TIRE AND WHEEL

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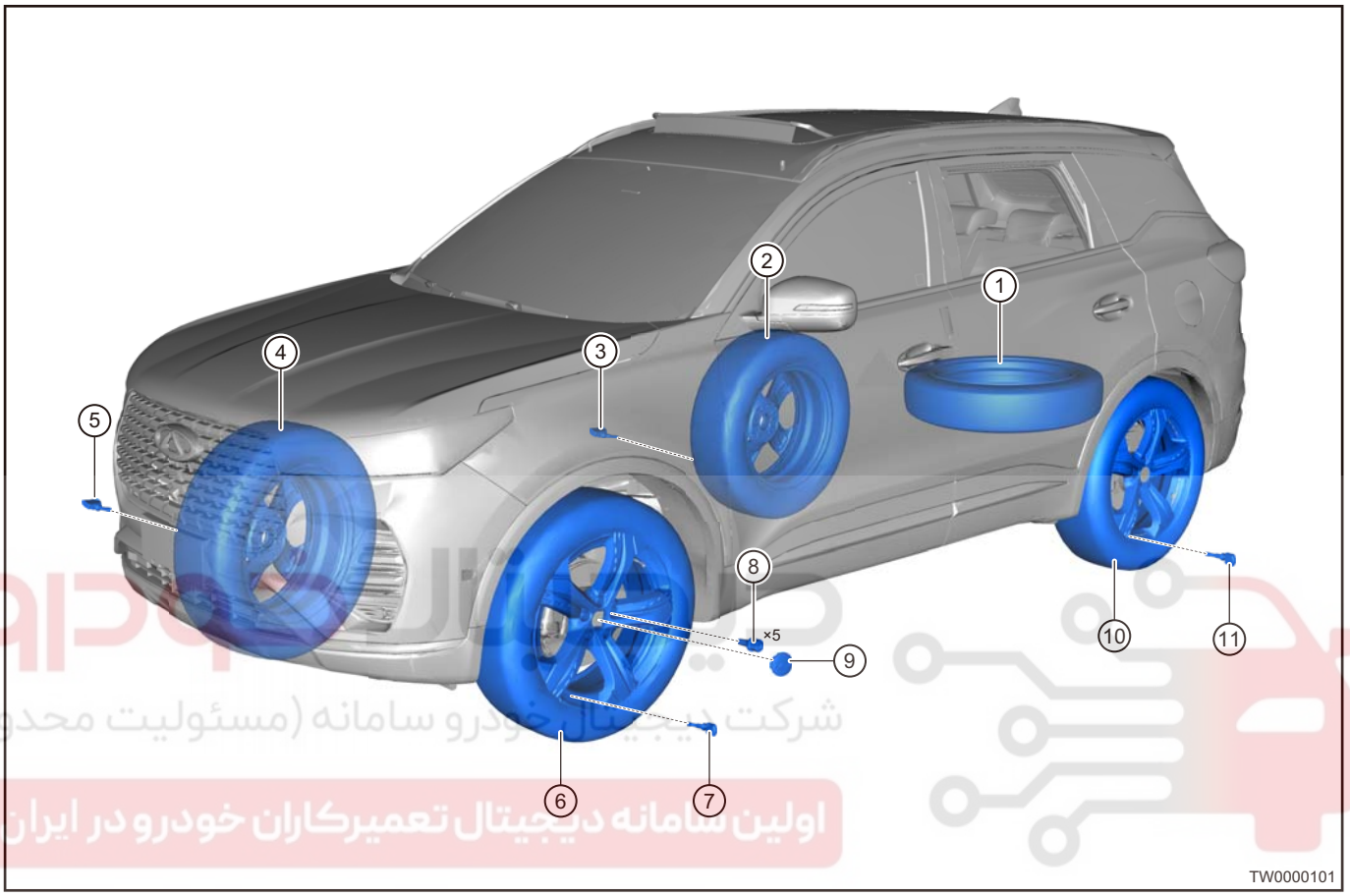
TIRE AND WHEEL

Overview

Tire and Spare Tire



1	Spare Tire Assembly	2	Rear Right Wheel
3	Rear Right Wheel Tire Pressure Sensor	4	Front Right Wheel
5	Front Right Wheel Tire Pressure Sensor	6	Front Left Wheel
7	Front Left Wheel Tire Pressure Sensor	8	Wheel Bolt
9	Trim Cover	10	Rear Left Wheel
11	Rear Left Wheel Tire Pressure Sensor		

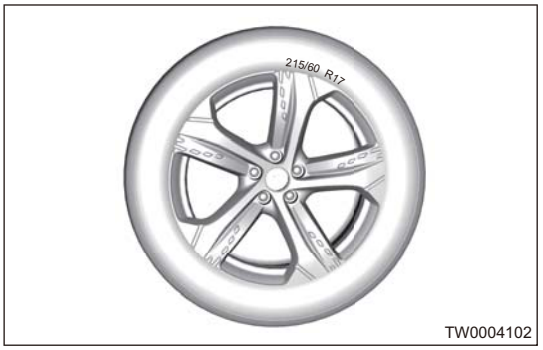
Precautions

1. Use tires only with the standard specification and type, because they have excellent reliability and skid resistance. Using a non-standard tire may lead to vehicle malfunction, which may cause an accident, resulting in serious injury or even death.
2. Contact surface between rim and tire should be cleaned before installing a new tire.
3. When installing wheel bolts, firstly, pre-tighten the bolts by hand, and then tighten them to the specified torque with a torque wrench.
4. Do not apply grease to the wheel bolts.
5. Some bad driving habits may shorten the tire life:
   - Rapid acceleration.
   - Depressing brake pedal suddenly and firmly.
   - High-speed driving.
   - Turning at excessive speed.

- Striking curbs or other obstacles.
- Tire pressure is too high or too low when driving vehicle.

Tire Identification

1. Letter and number code of tire type, size, load index and speed level are stamped on the side wall of tire as shown in the illustration.



Specifications

Torque Specifications

Description	Torque (N·m)
Wheel Mounting Bolt	130 ± 10

Tire Type

Description	Type
Tire Type	215/60R17
	225/65R17
	225/60R18
	225/55R19

Rim Type

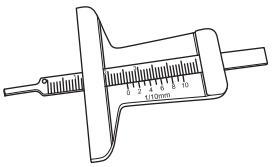
Description	Type
Rim Type	17×6.5J
	18×6.5J
	19×7J

Tire Pressure Specifications

Description	Tire Pressure (kPa) (Unloaded)
Front Tire	220
Rear Tire	220
Spare Tire	420

Tool

General Tool

Tool Name	Tool Drawing
Tire Depth Gauge	 RCH009406

DIAGNOSIS & TESTING

Problem Symptoms Table

Hint:

Use symptoms table below to help determine cause of problem. Check each suspected area in sequence. Repair or adjust faulty components, or replace as necessary.

Symptom	Suspected Area
Wear on one side of tire	Wheel alignment (incorrect)
Wear on both sides of tire	Tire pressure (insufficient)
Tire center wear	Tire pressure (excessive)
Serrated wear	Wheel alignment (incorrect)
Severe wear on partial area of tire	Braking (too hard)
Scratches on side wall of tire	Sharp objects on road (scratched)
Excessive tire noise	Tire pressure (incorrect)
	Tire (worn)

Inspection

Tire Inspection

Caution:

- Be sure to refer to the instruction when installing non-standard tires and rims.
- Use tires with standard specification and type.

1. Check if tires are scratched or damaged as shown in the illustration.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2. Check if rims are scratched or damaged as shown in the illustration.


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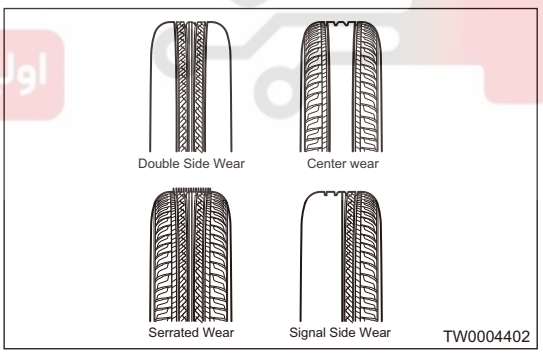
3. Check if tires are worn abnormally as shown in the illustration.



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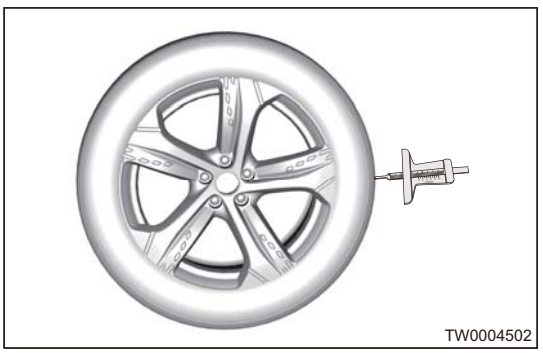
4. Measure the tread pattern depth with a tire depth gauge. When the depth is less than 1.6 mm, the tire should be replaced.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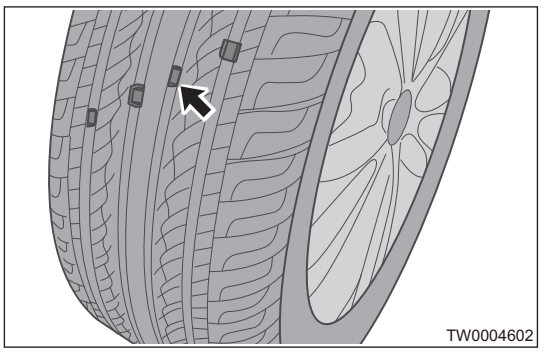
5. Check the tread wear indicators (arrow). When tires are worn to the indicating mark, replace them.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6. Use tire pressure gauge to check if pressures of all tires (including spare tire) are normal. Inflate tires to specified tire pressure as necessary.

   Warning:

   - Use tire pressure gauge when inflating, and never use the tire pressure indication on meter to inflate. If inflating tires using pressure values displayed from tire pressure monitoring system, inflation pressure may be higher than tire standard value, resulting in a risk of accident.
   - The tire pressure is too low, please resume it to normal pressure as soon as possible. Too low tire pressure will increase fuel consumption and tire wear. And seriously worn tire will cause an accident such as flat tire.

7. Check air valve (arrow) for leakage.

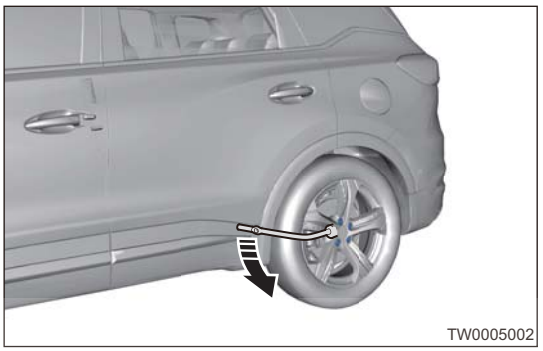

TW0004702

ON-VEHICLE SERVICE

Wheel

Removal

1. Stop vehicle at a level surface and apply parking brake.
2. Turn off all electrical equipment and ENGINE START STOP switch.
3. Disconnect the negative battery cable.
4. Remove the tire bolt cover (if equipped).
5. Using a tire wrench, loosen the wheel mounting bolts.
6. Firmly support and raise the vehicle to a proper height.
7. Using a tire wrench, remove 5 wheel mounting bolts.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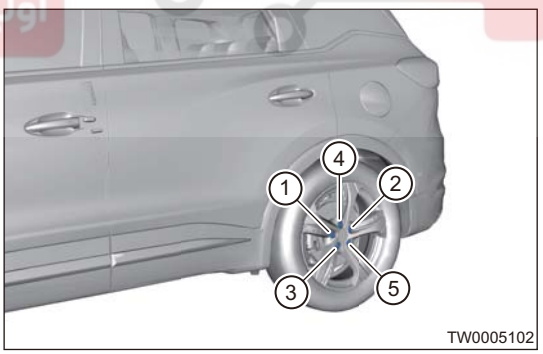
8. Remove the wheel.

Caution:

When removing and installing the wheel with tire pressure sensor, the tire pressure monitoring section must be strictly referred to.

Installation

1. Anti-corrosion and anti-rust treatment is conducted on the contact surface between wheel and brake disc.
2. Install the wheel and pre-tighten the wheel mounting bolts by hand.
3. Using a torque wrench, tighten the wheel mounting bolts evenly to the specified torque in the order shown in the illustration.
   Torque: 130 ± 10 N·m



TW0005102

4. Install the tire bolt cover (if equipped).
5. Connect the negative battery cable.

Caution:

- DO NOT attempt to repair wheels by striking, heating or welding.
- Replace wheel mounting bolts with special wheel mounting bolts, rather than those with different specifications or inferior quality.
- Be careful not to damage coating on wheel.
- To avoid damage to tire or over/under tightening wheel mounting bolts, never use an impact wrench.
- DO NOT apply grease to wheel mounting bolts.

Tire Replacement

Caution:

Spare tire is not equipped with tire pressure sensor, so there will be malfunction in tire pressure monitoring system when spare tire is replaced in vehicle equipped with tire pressure monitoring system.

Warning:

Speed level of new replaced tire must meet the specified values for safe operation; otherwise the tire may blow out.

1. Remove the wheel.
2. Use a tire remover to remove tires according to the instructions.

   Caution:

   - When removing and installing the tire with tire pressure sensor, be sure to strictly refer to the Tire Pressure Monitoring section.
   - Always use automatic electric wrench when installing tire pressure sensor, with a torque of 5 ±1 N·m.
   - When installing wheel assembly with TPMS, align dynamic balance testing mark (light point) on tire with valve core (TPMS) position on rim.
   - Before installing air valve, check if air valve hole of wheel is smooth without any burrs, and apply glycerin to air valve rubber surface or soak air valve into glycerin fluid, and then pull or press the locating ring of air valve by force to pass it through the air valve hole and install it into place (it is possible to use soapy water instead of glycerin).
   - The four driving tires mounted on the same vehicle must be from the same manufacturer and are not allowed to be mixed.
   - Before assembling the tire, apply glycerin or soapy water to the rim area of tire.
   - When there is "dark point" mark on rim, align the dynamic balance testing mark on tire with "dark point" mark on rim.
   - When there is no "dark point" mark on rim, align the dynamic balance testing mark on tire with the air cock.
3. Adjust tire pressure to specified value.

   Caution:

   - Before performing four wheel alignment work, check the four tires pressure and adjust the pressure: 220 kPa of front wheel and 220 kPa of rear wheel.
   - The rated inflation pressure of T-type spare tire assembly is 420 kPa, and store spare tire in isolation from 4 loaded wheels.
   - Please replace the tires only with standard specification and type.
4. Check contact surface among air valve, tire and rim for leakage.
5. Using a dynamic balancer, adjust the wheel balance.
6. Install the wheel.

   Torque: 130 ± 10 N·m

   Caution:

   - Avoid scratching tires and rims when removing tires.
   - Contact surface between tire and rim should be cleaned when installing tires.

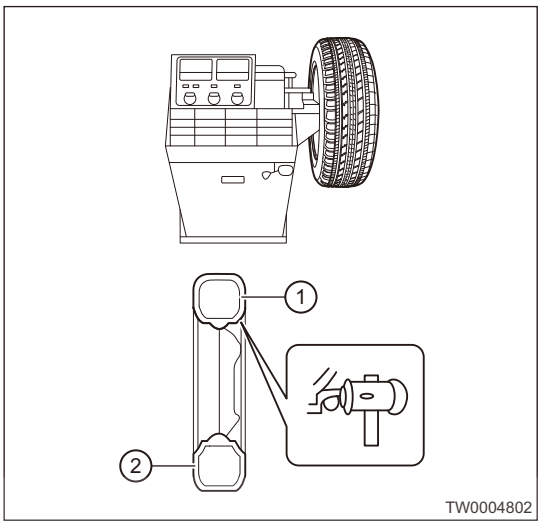
Wheel Balance

Caution:

- Dynamic balancer must be calibrated before adjusting wheel balance.
- Remove impurities inside tread pattern and original balance blocks to ensure wheel balance.

1. Remove the wheel.
2. Adjust tire pressure to specified value.
3. Install wheel with balance block removed to balancer. Install the balance shaft with mounting surface of wheel facing inward, choose a suitable taper body, and firmly lock the wheels using a locking device (align the taper body with center hole, otherwise data may be incorrect).

4. Turn on the power source of balancer, and input parameters such as the measured distance from rim to balancer, rim width and rim diameter.
5. Put down the wheel protector, and proceed to balance test procedure automatically (start button should be pushed for some balancers). When measurement is completed, the unbalanced weight for both sides of tire will be displayed on the balancer automatically, and the wheel brakes automatically until it stops. Do not open the protector before stopping. Failure to do this may lead to an accident.
6. According to the measurement result, corresponding balance blocks should be installed on the outside (1) and inside (2) of rim edge as shown in the illustration.



7. Perform test again after assembly is completed, until the balancer displays 0.
8. After dynamic balance is completed, remove the wheel.

Caution:

- Perform dynamic balance inspection after tire inflation (dynamic balance inspection is not necessary for T-type spare tire), and install balance blocks of appropriate weight to inside and outside of wheels as required. When ambient temperature is lower than 25 ℃ , it is necessary to heat and insulating paste type balance block to ensure that assembly temperature of the paste type balance block is between 25 ℃ and 38 ℃ . The residual unbalanced requirement after balance block assembled on wheel assembly:
- Clamp type balance block side is 8 g or less, and paste type balance block side is 10 g or less.
- Either side of each wheel is permitted to use only one clamp type balance block at most, and paste type balance block should be pasted as needed.
- When dynamic balance inspection of assembly is performed: Unbalanced mass of clamp type balance block side is not more than 67 g, unbalanced mass of paste type balance block is not more than 82 g when clamp air valve is matched, unbalanced mass of paste type balance block is not more than 112 g when TPMS is matched.
- DO NOT tap balance blocks forcibly during installation. If so, the balance block needs to be replaced in time. The replaced balance block is not allowed to be used again.

Tire Inflation

Do not inflate tires with high tire temperature, which will cause serious damage to the tire, even blowouts, resulting in accidents.

Do not inflate tires depending on values displayed from tire pressure monitoring system. Tire pressure monitoring system can monitor tire pressure and temperature in real time only when vehicle speed is more than 30 km/h. If inflating tires using pressure values displayed from tire pressure monitoring system, inflation value may be higher than tire standard value, which will cause accidents.

When vehicle is driving normally, heat is generated in the tire due to friction, which will cause tire pressure to increase. Exposure of tires to the sunlight may also cause an increase in air pressure, resulting in a change in tire pressure. For every 10°C increase in tire temperature, tire pressure will increase by about 0.1 bar.

Tire Rotation

Description

Front and rear tires operate at different loads and perform different steering, driving and braking functions. For these reasons, different wear rate is formed, causing irregular wear patterns. These effects can be reduced by rotating tires at regular time.

Advantages of tire rotation:

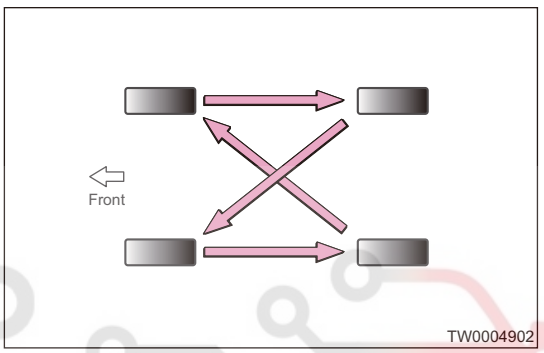
- Improving tread life;
- Maintaining traction levels;
- Maintaining a smooth and quiet driveability.

Caution:

Chery recommends that you should rotate tires every 10000 km (Optimal tire rotation mileage is 5000 - 7000 km). However, the best suitable time for tire rotation differs depending on driver's driving habits and road conditions.

Rotation Method

Perform tire rotation as shown in the illustration.



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