not to damage the paintwork and wiring during removal.



6. Install in the reverse order of removal.

#### A CAUTION

You must connect the nozzle hose to the high mounted stop lamp groove for installation.

Modification basis	
Application basis	
Affected VIN	

08-100 7850-00

FOLUNGO

## 7850-00 PUDDLE (APPROACH) LAMP ASSEMBLY

Preceding work

- Disconnect the negative battery cable.





1. Separate the outside rearview mirror fixing part using a flat-bladed screwdriver.

#### **A** CAUTION

Take care not to damage the outside rearview mirror.



2. Remove the outside rearview mirror heating element (A) and the outside rearview mirror.

Modification basis	
Application basis	
Affected VIN	



3. Disconnect the outside rearview mirror cover.



4. Separate the puddle lamp from the outside rearview mirror housing using a flat-bladed screwdriver.



5. Disconnect the puddle lamp connector (A) and remove the puddle lamp.



6. Install in the reverse order of removal.

08-102 7850-05

FOLUNGO

## 7850-05 OUTSIDE TURN SIGNAL LAMP ASSEMBLY

Preceding work

- Disconnect the negative battery cable.





1. Separate the outside rearview mirror fixing part using a flat-bladed screwdriver.



#### **A** CAUTION

Take care not to damage the outside rearview mirror.

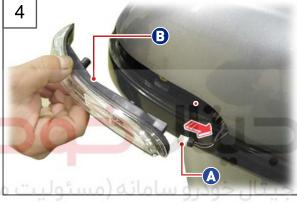


2. Remove the outside rearview mirror heating element and outside rearview mirror.

Modification basis	
Application basis	
Affected VIN	



3. Remove the one turn signal lamp mounting screw from the outside rearview mirror.



4. Disconnect the turn signal lamp connector (A) and remove the outside rearview mirror turn signal lamp (B).



5. Install in the reverse order of removal.

Modification basis Application basis Affected VIN

08-104 7770-20

Foravdo



## **OVERHEAD CONSOLE ASSEMBLY (INTEGRAED FRONT ROOM LAMP)**

Preceding work

- Disconnect the negative battery cable.

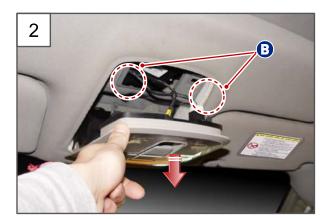




1. Unscrew the 2 mounting bolts (10 mm) on the overhead console.

LAMP

7770-20 08–105



2. Remove the overhead console clip (B).

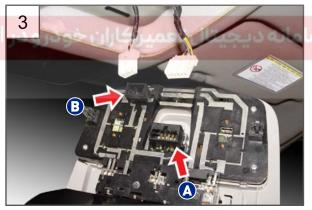


#### reference

Overhead console clip section (B)



3. Disconnect the front room lamp connector (A) and the sunroof switch connector (B), and remove the overhead console.



4. Install in the reverse order of removal.



Modification basis
Application basis
Affected VIN

08-106 8610-01

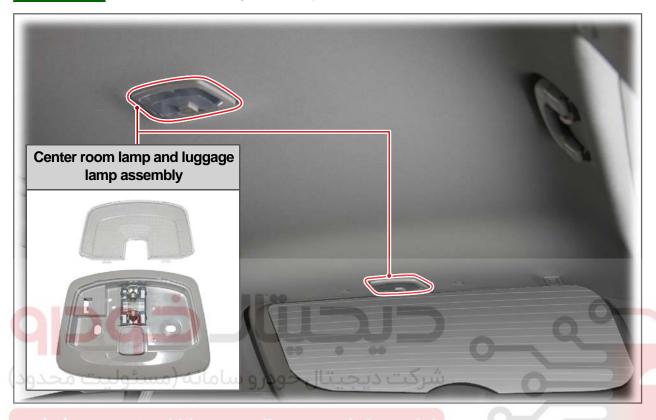
FOLUNDO



## **CENTER ROOM LAMP & LUGGAGE LAMP ASSEMBLY**

Preceding work

- Disconnect the negative battery cable.





1. Remove the lamp cover using a flat-bladed screwdriver.

LAMP

SWITCH



2. Remove the 2 room lamp mounting nuts (10 mm)



3. Disconnect the room lamp connector (A) and remove the room lamp assembly.



4. Install in the reverse order of removal.

Modification basis Application basis Affected VIN

08-108 8610-04

FOLUNGO

## 8610-04 GLOVE BOX LAMP

Preceding work - Disconnect the negative battery cable.





1. Push out the glove box lamp to the arrow direction using a flat-bladed screwdriver.



2. Disconnect the connector and remove the glove box lamp.

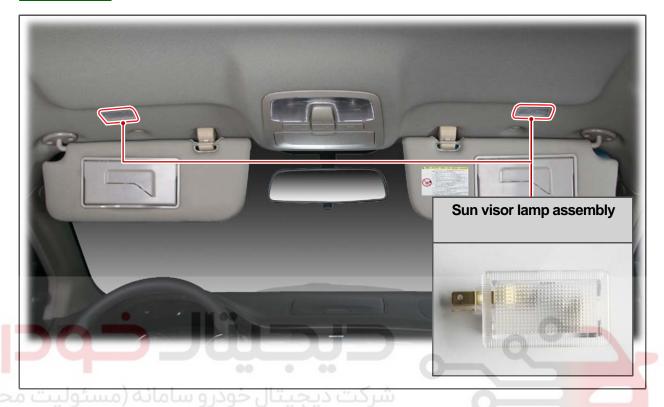
3. Install in the reverse order of removal.

Modification basis	
Application basis	
Affected VIN	

## SUN VISOR LAMP ASSEMBLY

Preceding work

- Disconnect the negative battery cable.





1. Separate the sun visor lamp assembly from the headlining using a flat-bladed screwdriver.



2. Disconnect the sun visor lamp connector (A) and remove the sun visor lamp.

3. Install in the reverse order of removal.

Modification basis Application basis Affected VIN

**LAMP** 

08-110 7115-15

Foravdo

## 7115-15 DOOR COURTESY LAMP ASSEMBLY

Preceding work

- Disconnect the negative battery cable.



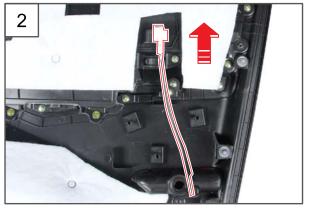




1. Remove the front door trim assembly.

## **♣** NOTE

Refer to "FRONT DOOR TRIM" under "REMOVAL AND INSTALLATION" in "BODY INTERIOR" chapter.



2. Pull out the door courtesy lamp to the arrow direction from the door trim.

LAMP

Modification basis	
Application basis	
Affected VIN	

BCM FUSE





3. Remove the door courtesy lamp assembly.



4. Install in the reverse order of removal.

Modification basis Application basis Affected VIN



## 1) Door Courtesy Lamp Bulb Replacement



1. Remove the door courtesy lamp lens using a flat-bladed screwdriver or equivalent.



- 2. Remove the door courtesy lamp bulb.
- 3. Install the new bulb in reverse order.



