# **Lighting System**

#### **Precautions:**

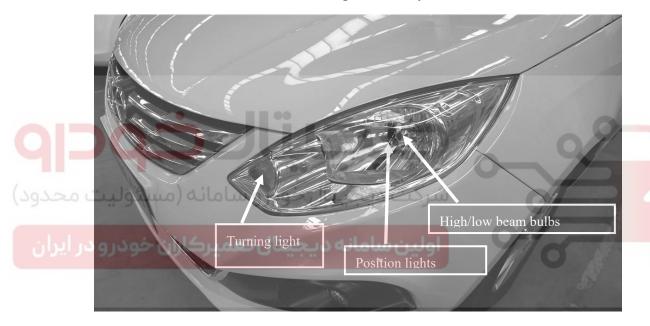
- Before removing the electrical connectors, the battery negative pole has to be removed and wait for at least 1m, otherwise it will damage the car.
- When removing and installing component, protect the parts to be detached with cloth so as to prevent damage.
- When removing the metal clamps from the trim parts, wrap the flat screwdriver edge with cloth.
  - Be careful not to damage the body components.
- In case where the removal/installation of some components cannot be achieved by one person, then two should be available for operation so as to prevent the drop-down.
- Do not use excessive force when removing and installing some trim parts, for it may cause the part deformation.

### The combination light



Layout of front light Components

- 2. The front combination Light Replacement
- 1) Removal
- 1 Disconnect battery negative pole.
- ② Remove front bumper, see "front bumper replacement".
- ③ Remove mounting screws of the front combination light in 3 installation points
  - The removal torque is from 9 N•m to 11 N•m.
  - (4) Carefully move the front combination light, remove the electric connector.
  - ⑤ Remove the front combination light assembly.



- 2) Installation.
- ① Connect the electric connector of headlight assembly.
- ② Install the headlight assembly and fix bolts.
- ③ Remove front bumper, see "front bumper replacement".
- 4 Refit up the battery negative.
- ⑤ Check if the lighting conforms to the requirements.
- If non-conform, see "The Combination Light Adjustment".
- 3. Replacement of high/low beam bulbs:
- Do not expose the headlight too long time after detached from the reflector, as the dust, damp and smoke etc may ingress into the lamp and affect the light performance. Should install a new bulb and let the rear cover back in place after

removing the bulb or the back cover immediately after

- The headlight is in shape of semi-enclosed light beam and uses the replaceable halogen bulb. The bulb replacement may be made inside the engine compartment, but preferably after the removal.
- When working on the bulb, only hold on the plastic holder of bulb instead of contacting the glass shelf.
  - Do not shake or rotate the bulb when removing.
  - 1) Removal
  - ① Disconnect battery negative.
- ② Nearly optical/far from the back cover from the light in the counterclockwise direction.
  - ③ Disconnect the connector from behind the bulb and loosen the buckle.
  - 4 Carefully remove the low and high beam bulb.
  - ⑤ Do not shake or rotate the bulb when removing.
  - 2) Installation.

Installation is the reverse order of removal.

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Do not expose the headlight too long time after detached from the reflector, as the dust, damp and smoke etc may ingress into the lamp and affect the light performance.

- The new bulb should be installed at once after the old one is removed from the headlight reflector.
  - 4. Replacement of the turn light bulb of headlight:

- Do not expose the headlight too long time after detached from the reflector, as the dust, damp and smoke etc may ingress into the lamp and affect the light performance.
- New bulb should be installed at once after the old one is removed from the headlight reflector.
- Headlight is in shape of semi-enclosed light beam and uses the replaceable halogen bulb. The bulb replacement may be made inside the engine compartment, but LT-3

preferably after the removal.

- When working on the bulb, only hold on the plastic holder of bulb instead of contacting the glass shelf.
  - Do not shake or rotate the bulb when removing.
  - 1) Removal
  - 1 Disconnect battery negative pole
  - 2 Unscrew, in clockwise, the turn light holder.
  - ③ Counter-clockwise turn signal light bulb from the lamp.
  - 4 Replace turn light bulb.
  - 2) Installation.

Installation is the reverse order of removal.

5. Replacement of the turn light bulb of headlight:

- Do not expose the headlight too long time after detached from the reflector, as the dust, damp and smoke etc may ingress into the lamp and affect the light performance.
- New bulb should be installed at once after the old one removed from the headlight reflector.
- Headlight is in shape of semi-enclosed light beam and uses the replaceable halogen bulb. The bulb replacement may be made inside the engine compartment, but preferably after the removal.
- When working on the bulb, only hold on the plastic holder of bulb instead of contacting the glass shelf.
  - Do not shake or rotate the bulb when removing.
  - 1) Removal
  - ① Disconnect battery negative pole.
- ② Counter-clockwise direction from near and far removed from the rear cover to remove position lights.
  - ③ Remove the position light bulb.

- 4 Change the position of light bulb.
- 2) Installation.

Installation is the reverse order of removal.

- 6. Adjustment of headlight:
- 1) Confirm if all of tire pressure are in normal state.
- 2) Place the car and tester on the same flat surface.
- 3) Confirm that the car is on free of load condition except the driver (or equal weight on the driver position).
  - 4) Turn on the headlight low beam.
  - 5) Use the adjusting screw to regulate the lighting.

Low Beam, High Beam adjusted up or down in a spot, you can adjust their upper and lower height; Low Beam, High Beam adjusted up or down in a spot, you can adjust their the height from the left to right. If the front part of body has been repaired and/or the headlight assembly replaced, the lighting alignment should be checked, use light detection scanner to adjust it.

6) Focus the light according to the beam-focusing table until it gets in place.

### Front fog lamp



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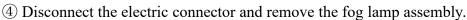
#### Location plan of front fog lamp elements

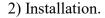
- 2. Replacement of front fog lamp
- 1) Removal
- ① Disconnect battery negative pole.
- ② Remove front bumper. See

### Front bumper replacement

3 Remove the fixing screws

on the fog lamp of front bumper.





- 1 Install the fog lamp assembly.
- 2 Connect the electric connector.
- 3 Remove front bumper, see "front bumper replacement".
- 4 Reinstall the battery negative and check the lighting. If non-conform to the requirements, the adjustment should be made. See"Adjustment of the Front Fog Lamp

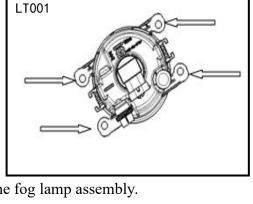
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The screw tightening torque: 2 N•m

- 3. Replacement of the front fog lamp bulb
  - 1) Removal
  - ① Remove the bumper.
  - ② Rotate the bulb seat cover counterclockwise. Remove the lamp cover.
- ③ Remove the fog light bulb from the light bulb
  - 4 Replace the fog light bulb.
  - 2) Installation.







Installation is the reversed order of removal.

- After installation, check the lighting. If non-conform to the requirements, the adjustment should be made. See"Adjustment of the Front Fog Lamp Light Beam"
  - 4. Adjustment of the front fog lamplight beam

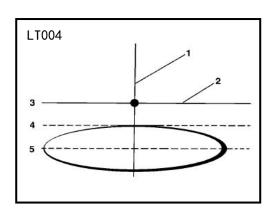
#### **Caution:**

- Front fog lamplight beam can provide the correct road lighting only after the adjustment.
- Prior or after the installation of a new fog lamp assembly and the vehicle maintenance or reparation, the installing bracket of front fog lamp may be possibly disturbed, therefore, the front fog lamplight beam has to be checked and adjusted.
- The front fog lamp assembly light beam of this model is unable to make horizontal adjustment.
- 1) In order to ensure that the vertical light beam of front fog lamp is accurately adjusted, prepare the car at first according to the following procedure.
- ① If the maintenance on other subjects was made on the car, confirm at first, that all parts and component of the car are in place.
  - ② Be sure that the fuel is at full level or slight lower.
  - 3 Park the car on a level ground at distance of 1.52m from the target screen.
  - 4 Stop all other operations on the car.
  - ⑤ Shake the body suspension in place. .
  - ⑥ Cover the front combination lamps when adjusting the fog light beam
  - 2) Turn on the front fog lamp.
- 3) Through the space under the bottom of front bumper

Insert the cross screwdriver to get close to the vertical adjustment screw of fog lamp.



4) Adjust up or down fog lamp
So that the top edge of highlight zone on the screen is at 102mm lower than the horizontal center line (2) extends from 0mm (3) below the horizontal center line to the ground limit (5).



Turn off the front fog lamp.

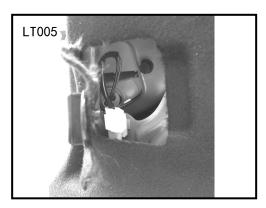
## **Taillight**

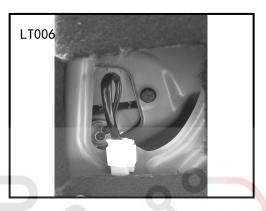


Location plan of taillight elements

- 2. Replacement of Reversing Lamp
- 1) Removal
- 1 Disconnect battery negative pole.
- ② Open the rear door.

③ Open the reversing light repair holes on the trunk carpet.





4 Remove 3 tail light mounting nuts.

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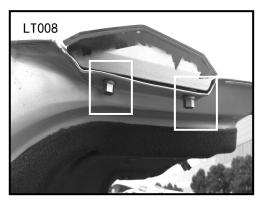


- ⑤ Replace the lamp or reverse light bulb.
- 2) Installation.

Installation is the reversed order of removal.

#### **Caution:**

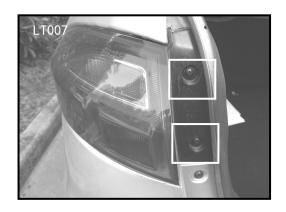
■Before installations make sure the taillight is intact.



- ■During installation the tail lights cannot be damaged.
- ■After installation, check if fender has been installed in place and if fits clearance between it and body is appropriate.

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- 3. Replacement of taillight
- 1) Removal
- ① Disconnect battery negative pole.
- ② Open the rear door.
- ③ Remove the rear tail light mounting screws.
- ④ Pull out the outside tail light with both hands along the direction the vehicle is heading for.



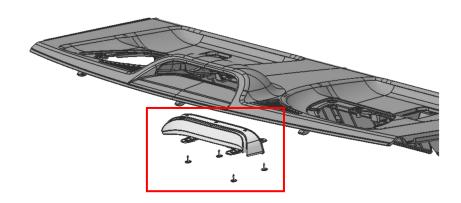
- ⑤ Counter-clockwise unscrew the bulb socket; replace the Light or Rear Position Light/Brake Light, Turn Signal Light Bulb.
  - 2) Installation.

Installation is the reversed order of removal.

### Caution:

- ■Before installations make sure the taillight is intact.
- ■During installation the tail lights cannot be damaged.
- ■After installation, check if fender has been installed in place and if fit clearance between it and body is appropriate.

### **High-mounted stop lamp**



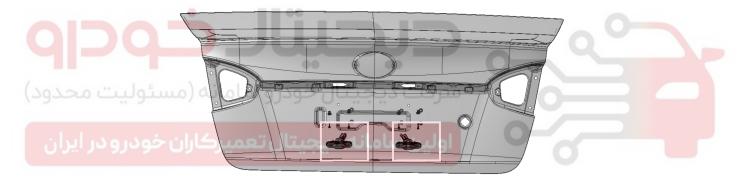
Layout of High Mounted Brake Light Components

- 2. High-mounted brake lamp replacement
- 1) Removal
- 1 Disconnect battery negative pole.
- ② Remove coat rack.
- 3 Disconnect the connector.
- 4 Use cross screwdriver to remove mounting screws.
- ⑤ Take off the high-position brake lamp.
- 2) Installation.

Assembly is the reversed order of removal.

### License plate light

1. Layout of Components



Layout of License Plate Light Components

- 2. Replacement of license plate light
- 1) Removal
- ① Disconnect the power supply.
- ② Use cross screwdriver to remove mounting screws
- 3 Take out the license plate light
- 4 Remove connector plug-ins, and replace license plate light.
- 2) Installation.

Installation is the reversed order of removal.

#### **Caution:**

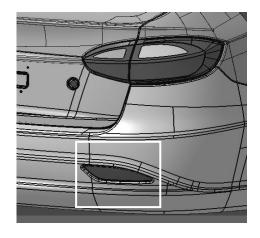
- Before installation make sure the taillight is intact.
- Install the lamp base to the mounting holes.

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■ Check it after installation.

### Rear fog lamp

1.Layout of Components



Location plan of rear fog lamp elements

### Rear fog lamp Replacement

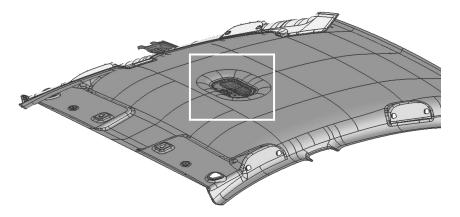
- 1) Removal
- 1) Disconnect battery negative pole.
- ② Remove rear bumper.
- 3 Unscrew the mounting screws, and remove the rear fog lights.
- 4 Replace the rear fog lamp assembly
- 2) Installation.

Installation is the reversed order of removal.

- Before installation make sure the taillight is intact.
- During installation the tail lights cannot be damaged.
- After installation, check if fender has been installed in place and if fits clearance between it and body is appropriate.

## The dome light

1. Layout of Components



Location plan of dome light components

Replacement of the rear dome light.

- 1) Removal
- ① Take out Dome light cover
- 2 Remove the dome light 2 internal mounting screws.
- 3 Carefully from the car ceiling remove the dome light, breaking the plug-ins.
- 4 Replace the lamp.
- 2) Installation.

Installation is the reversed order of removal.

- Based on actual operation to select the bulb to be replaced
- Before installation make sure the taillight is intact.
- The light bulb in the base must be set at position.
- Check after installation to make sure it meets the requirements.

# Maintenance data and specification

Lamp Wattage and light color

Lighting Parameters table

ITEM		Type of bulb	Power of bulb	Color of light
Front combination	Front position	Bulb(W5W)	2×5W	White
lamps	lamps			
	High/low beam	Halogen light(H4)	2×60W/55W	White
	light			
	Front direction	Bulb(P21)	2×21W	Amber
	indicator			
Front fog lamps		Bulb(H11)	2×35W	White
Rear combination	Brake light/rear	Bulb(P21/5W)	4×21W+4×5W	Red
lamps	position lamp			Q_
(مسئولیت م	Rear direction indicator	Bulb(P21W)	2×21W	Amber
اران خودرو در ا	Reversing light	Bulb(W16W)	2×16W	White
Rear fog lamps		Bulb(P21W)	2×21W	Red
Plate light		Bulb(W5W)	2×5W	White
HMSL		LED	1.44W	Red
Dome light		Bulb(C10W)	10W	White
Left/right door lamp		Bulb(W5W)	2×5W	Red
luggage boot lamp		Bulb(KHA)	5W	White