TIRE AND WHEEL

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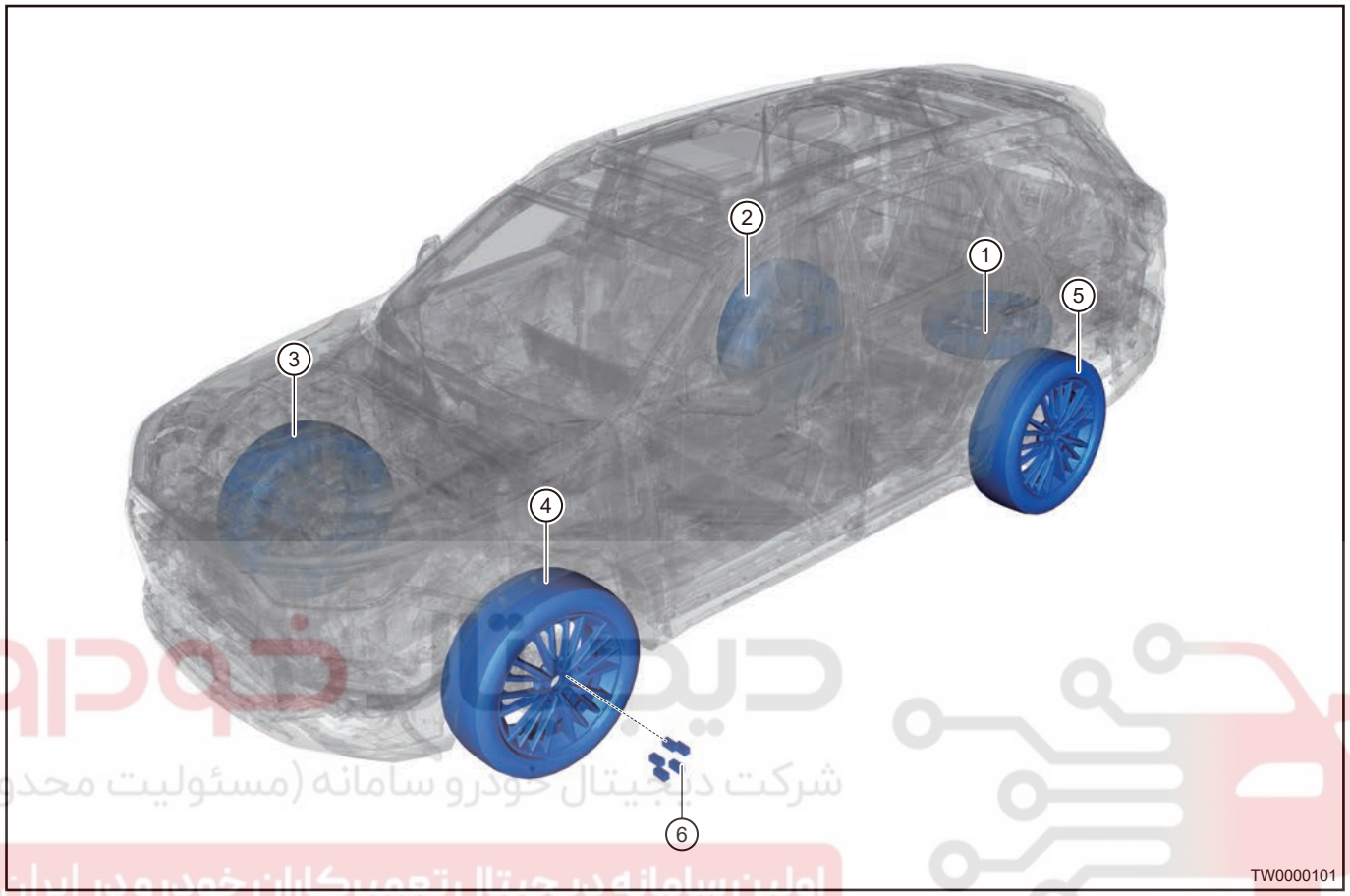
GENERAL INFORMATION

Description



1	Spare Tire Assembly	4	Front Left Wheel
2	Rear Right Wheel	5	Rear Left Wheel
3	Front Right Wheel	6	Wheel Bolt

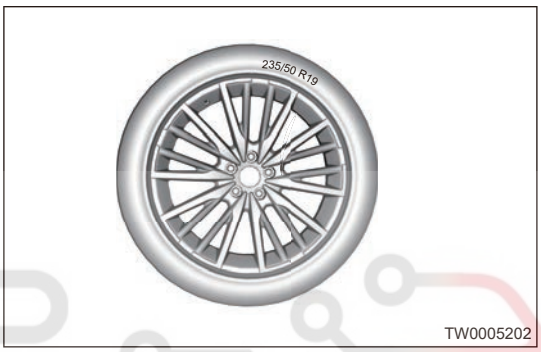
Precautions

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:
   a. Rapid acceleration
   b. Depressing brake pedal suddenly and firmly
   c. High-speed driving
   d. Turning at excessive speed
   e. Striking curbs or other obstacles
   f. 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.
   a. R18-inch glossy aluminum rim: 235/55 R18

   b. R19-inch glossy aluminum rim: 235/50 R19



Specifications

Torque Specification

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

Tire Type

Description	Type
Tire Type	235/55 R18 235/50 R19

Rim Type

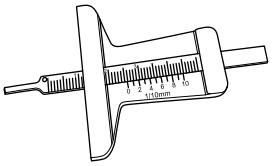
Description	Type
Rim Type	18X7.5J, 19X7J

Tire Pressure Specifications (Before Four Wheel Alignment)

Description	Tire Pressure (kPa)
Front Tire	220 ± 10
Rear Tire	220 ± 10
T-type Spare Tire (Rated inflation pressure)	420 ± 20

Tool

General Tool

Tool Name	Tool Drawing
Tire Depth Gauge	 RCH0094006

DIAGNOSIS & TESTING

Problem Symptoms Table

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

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.
2. Check if rims are scratched or damaged as shown in the illustration.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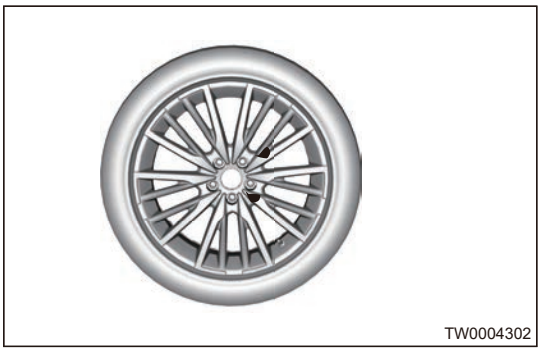
3. Check if tires are worn abnormally as shown in the illustration.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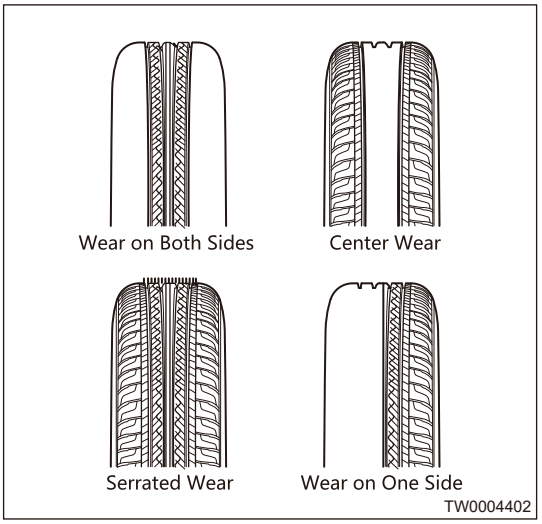
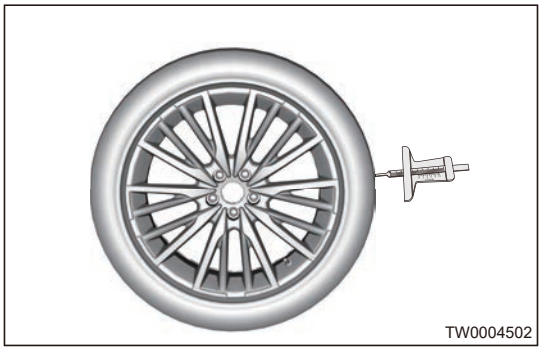
4. Measure the tread pattern depth with a tire depth gauge. When the depth is less than 1.6 mm, the tire should be replaced.



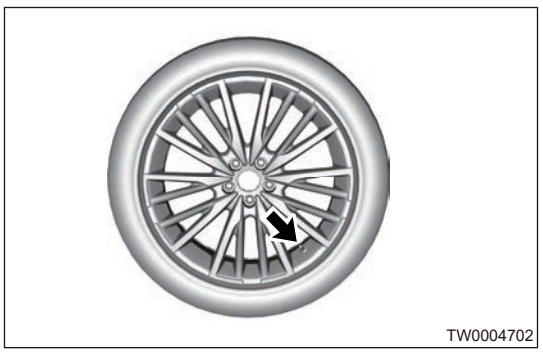
5. Check the tread wear indicators (arrow). When tires are worn to the indicating mark, replace them.



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.



ON-VEHICLE SERVICE

Wheel

Removal

1. Remove the wheel.
   a. Stop vehicle at a level surface and apply parking brake.
   b. Using a tire wrench, loosen the wheel mounting bolts.
   c. Firmly support and raise the vehicle to a proper height.
   d. Using a tire wrench, remove 5 wheel mounting bolts.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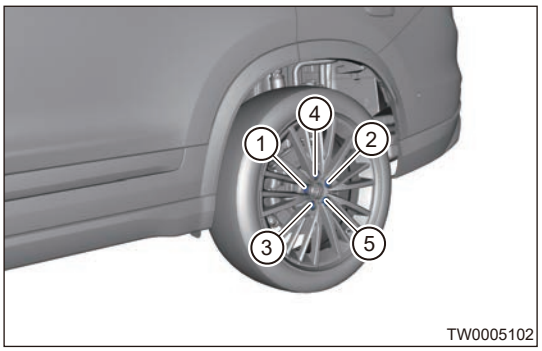
   e. Remove the wheel.

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

Installation

1. Install the wheel.
   a. Anti-corrosion and anti-rust treatment is conducted on the contact surface between wheel and brake disc.
   b. Install the wheel and pre-tighten the wheel mounting bolts by hand.
   c. Using a torque wrench, tighten the wheel mounting bolts evenly to the specified torque in the order shown in the illustration.

      Tightening torque: 130 ± 10 N•m



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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

Removal

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. • 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 installing wheel assembly with TPMS, align dynamic balance testing mark (light point) on tire with valve core (TPMS) position on rim. • 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: Front wheel: (220 ± 10) kPa, rear wheel: (220 ± 10) kPa. • The rated inflation pressure of T-type spare tire assembly: (420 ± 20) kPa, isolated from the four wheels on the vehicle. • 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.
   Tightening torque: 130 ± 10 N•m

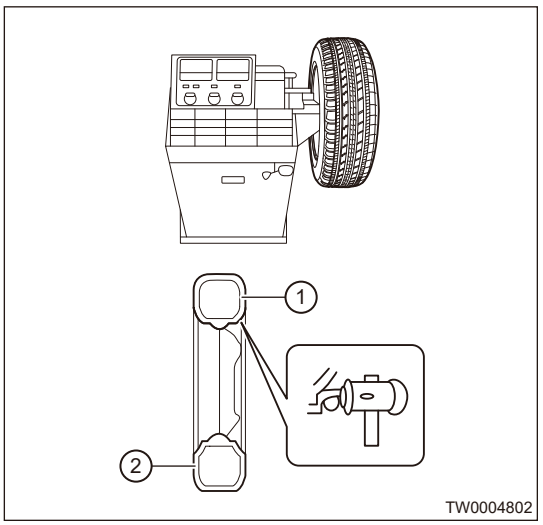
Caution
• Avoid scratching tires and rims when removing tires. • Contact surface between tire and rim should be cleaned when installing tires.

Wheel Balance

Operation Step

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

- Dynamic balance requirements for wheel assembly: One side for paste type ⩽ 112 g; one side for card type ⩽ 67 g. If dynamic balance of wheel assembly is out of tolerance, it is allowed to rework once. Rework method: Rotate tire 180 ° after deflation, and then inflate it to perform dynamic balance test. If it is still not as specified after reworking, return the parts according to the relevant regulations of company by quality engineer.
- The residual unbalanced requirement after balance block being assembled on wheel assembly: One side for paste type ⩽ 10 g; one side for card type ⩽ 8 g. Sampling inspection is adopted for re-inspection of residual imbalance in batch production, and 100% full inspection is adopted for limited quantities of trial assembly.
- Clamp type balance block installation: Either side of each wheel is permitted to use only one clamp type balance block at most. 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.
- Paste type balance block installation: Before pasting, wipe the adhesive part of aluminum rim with alcohol cotton to ensure that there is no oil, dust, etc. Tear off the plastic tape behind the adhesive balance block, and align it with step reference surface of pasting position, and apply force evenly with both hands. When the room temperature is lower than 25° C, the paste type balance block should be heated with oven temperature at 25 - 38° C.
- The T-type spare tire does not require dynamic balance test and the installation of balance block.

Tire Rotation

Operation Step

Description

1. 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.
2. Advantages of tire rotation:
   - Improving tread life
   - Maintaining traction levels
   - Maintaining a smooth and quiet driveability

Caution
Chery recommends you rotate your tires every 10000 km. However, the best suitable time for tire rotation differs depending on driver’ s driving habits and road conditions.

Rotation Method

1. Perform tire rotation as shown in the illustration.