

## 0404 Wheel

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دیجیتال خودرو

شرکت دیجیتال خودرو سامانه (مسئولیت محدود)

اولین سامانه دیجیتال تعمیرکاران خودرو در ایران



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## 1 General Information

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### 1.1 Important notes

- Tires suitable for vehicle performance are used because they feature sound reliability and skid resistance.
- Hard acceleration, drastic brake, excessive tire pressure will shorten the service life of tires.
- The contact area between the rim and the tire should be cleaned before installing a new tire.
- First manually drive in the nuts and then use a wrench to tighten them to the specified torque before installing the wheel nuts.
- It is impermissible to apply grease on the wheel nuts.

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**1.2 Product specifications****Torque specifications**

Component	Torque (N·m)
Wheel nut	110±10

**Inflation pressure of cold tire (kPa)**

Vehicle model	Tire type	Inflation pressure (unladen) (Kpa)	Inflation pressure (full-load) (Kpa)	Inflation pressure (spare tire) (Kpa)
SQR7150J150	185/60R15 84H	230/210	240/250	250
SQR7150A137	195/55R15 85V	230/210	240/250	250

**Tire and rim type**

Tire type	Rim type
185/60R15 84H	15×6J
195/55R15 85V	15×6J

**Permissible maximum rim distortion**

Aluminum alloy rim	3 mm
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## 2 Diagnosis and Inspection

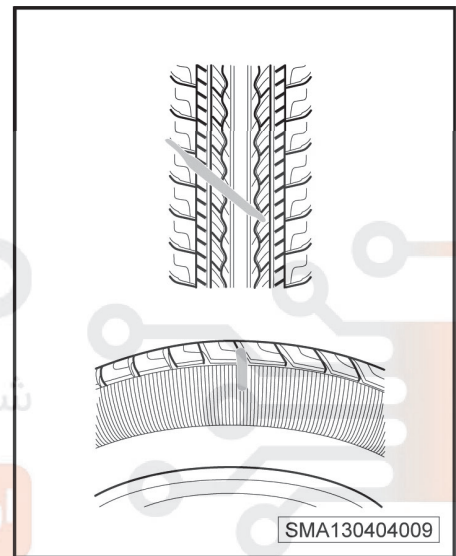
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### 2.1 Checking the wheels

**Caution**

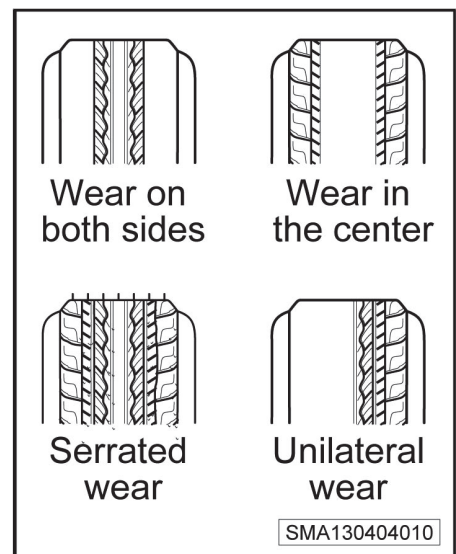
- Be sure to refer to the instructions when installing non-standard tires or rims.
- Standard tires of the same size and type should be used.

1. Check if tires are damaged or scratched, and replace them if necessary.



2. Check if rims are distorted or damaged, and replace them if necessary.

3. Check for abnormal wear on tires. If wear is found on both sides or in the center of the tires, adjust the tire pressure; If unilateral wear or serrated wear is found on the tires, check the wheel alignment, and adjust them if necessary.

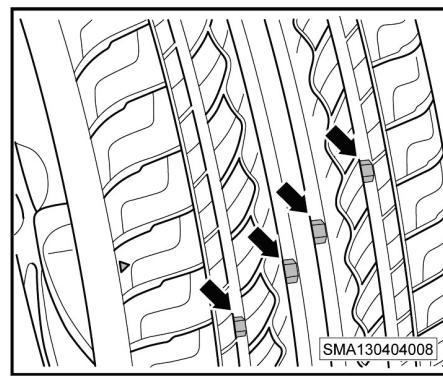


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04 - Chassis

4. Check the tire indicating belt (-arrow-).When tires are worn to the indicating belt, replace them.



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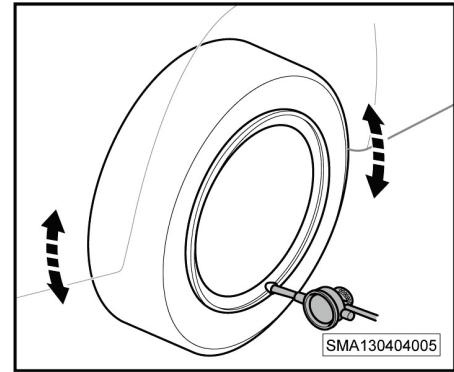
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## 2.2 Checking the wheel oscillation

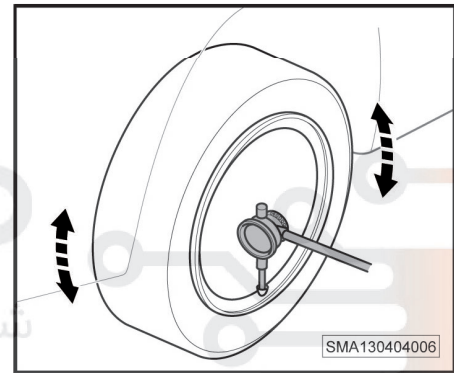
1. Prop the vehicle at a suitable position and lift it.
2. Check for wheel distortion.
3. As shown in the figure, place a dial gauge, and rotate the wheels in the (-arrow-) direction and measure the axial oscillation.

Service limit: 1.2 mm



4. As shown in the figure, place a dial gauge, and rotate the wheels in the (-arrow-) direction and measure the radial oscillation.

Service limit: 1.2 mm



5. If the wheel oscillation does not meet the technical requirements, check the axial clearance of the wheel bearings and replace them if necessary.
6. If the axial clearance of the bearings meets the technical requirements, but the wheel oscillation is outside the service limit, then replace the wheels.

**2.3 Common tire fault and maintenance list**

Symptoms	Possible causes	Maintenance recommendations
Uneven tire wear	Improper toe-in and camber angle	Adjust the toe-in and camber angle
Tread center wear	Excessive tire pressure	Adjust the tire pressure
Serrated tread wear	Improper toe-in and camber angle	Adjust the toe-in and camber angle
Premature wear of some area of the tire	Drastic brake	Avoid a drastic brake
Scratches on the tire side wall	Resulting from the sharp objects on road	Replace the tires
Excessive tire noise	Incorrect tire pressure Tire deterioration	<ul style="list-style-type: none"> <li>Adjust the tire pressure</li> <li>Replace the tires</li> </ul>
Departure from the right direction	Incorrect tire pressure Abnormal tire wear Steering system failure Brake system failure Suspension system failure	<ul style="list-style-type: none"> <li>Adjust the tire pressure</li> <li>Replace the tires</li> <li>Remove steering system failure</li> <li>Remove brake system failure</li> <li>Remove suspension system failure</li> </ul>
Hard steering	Incorrect tire pressure Steering system failure Suspension system failure	<ul style="list-style-type: none"> <li>Adjust the tire pressure</li> <li>Remove steering system failure</li> <li>Remove suspension system failure</li> </ul>
Braking deviation	Incorrect tire pressure Brake system failure	<ul style="list-style-type: none"> <li>Adjust the tire pressure</li> <li>Remove brake system failure</li> </ul>

### 3 Standard Operation

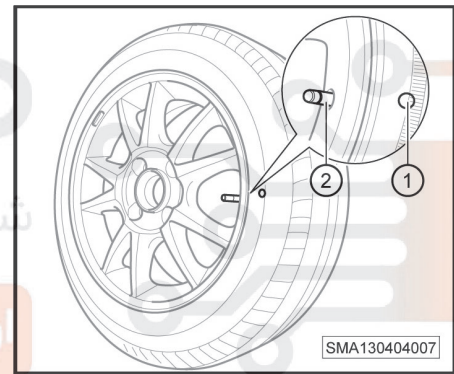
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#### 3.1 Replacing the tires

##### ⚠ Warning

- The speed grade of new exchange tire must meet with the prescribed values for safe operation; otherwise, a sudden tire burst may occur.

- Remove the wheels.=> refer to page 760
- Use a tire removing device to remove the tires according to the instructions.
- The white dot (-1-) on tire edge must be aligned with the nozzle (-2-) on the rim when installing the tires.



- Adjust the tire pressure to the prescribed value.
- Check for leakage of the contact area between the nozzle, tire and rim.
- Use a dynamic balancer to carry out wheel balancing.
- Install the wheels=> refer to page 760.
  - Tightening torque of the nuts:  $110 \pm 10 \text{ N}\cdot\text{m}$

##### i Note

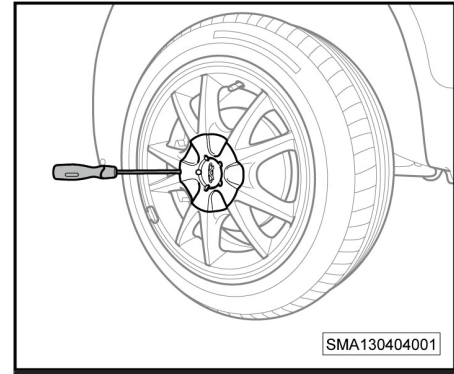
- You should avoid scratching the tires or rims when a tool is used to remove the tires.
- The contact area between the tire and rim should be cleaned when installing the tire.
- Please replace a suitable tire for vehicle.



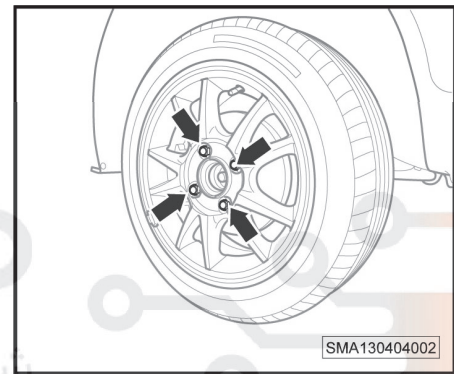
### 3.2 Removing and installing the wheels

#### Removal

1. Use a screwdriver to pry out the decorative covers for wheel fixing nuts.



2. Loosen the wheel fixing nuts (-arrow-).



3. Prop the vehicle firmly and lift it.
4. Unscrew the wheel fixing nuts.
5. Remove the wheels.

#### Installation

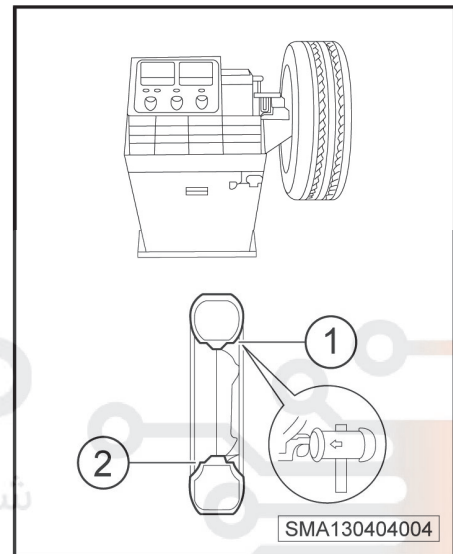
1. Anticorrosion treatment is conducted on the contact area between the wheel and the brake disc.
2. First manually drive in the wheel nuts before installing the wheels.
3. Use a tool to tighten the wheel nuts in a diagonally opposite direction.
4. Lower the vehicle and use a torque wrench to tighten the wheel nuts to the specified torque.
  - Tightening torque of the nut:  $110 \pm 10 \text{ N}\cdot\text{m}$

### 3.3 Wheel balancing

#### **i** Note

- The dynamic balancer must be calibrated before carrying out wheel balance.
- Remove impurities inside the tire pattern to ensure the tire balance effect.

1. Remove the wheels .=> refer to page 760
2. Install the wheels on a dynamic balancer to carry out dynamic balance tests.
3. If the results of the dynamic balance tests do not meet the prescribed values, balance blocks should be installed at positions (-1-) and (-2-) until the dynamic balance data meet the prescribed values.



#### **eye** Caution

- Take care to use tools and avoid damaging rims when installing the balance blocks.
- It is impermissible to reuse the used balance blocks.

**3.4 Wheel rotation**

**Note**

- It is recommended that the first wheel rotation for new cars is performed at a mileage of 5000 km and the next wheel rotation should be carried out at a mileage of 10,000 km.

**Non-directional wheel rotation method:**

