MOONCOL

MC 350



Welcome to the MOONCOOL Family!

You are now the proud owner of a MC350 E-trike! Thank you for choosing MOONCOOL!

This manual is designed to guide you in completing the assembly. Please read this manual from beginning to end before starting assembly, and refer to it often as you work. If you experience difficulty, please ask a mechanically inclined friend for assistance, or visit a local bike shop. You can also contact Mooncool Support by emailing support@mooncool.com.

Important Notes

In addition to assembly instructions, you will find very important information regarding safety, performance, and maintenance. It is vital that you read and comprehend all tips and precautions prior to your first ride. For questions, please ask a friend or contact Mooncool Support. Your tricycle shipment includes all the essential tools for assembling and adjusting the MC350. However, some tasks are easier with professional tools and skills. We recommend the assistance of a certified tricycle mechanic.

Before allowing anyone to ride your MC350, please request that they read this manual before their first ride. This will help avoid accident or injury. Your MC350 is a powerful riding machine, and it is important to insist that your friends and family members read this manual before riding.

WARNING: Wear a certified tricycle helmet when riding your MC350. For night riding safety, also wear fluorescent or reflective clothing.

WARNING: Ride your MC350 entirely at your own risk. MOONCOOL cannot predict every riding circumstance, and makes no representation that tricycle riding is a safe activity. MOONCOOL is not responsible for personal injury or product damage.

WARNING: Bodily injury and property damage resulting from use of your MC350 may not be covered by your existing insurance policies. It is your responsibility to purchase adequate insurance coverage.

WARNING: Improper assembly of your MC350 may result in significant damage to your MC350 and/or bodily injury. If you are uncertain of your skills, hire a qualified bicycle mechanic.

WARNING: The motor, controller, sensor, battery, and cables provided with your MC350 shall not be used for other purposes, including disassembly or modification. Doing so will violate your warranty and may damage certain components and/or cause bodily injury.

MOONCOOL tricycles are sold with a one-year warranty that covers all defective or damaged parts.

The MOONCOOL Service Department is located in Covina, CA.

MOONCOOL Service email address: support@mooncool.com

When sending a support request email, please include your order number, photos or videos to help us understand the problem, and a screenshot or photo of your invoice.

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Check all parts of the tricycle before assembly. If any parts are missing or damaged, please contact us via your account order.

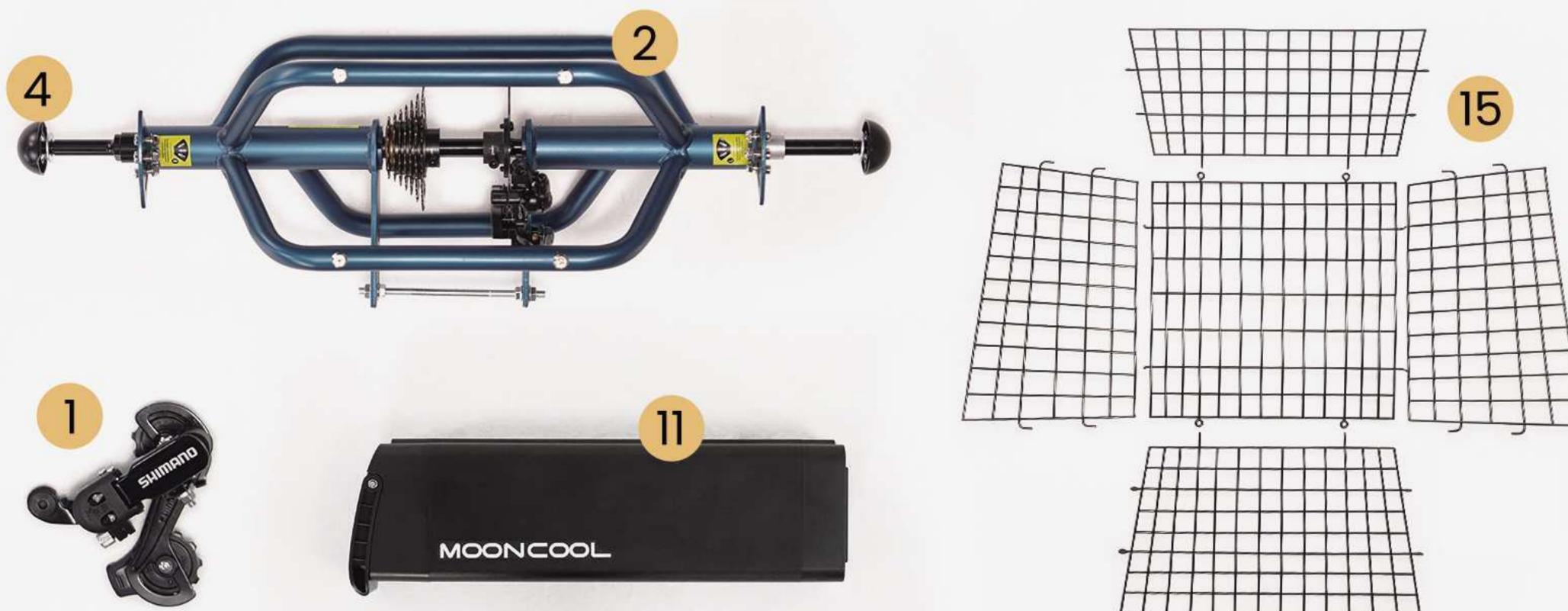


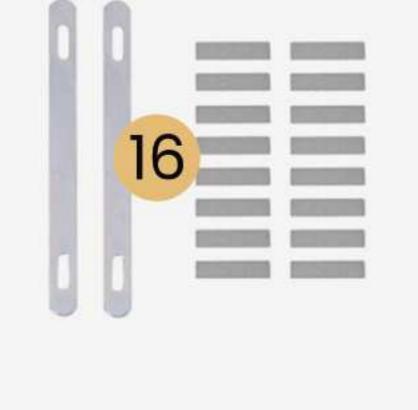
Allen Wrenchs	Wrench	Wrench (for wheels)	Screwdriver

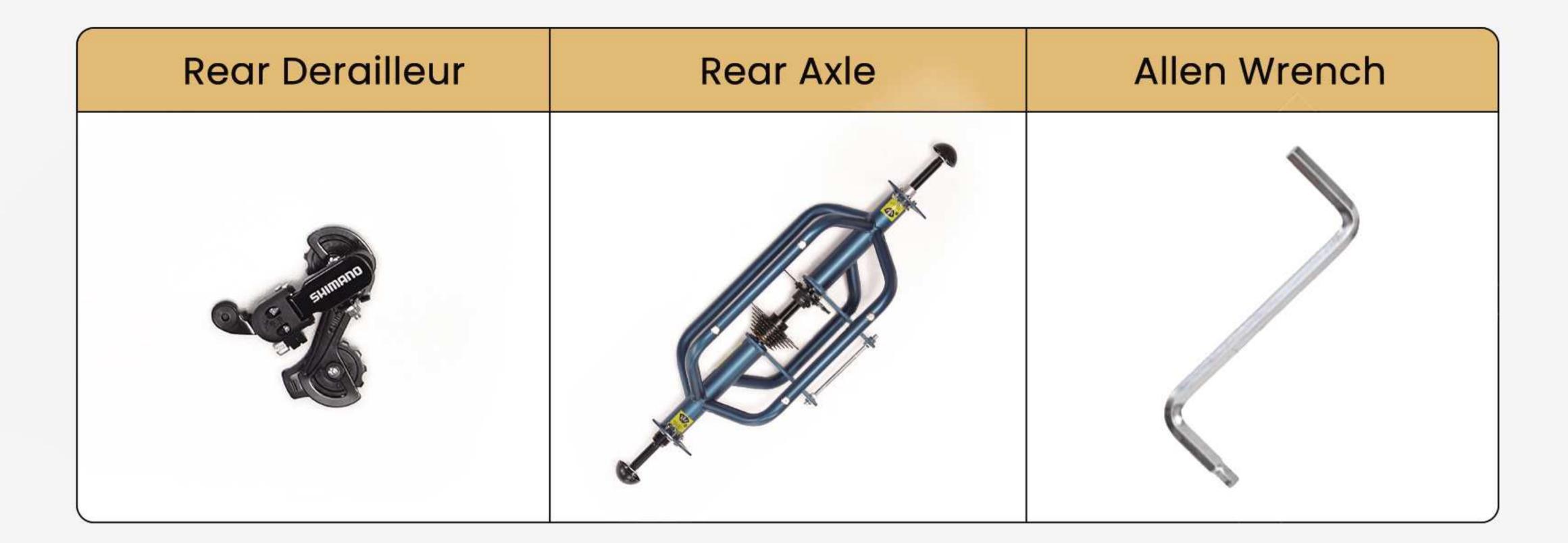
TIPS: You can choose to use other tools with better functionality for the installation.



No.	Part Name
1	Rear Transmission
2	Rear Axle
3	Rear Wheel
4	Rear Axle Parts
5	Frame
6	Chain
7	Chain Cover
8	Front Fender
9	Front Wheel
10	Rear Fender
11	Battery
12	Handlebar
13	Pedal
14	Saddle
15	Rear Basket
16	Basket Long Gasket
17	Headflight
18	Wheel Reflectors
19	Disc Brake
20	Rear Fender Reflectors



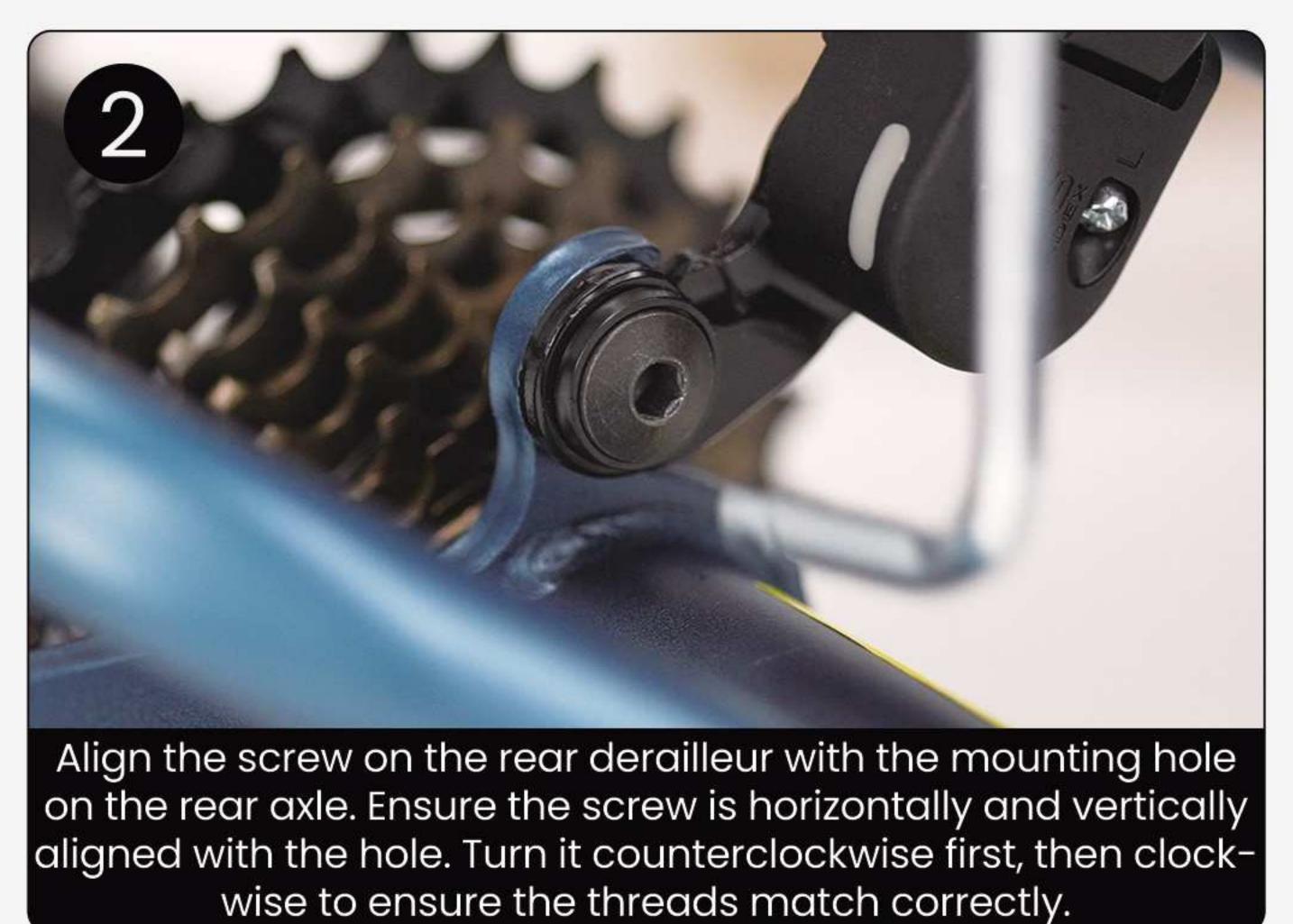


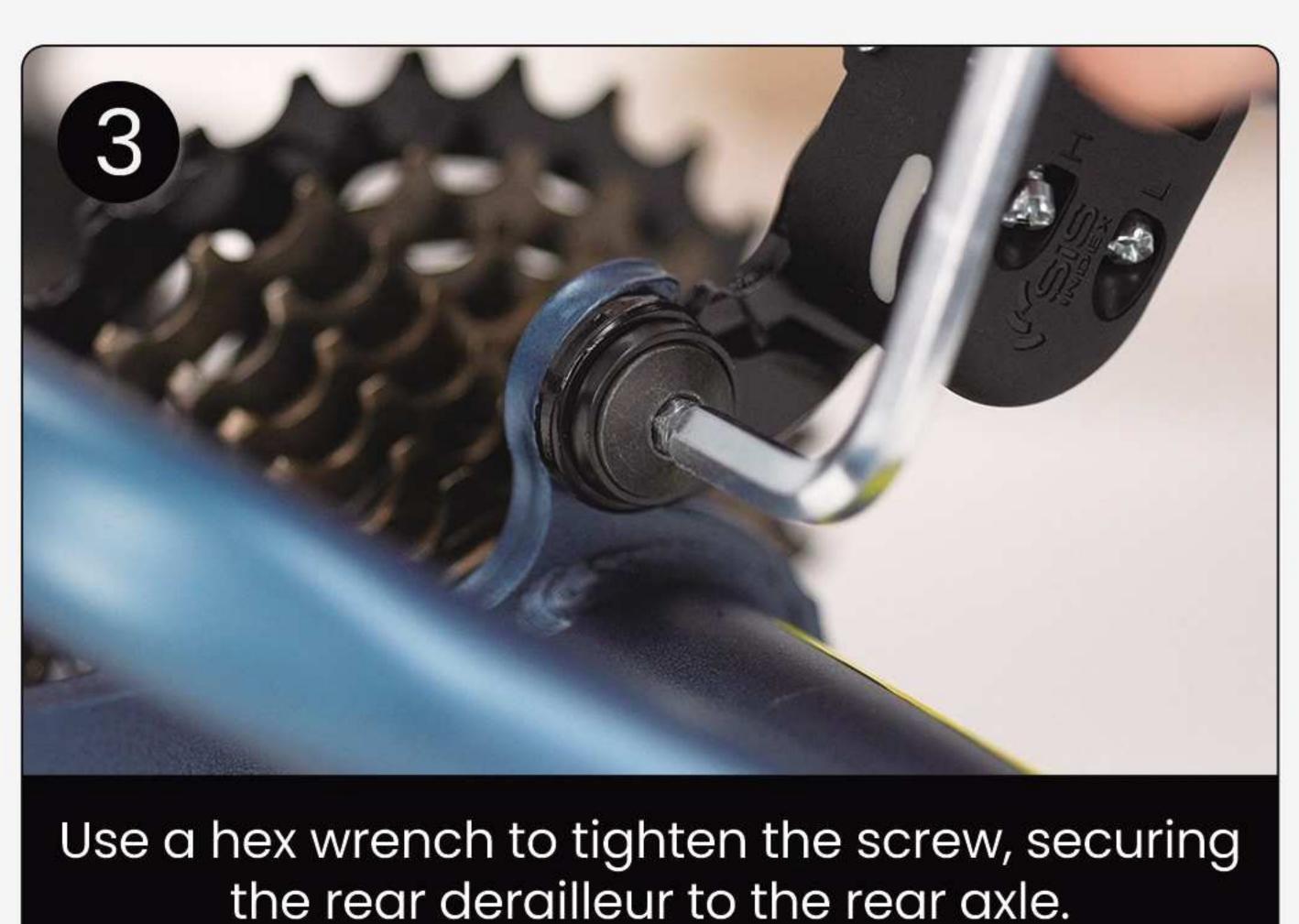


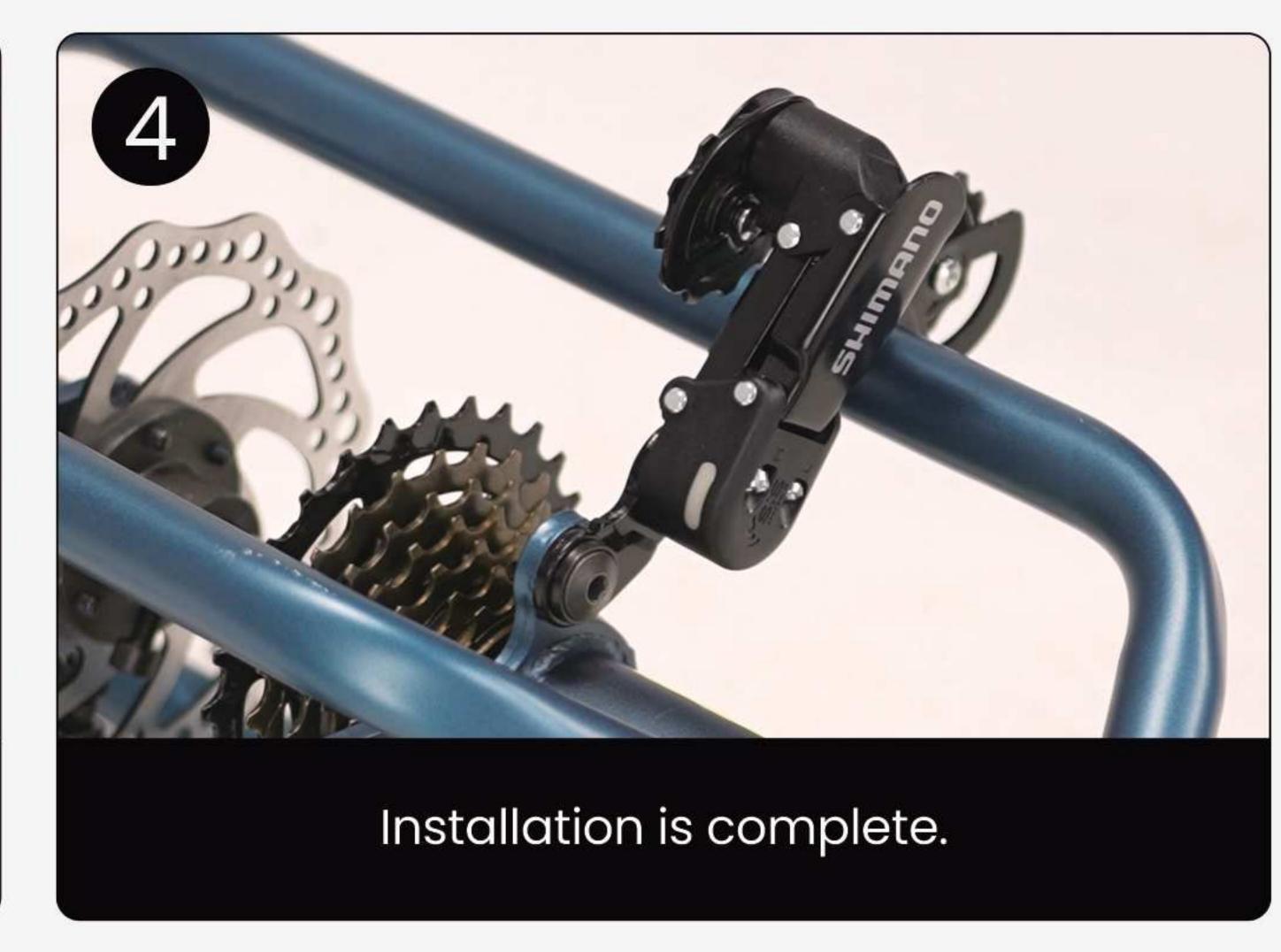
Assembly Steps

Ensure the screws and washers are in the correct position on the rear derailleur, and align with the axle hole correctly. Tighten the screws vertically to secure.

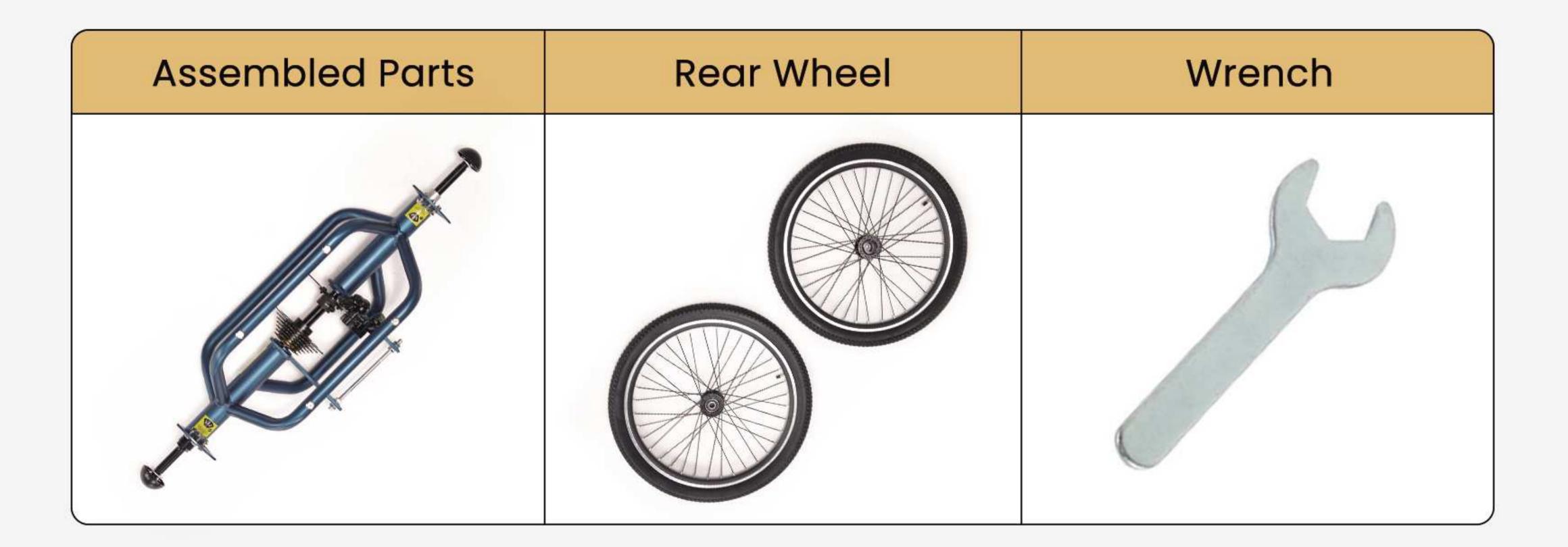








Parts and Tools

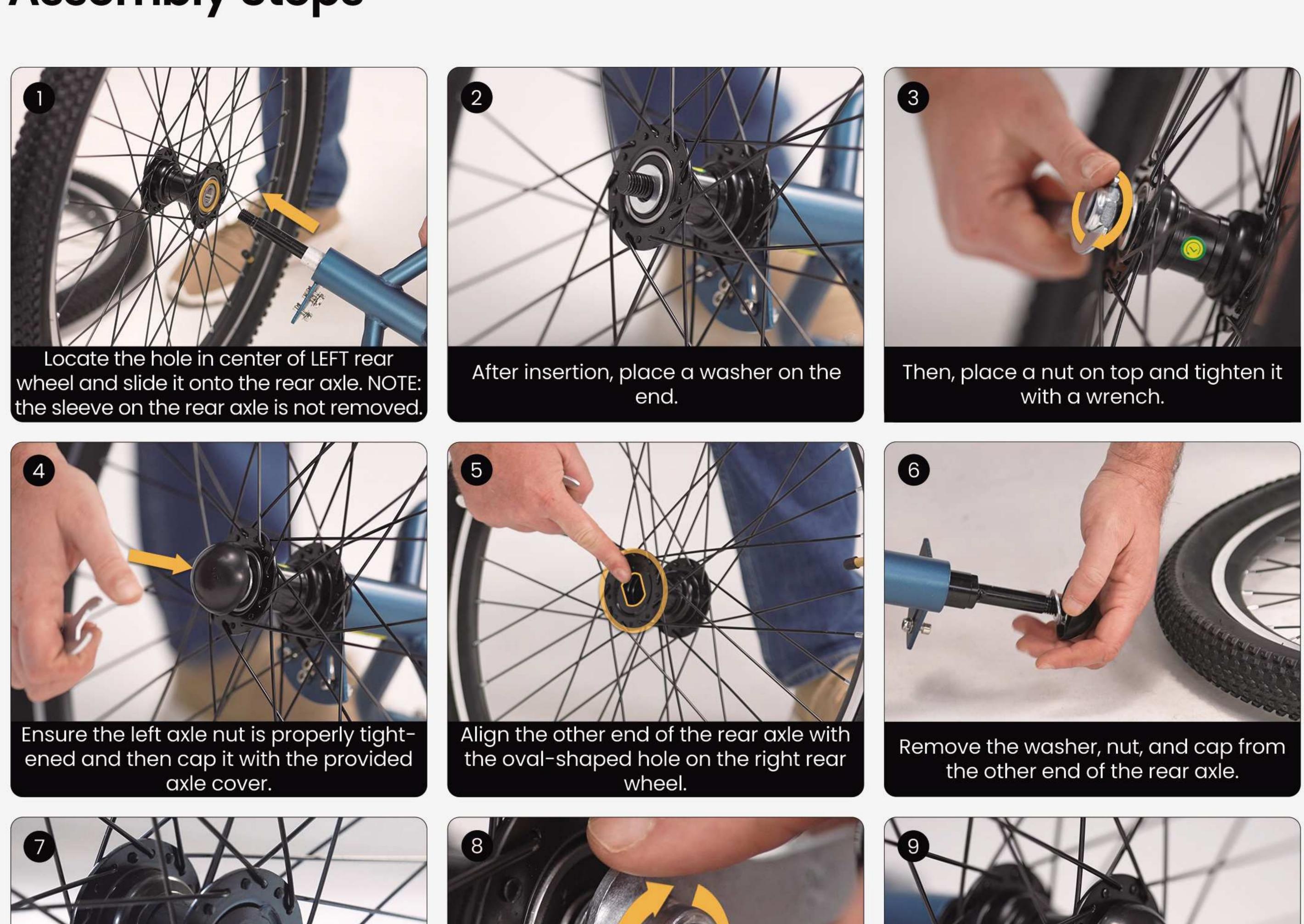


Assembly Steps

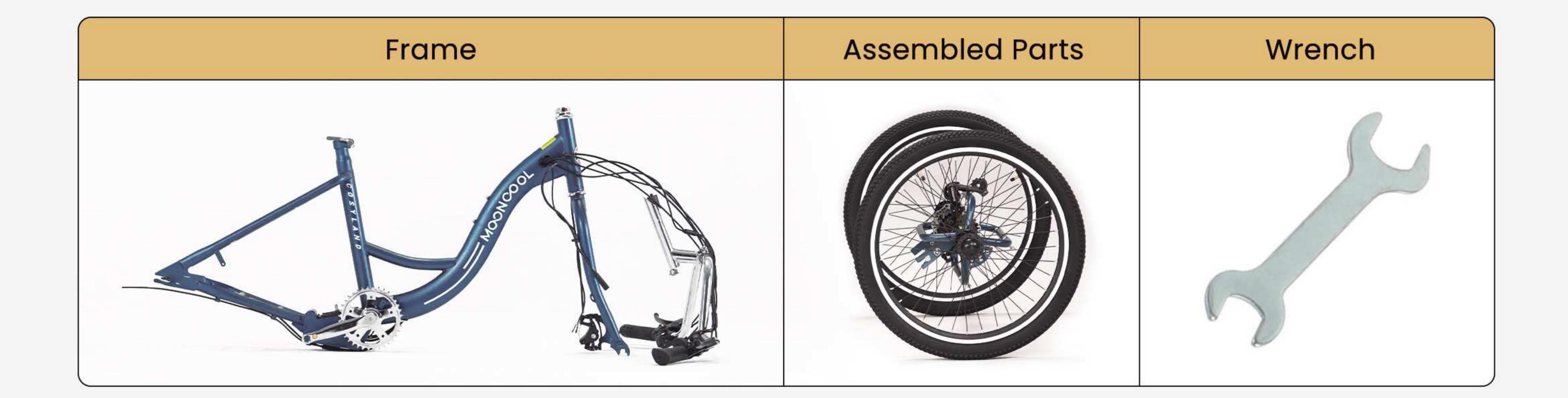
Insert the end of the rear axle into the corre-

sponding oval hole on the right rear wheel.

After insertion, place a washer on the end.

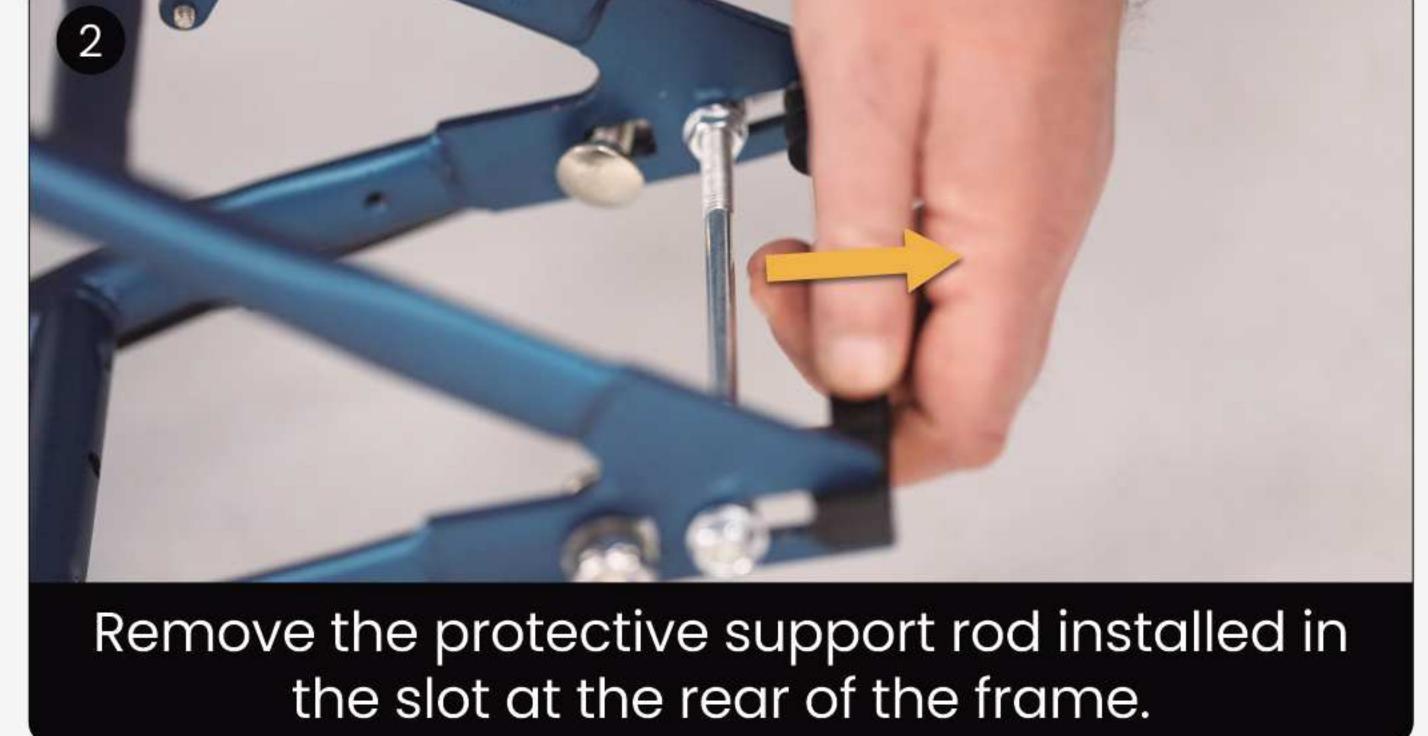






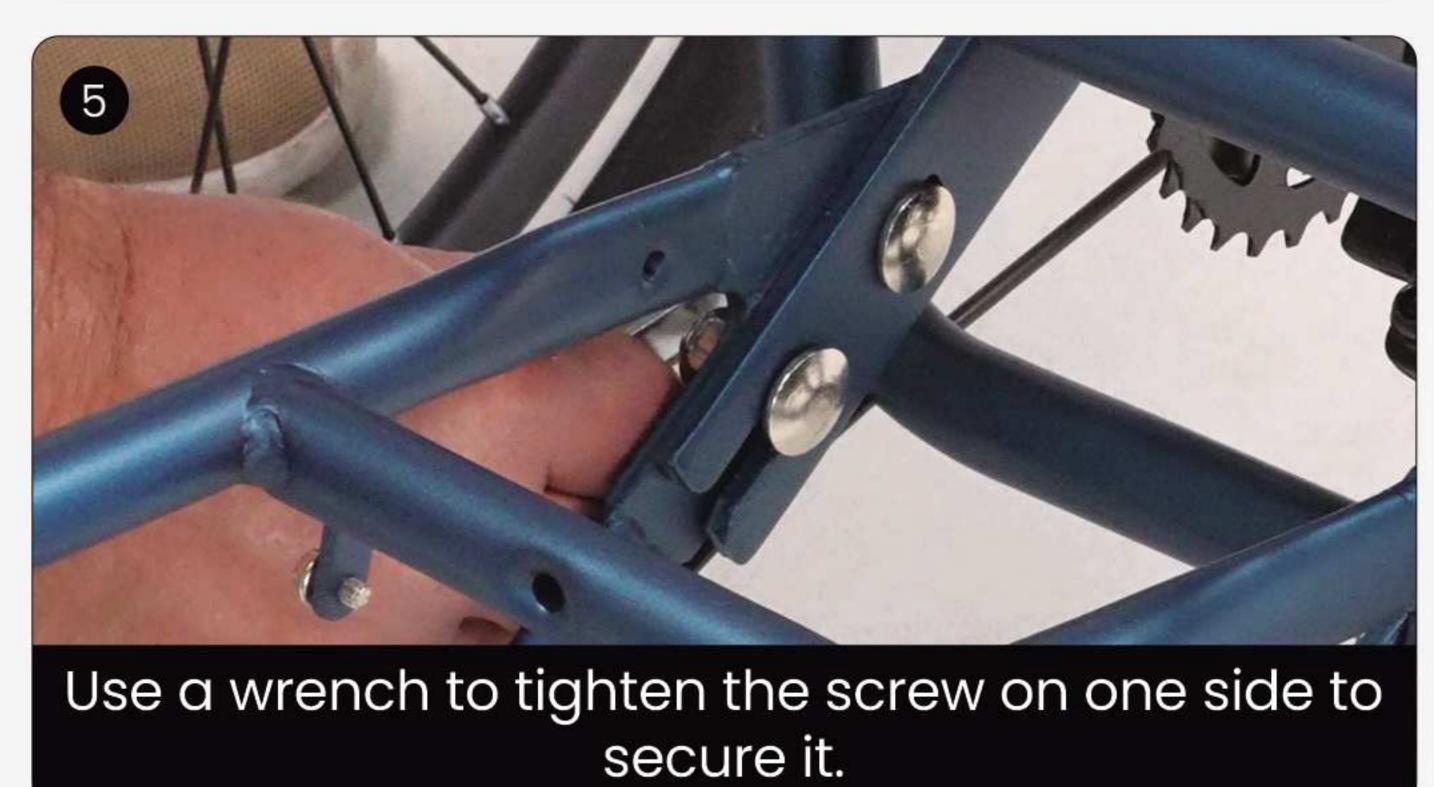
Assembly Steps

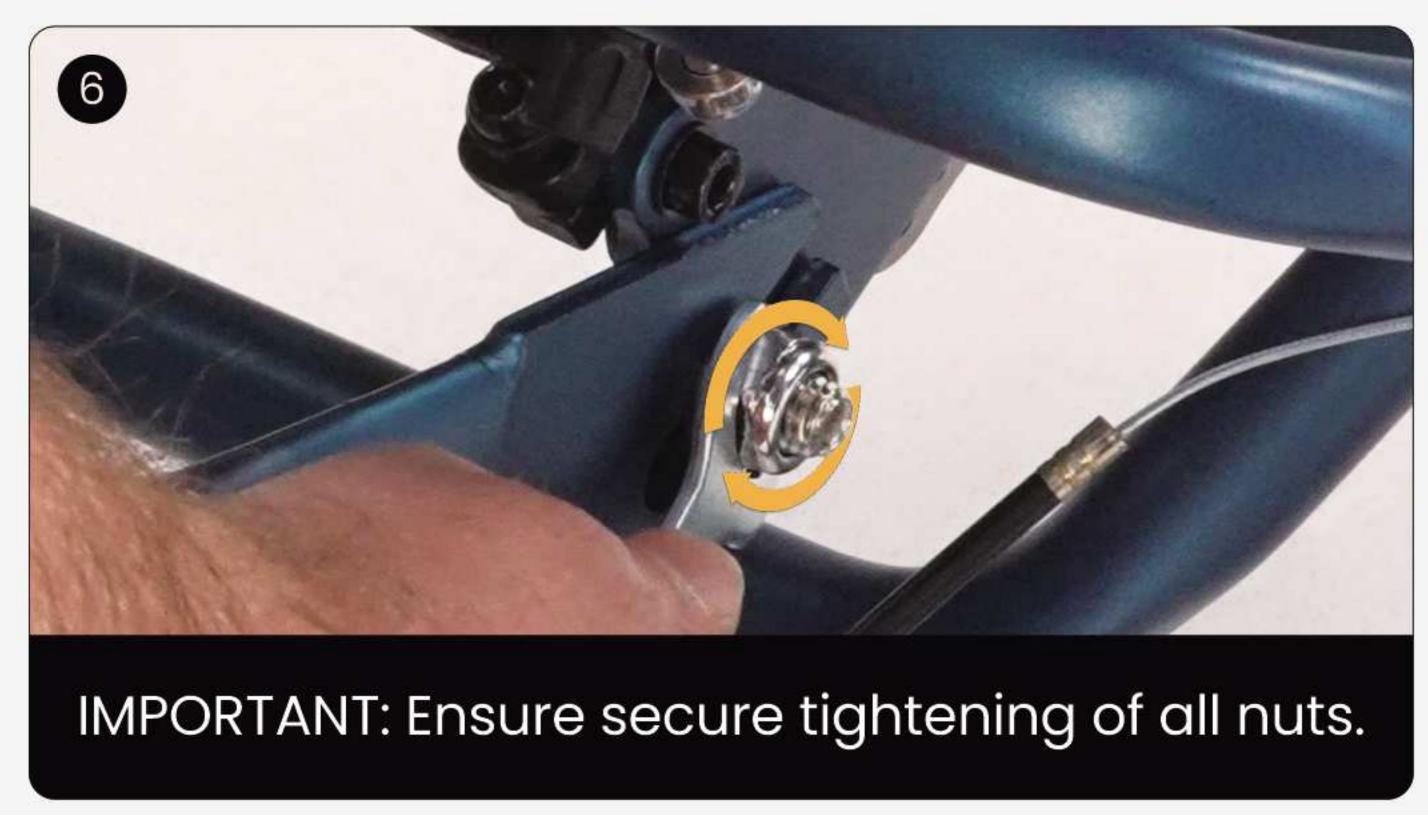




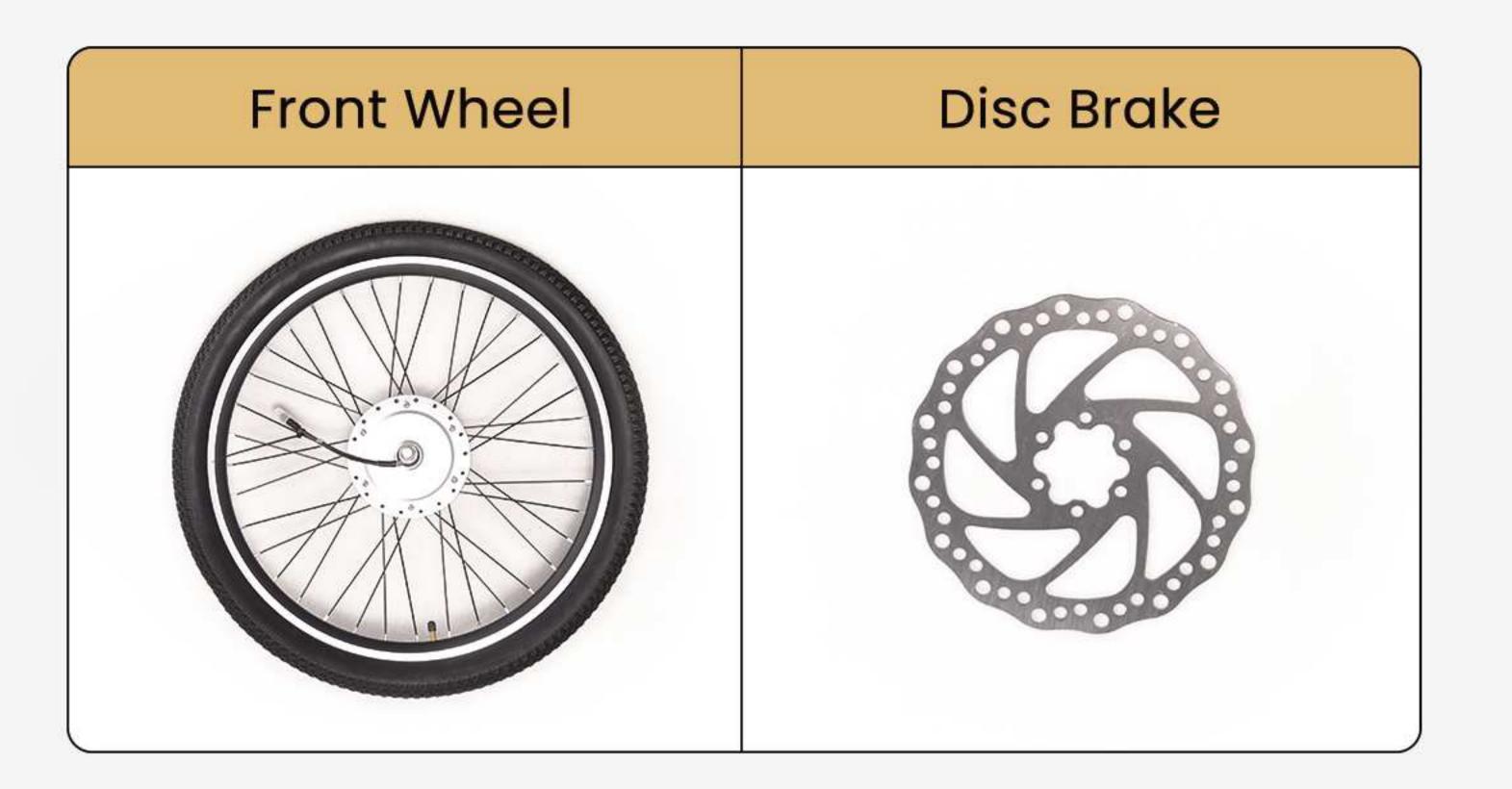








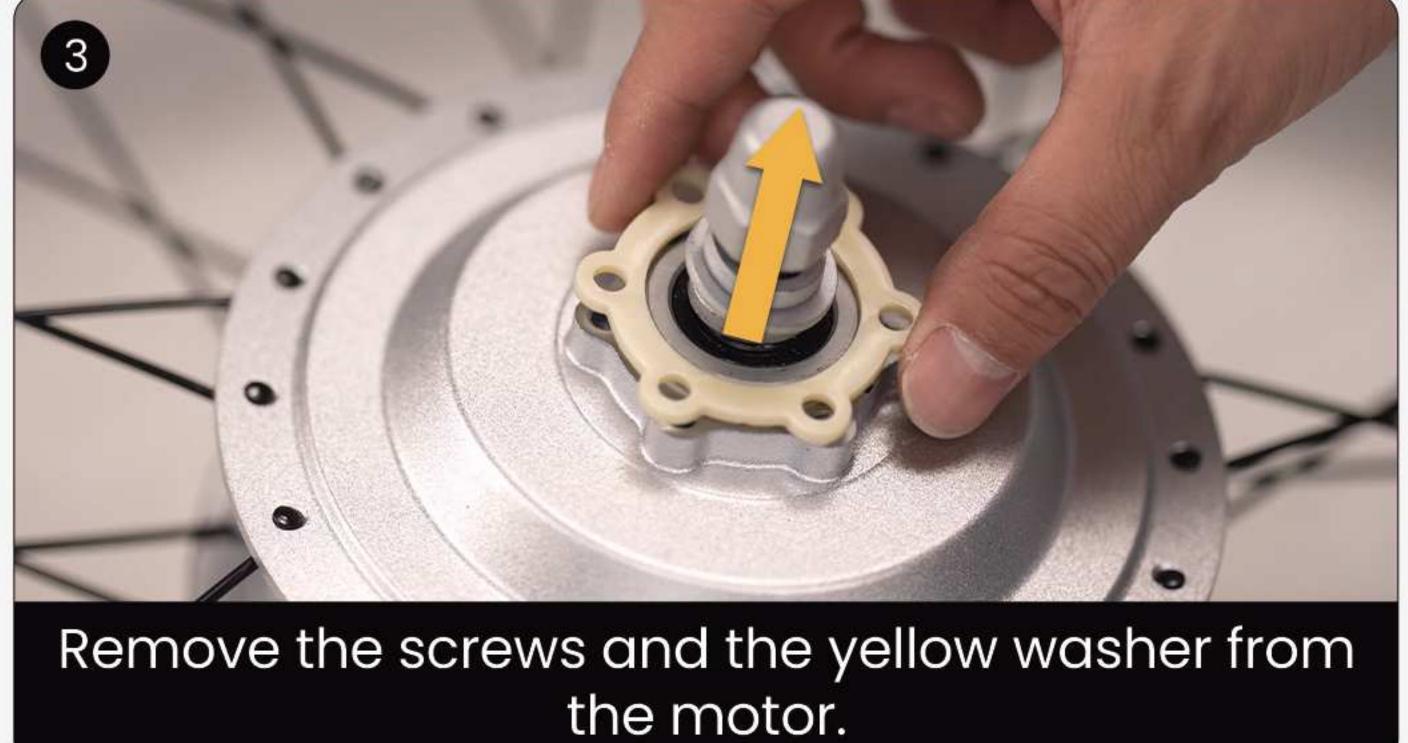
Parts and Tools



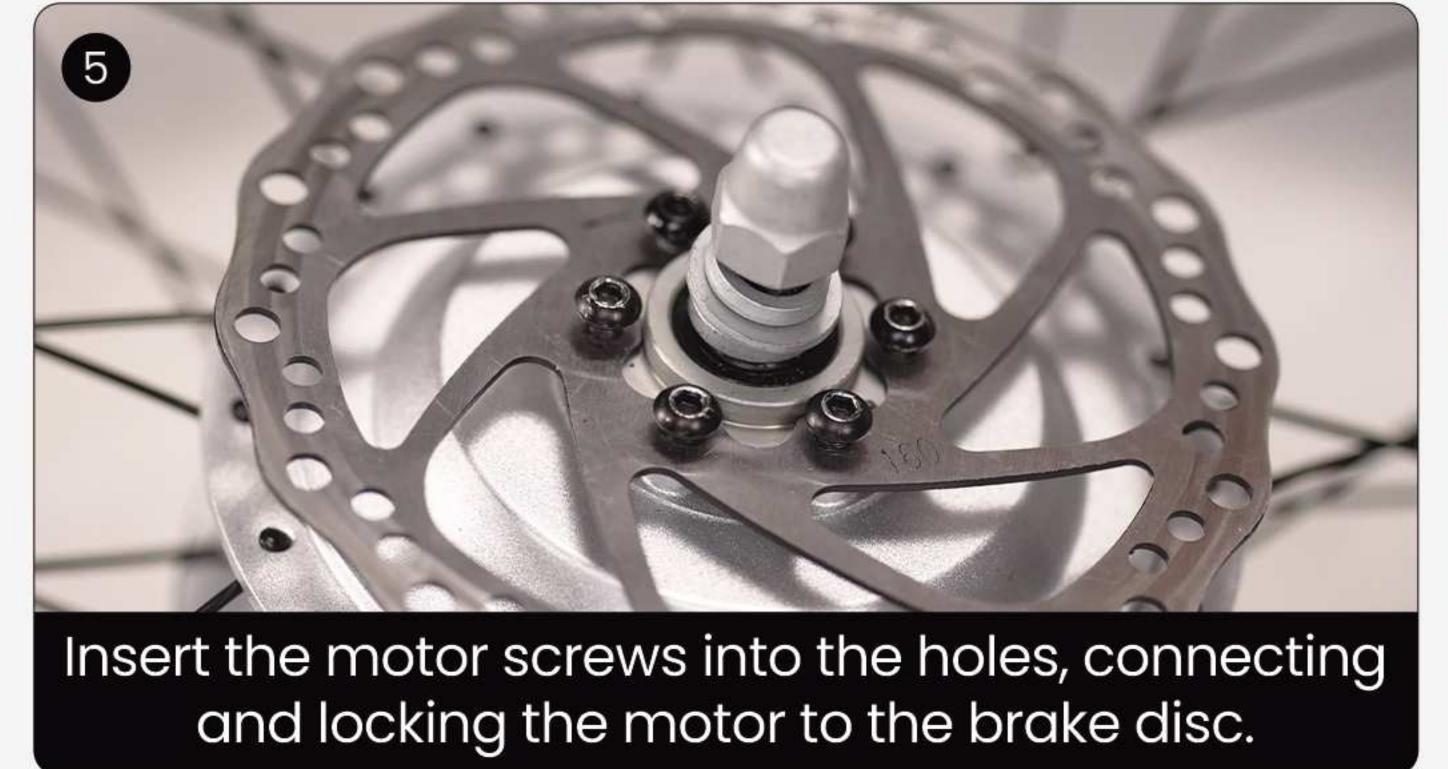
Assembly Steps





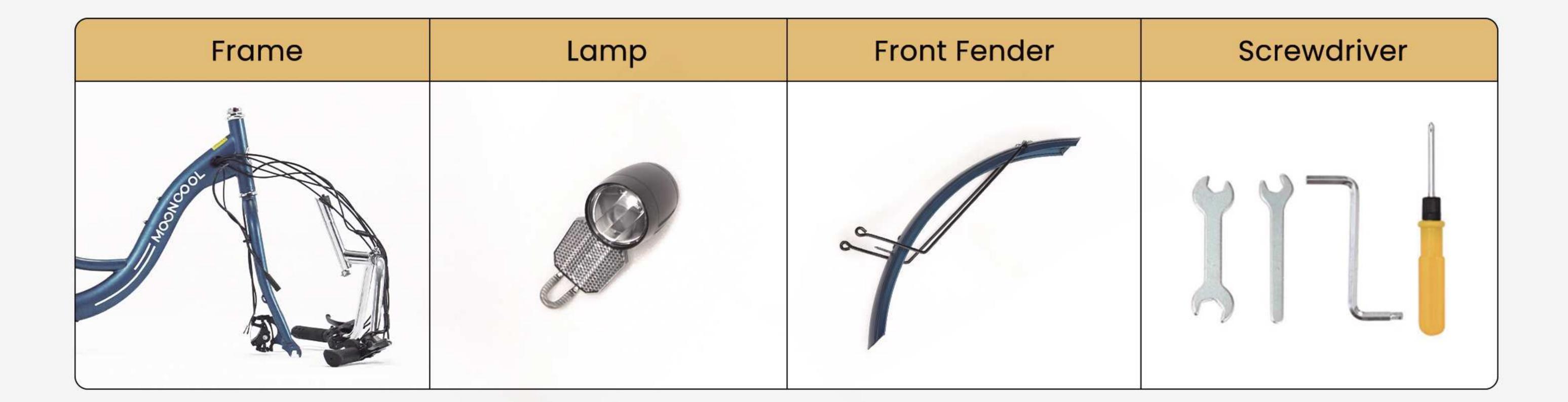




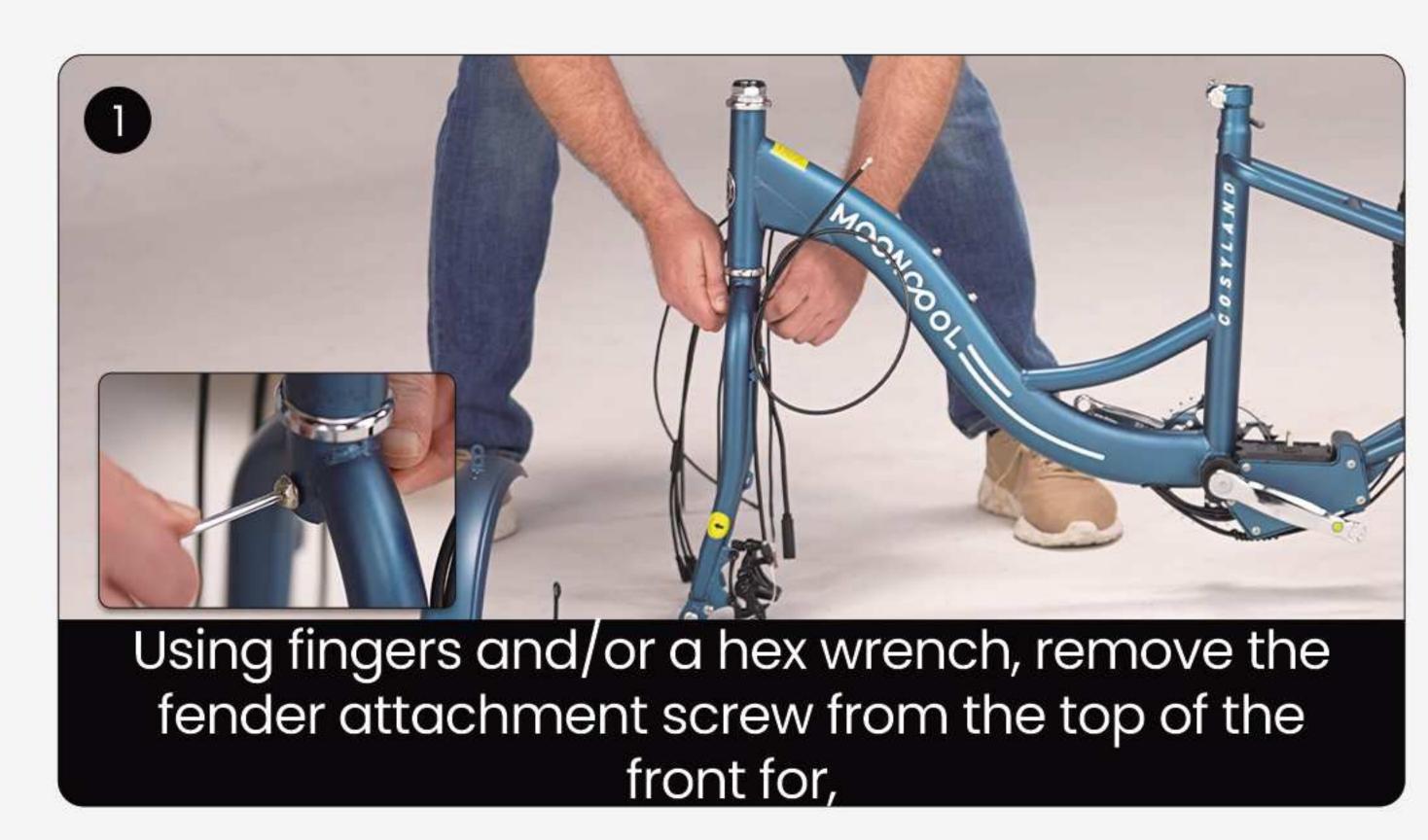




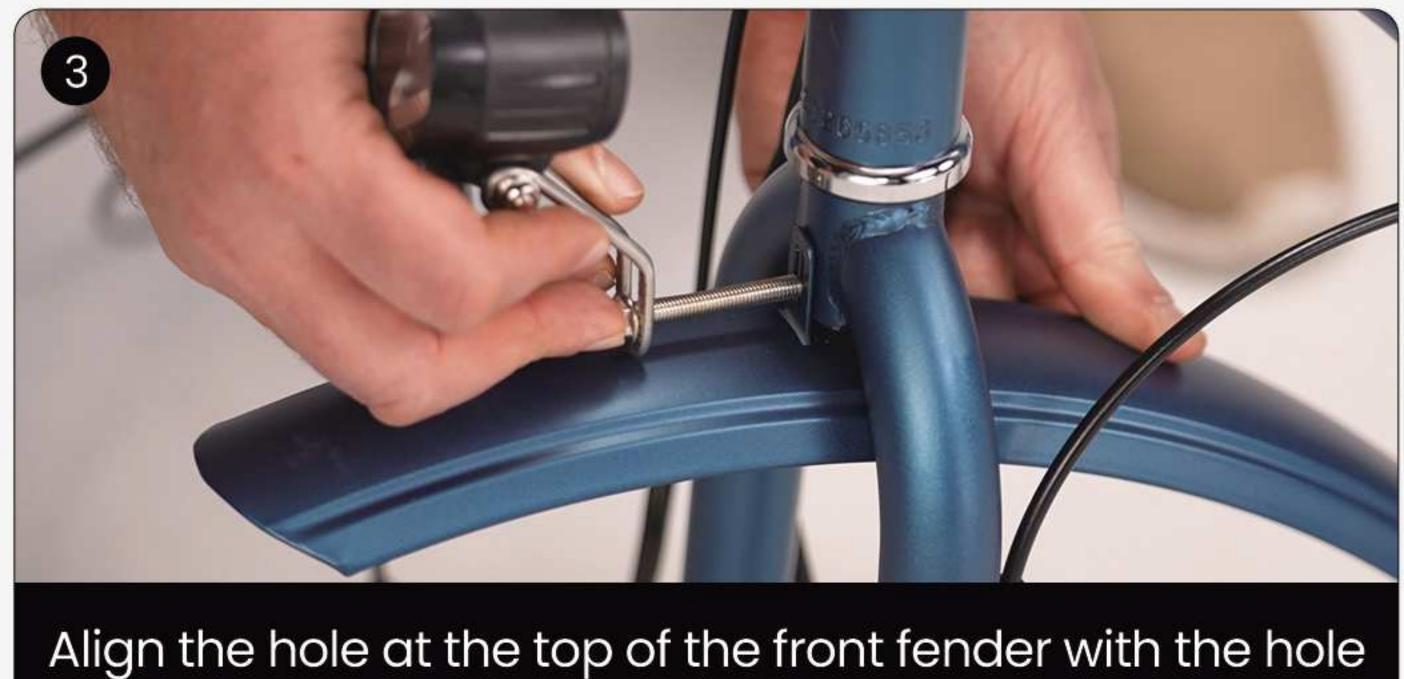
ing the brake disc and completing the assembly.



Assembly Steps

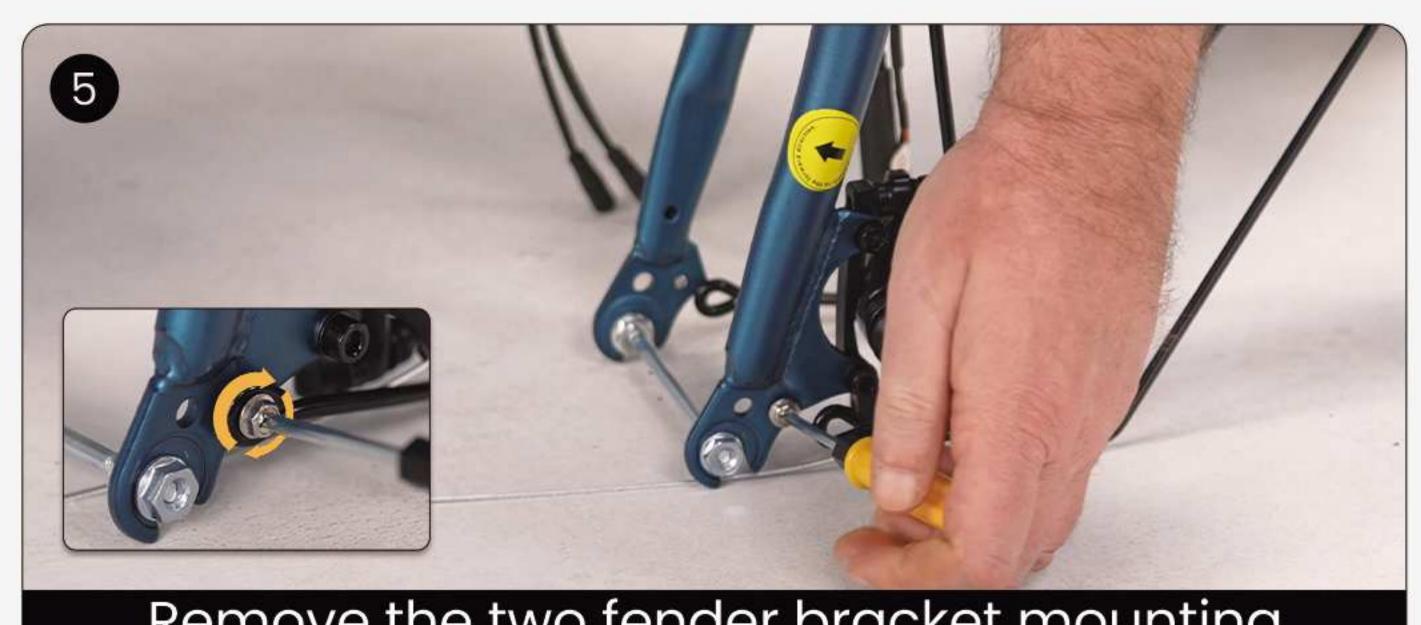




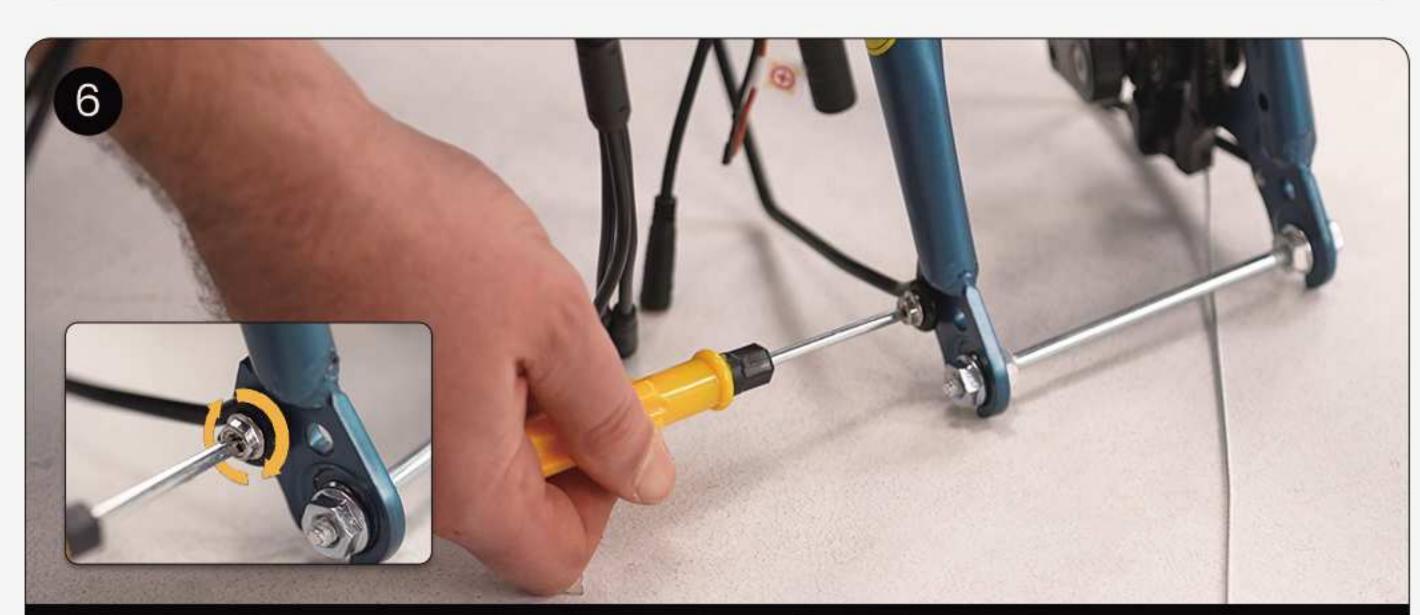


at the top of the front fork, and insert the fender screw.





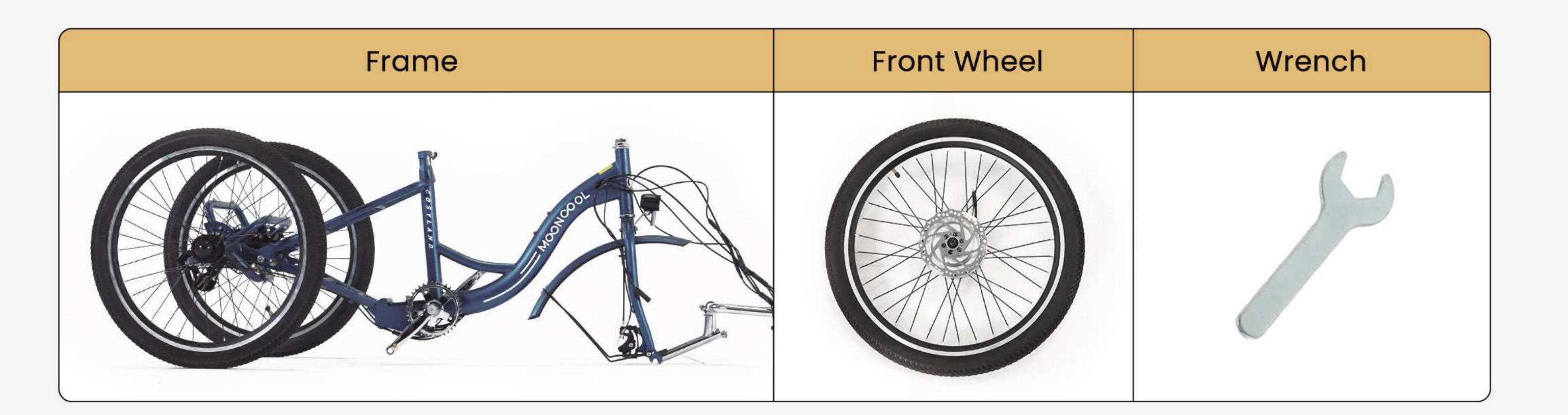
Remove the two fender bracket mounting screws located lower on the front fork. Place them carefully nearby.



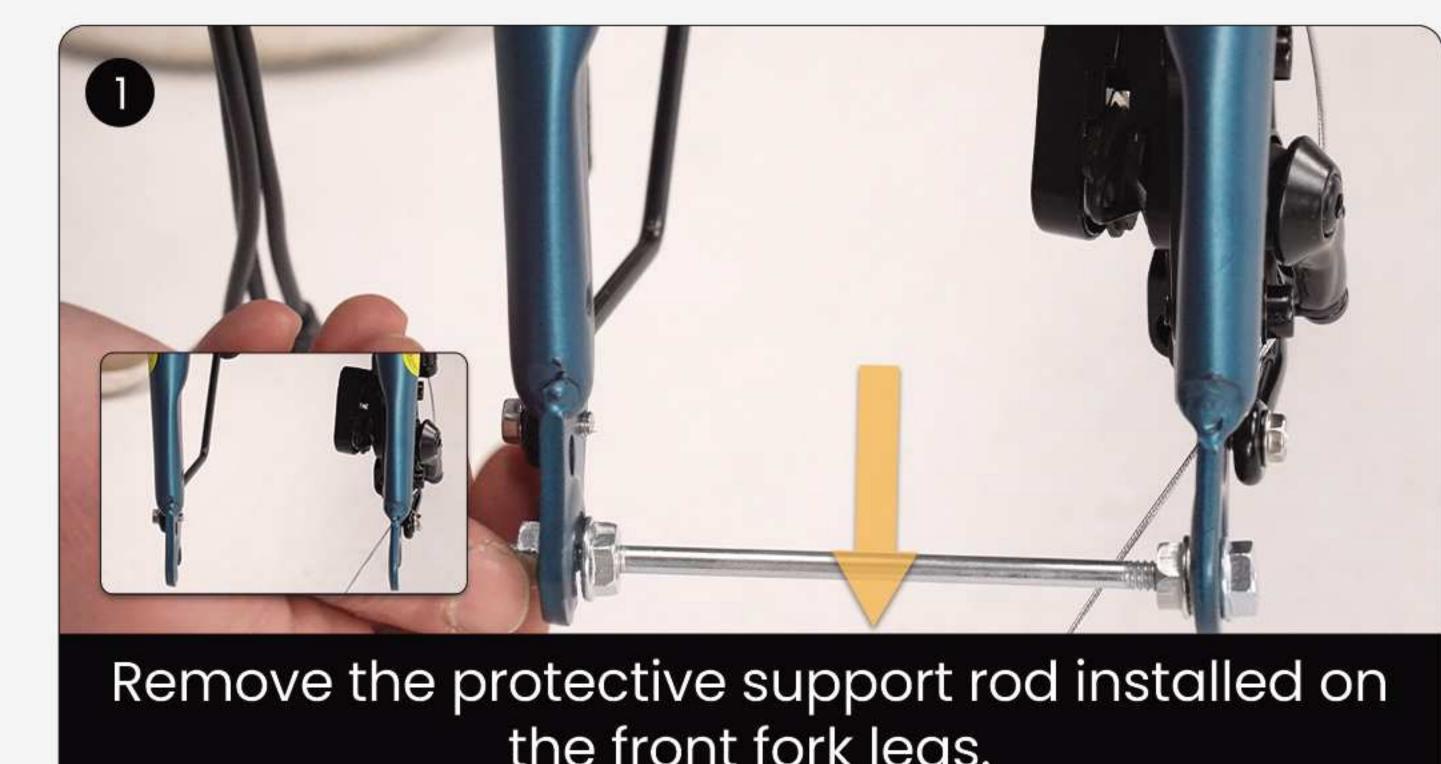
Tighten securely.

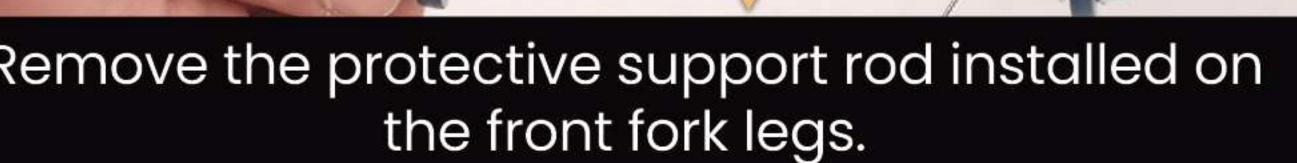
Align the holes at the bottom of the front fender bracket with the holes at the bottom of the front fork, insert the screws, and tighten them to secure the front fender.

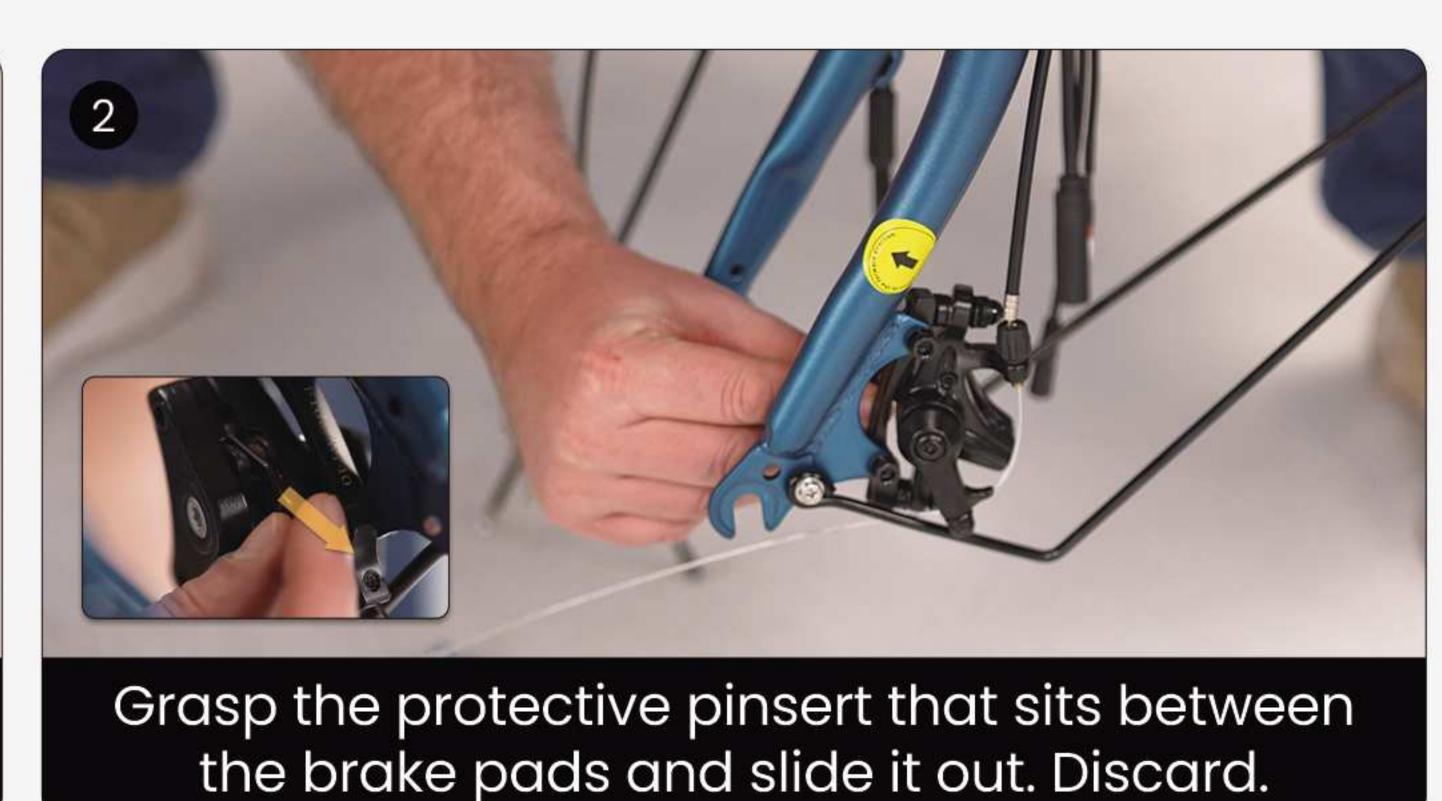
Parts and Tools



Assembly Steps





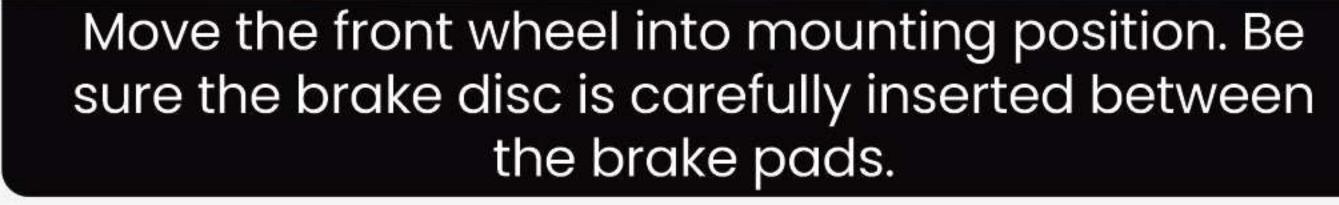


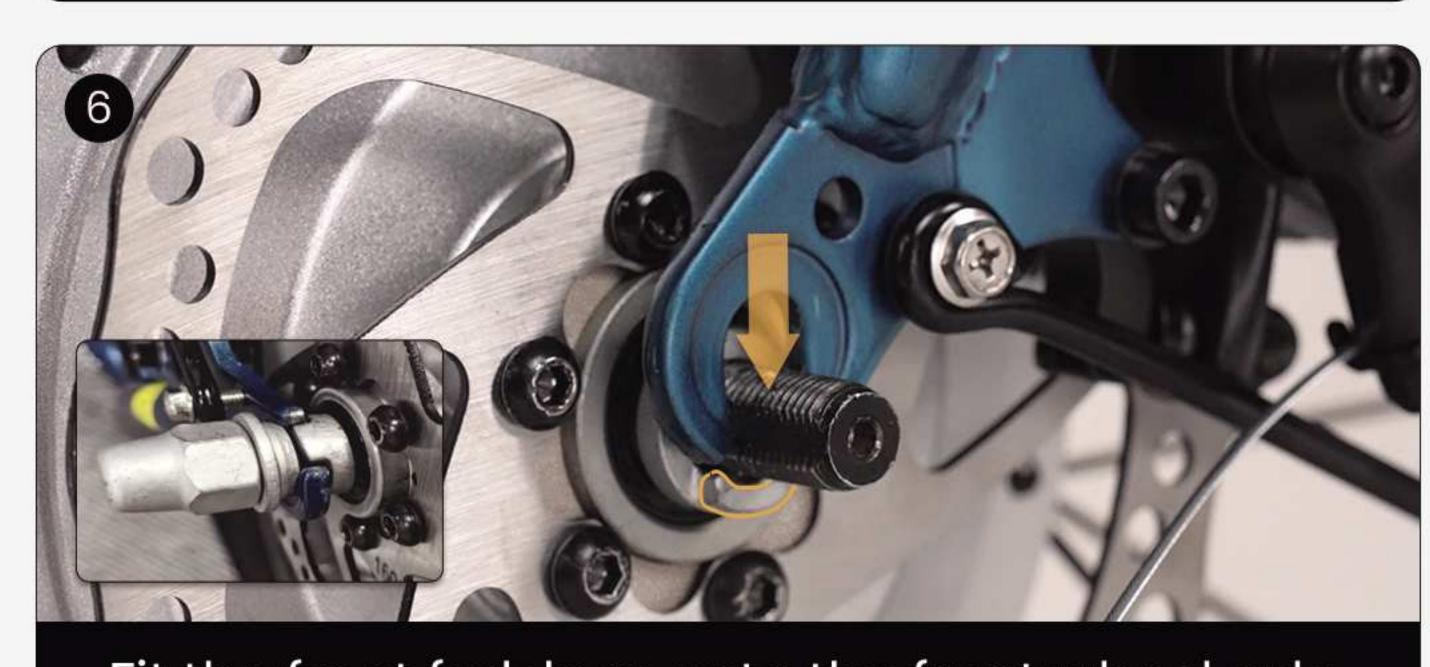






washer on the axle.





Fit the front fork legs onto the front wheel axle, aligning with the shaped washers.

Chain Assembly 2.7 Assembly Steps

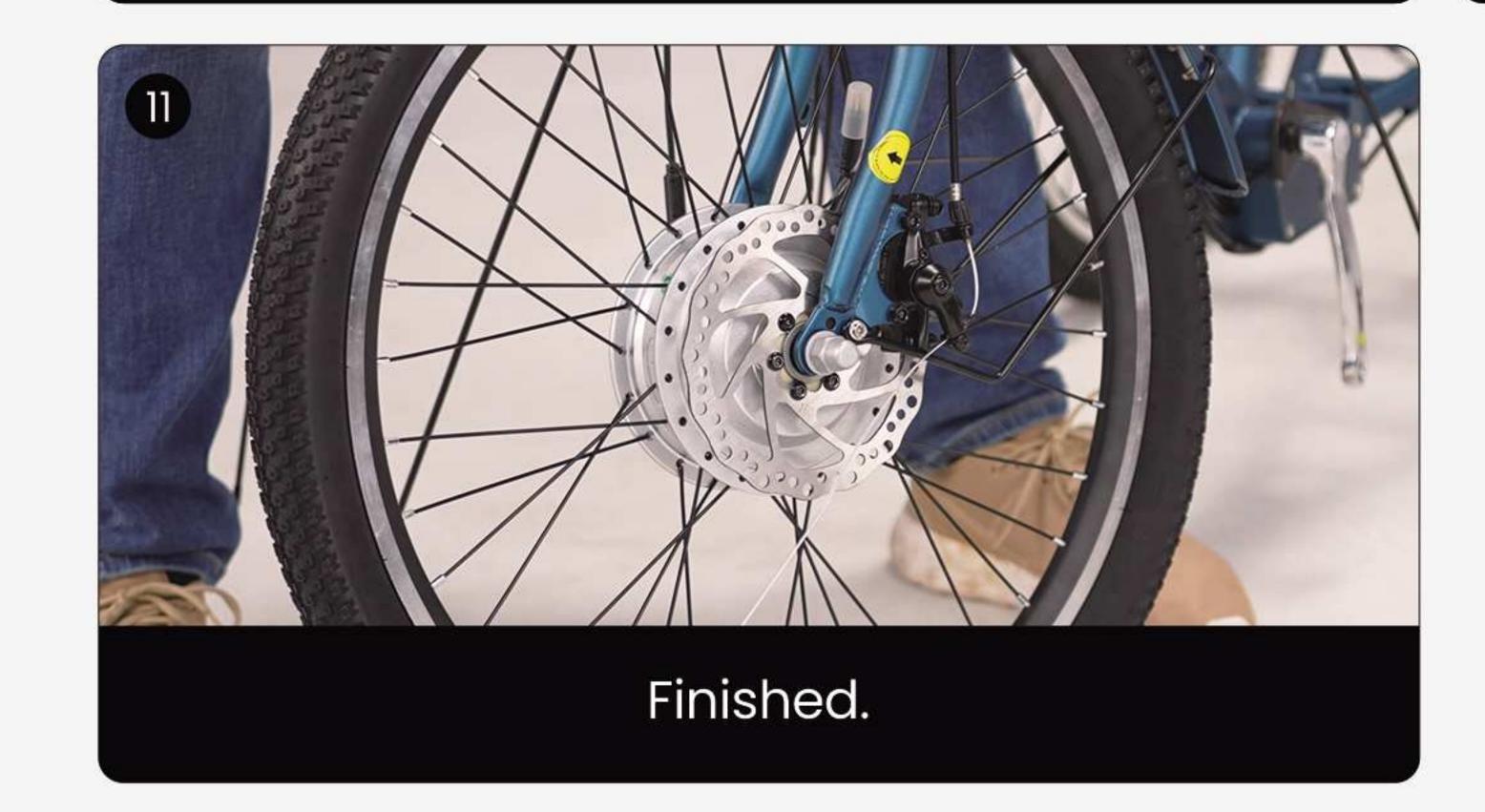
2.6 Front Wheel Assembly Assembly Steps







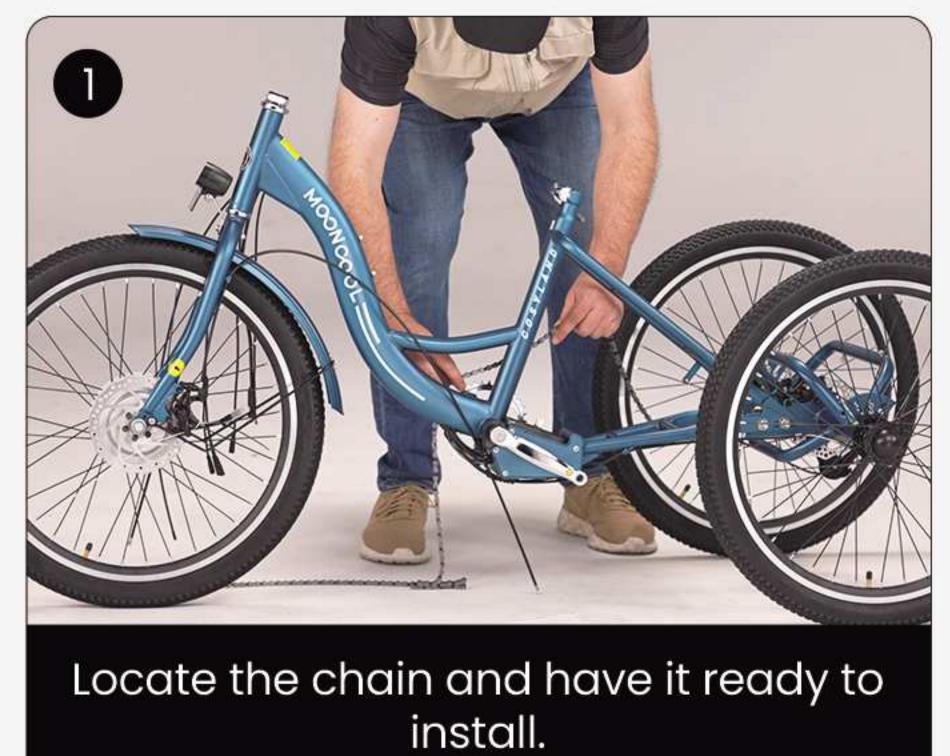


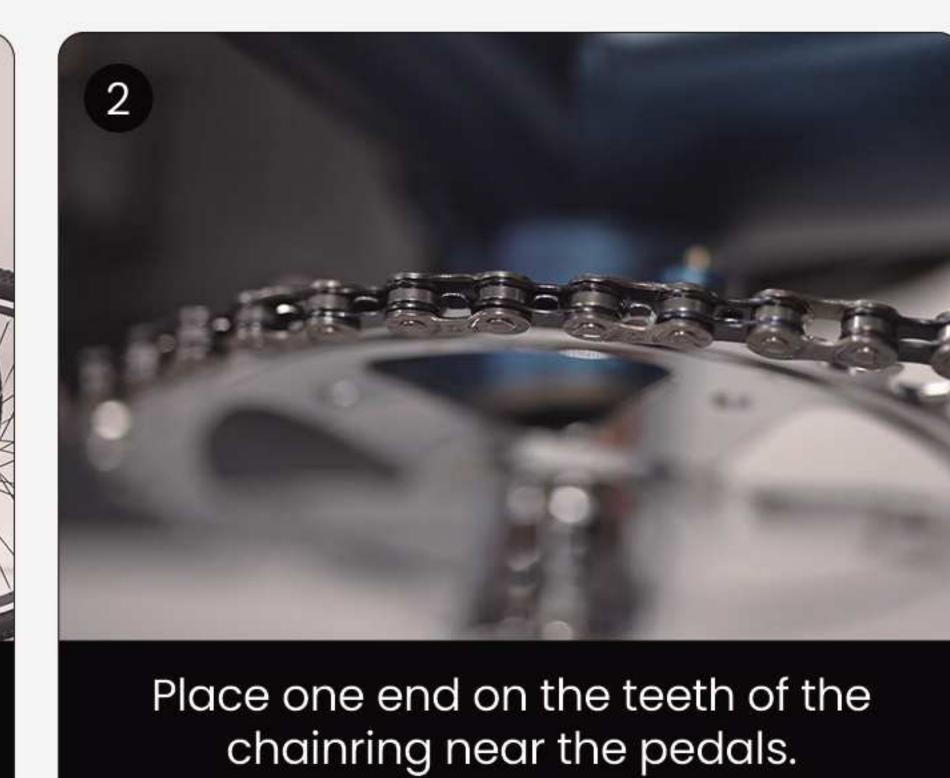


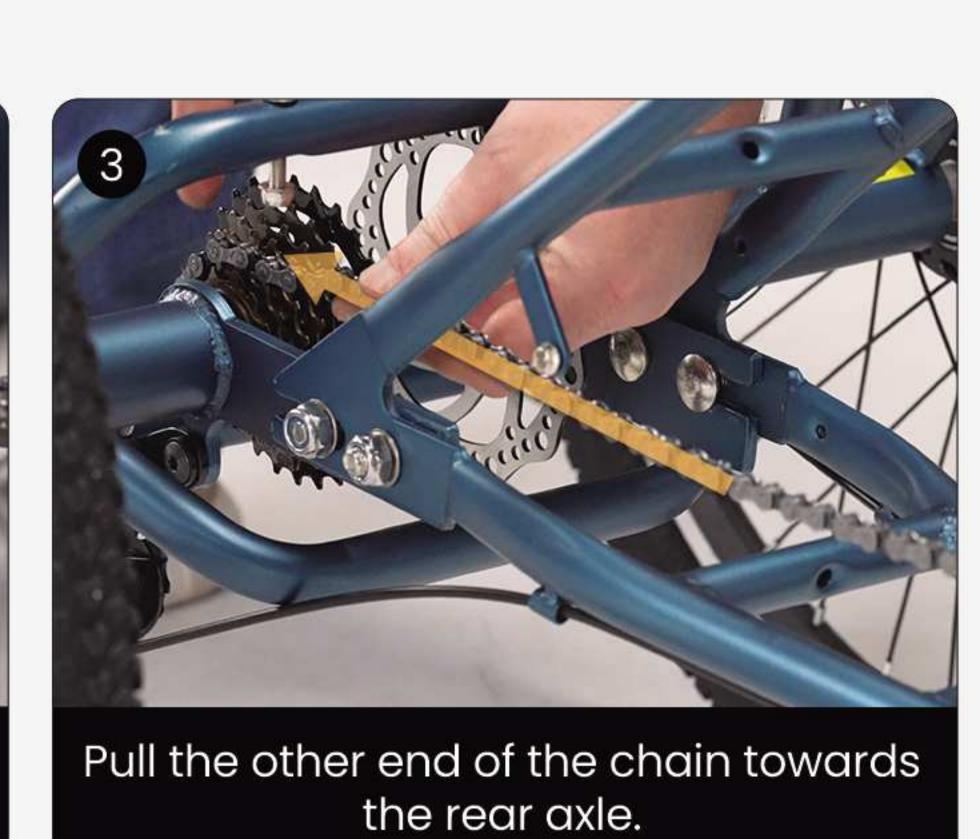
Parts and Tools



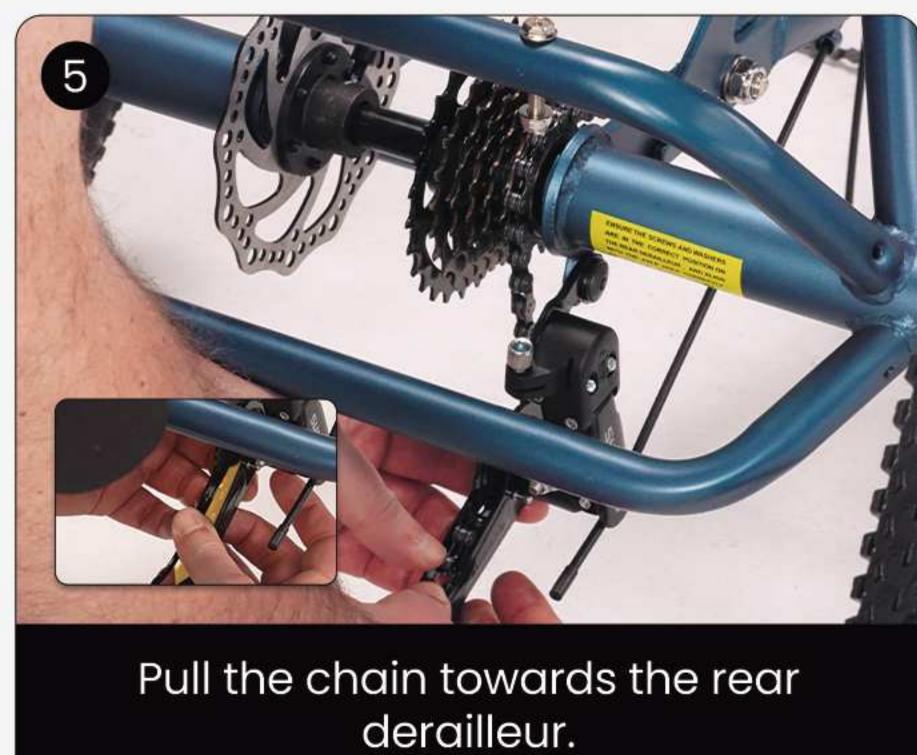
Assembly Steps

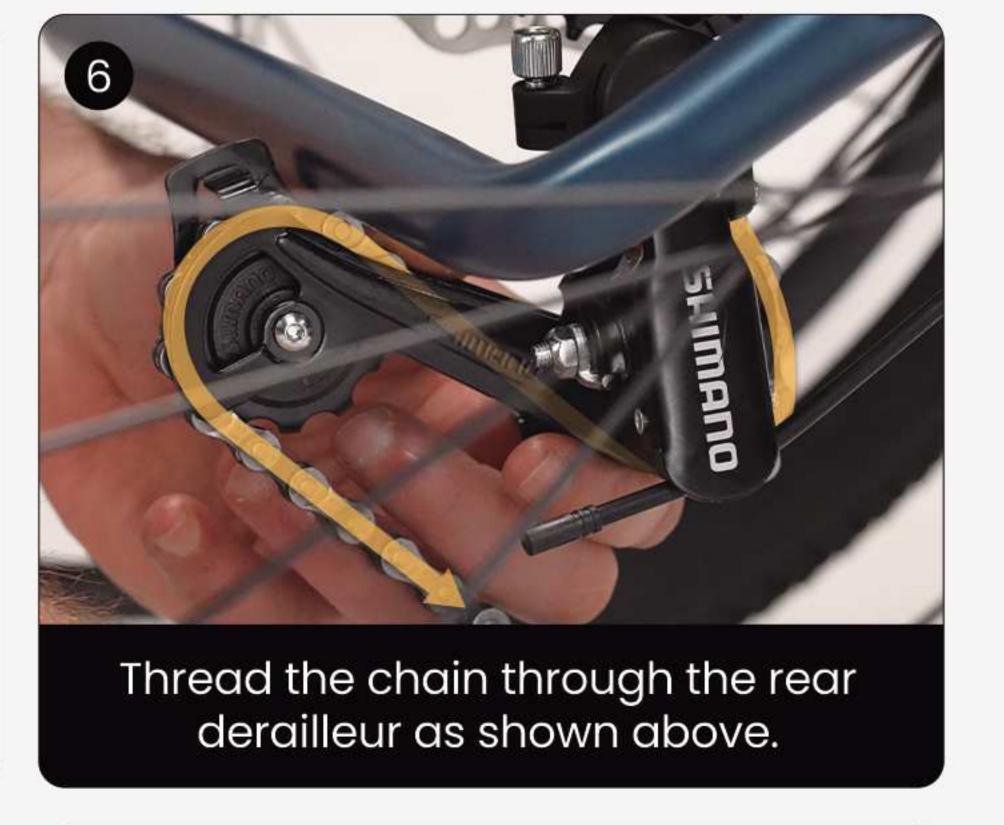




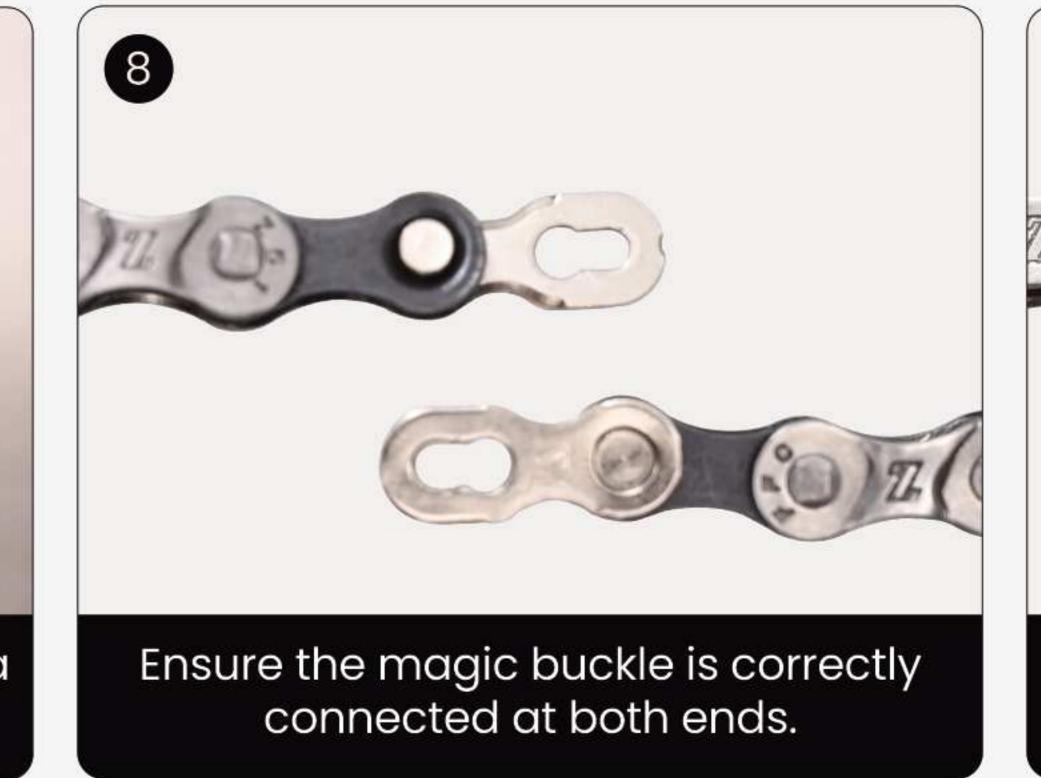


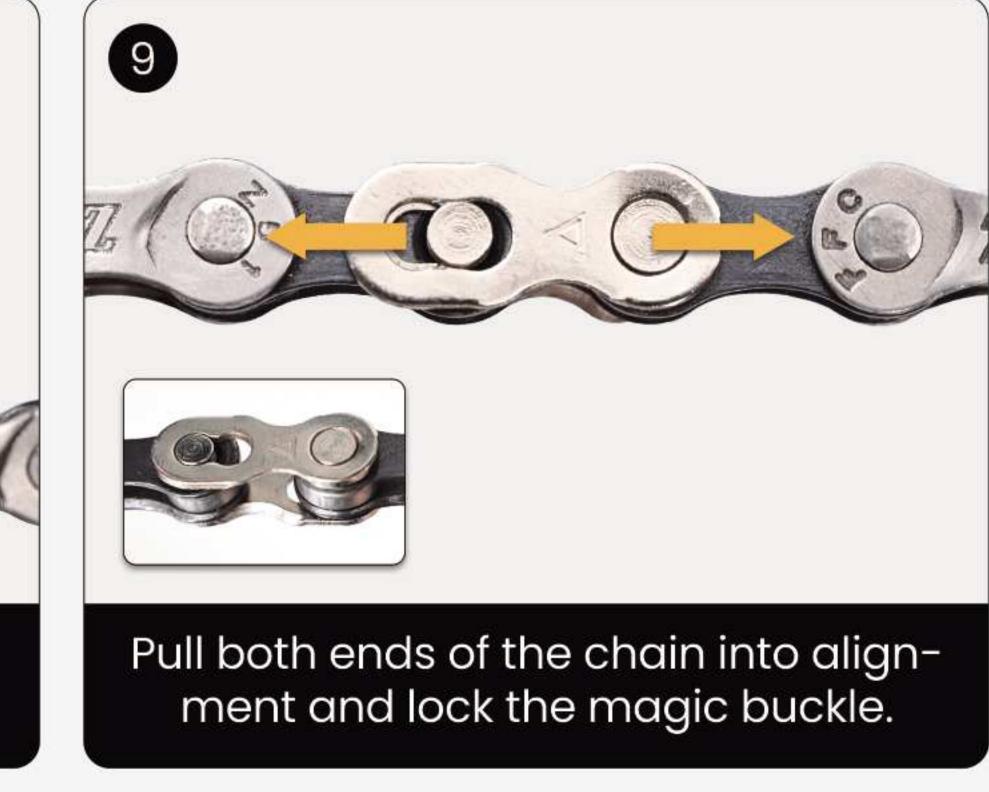






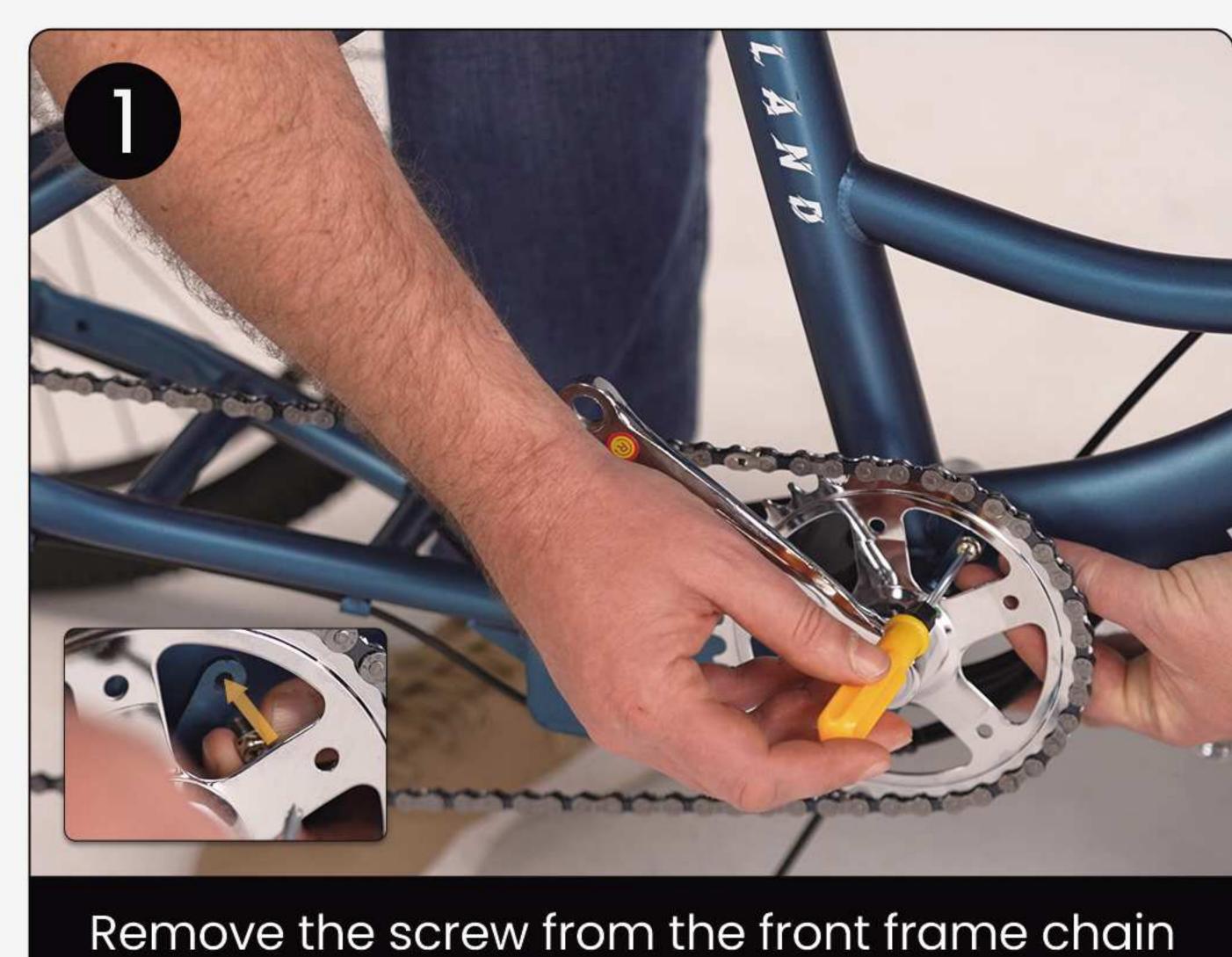


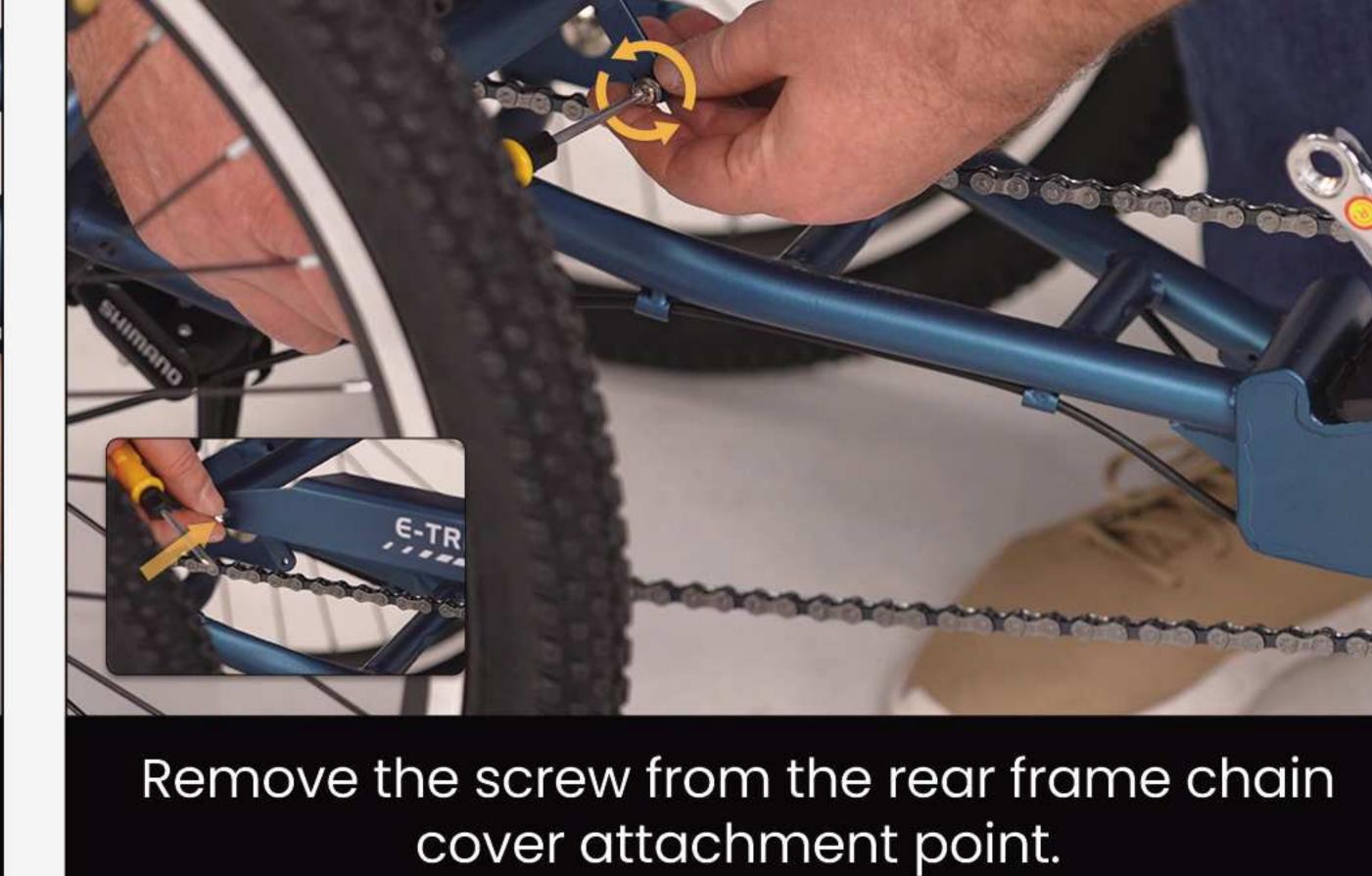


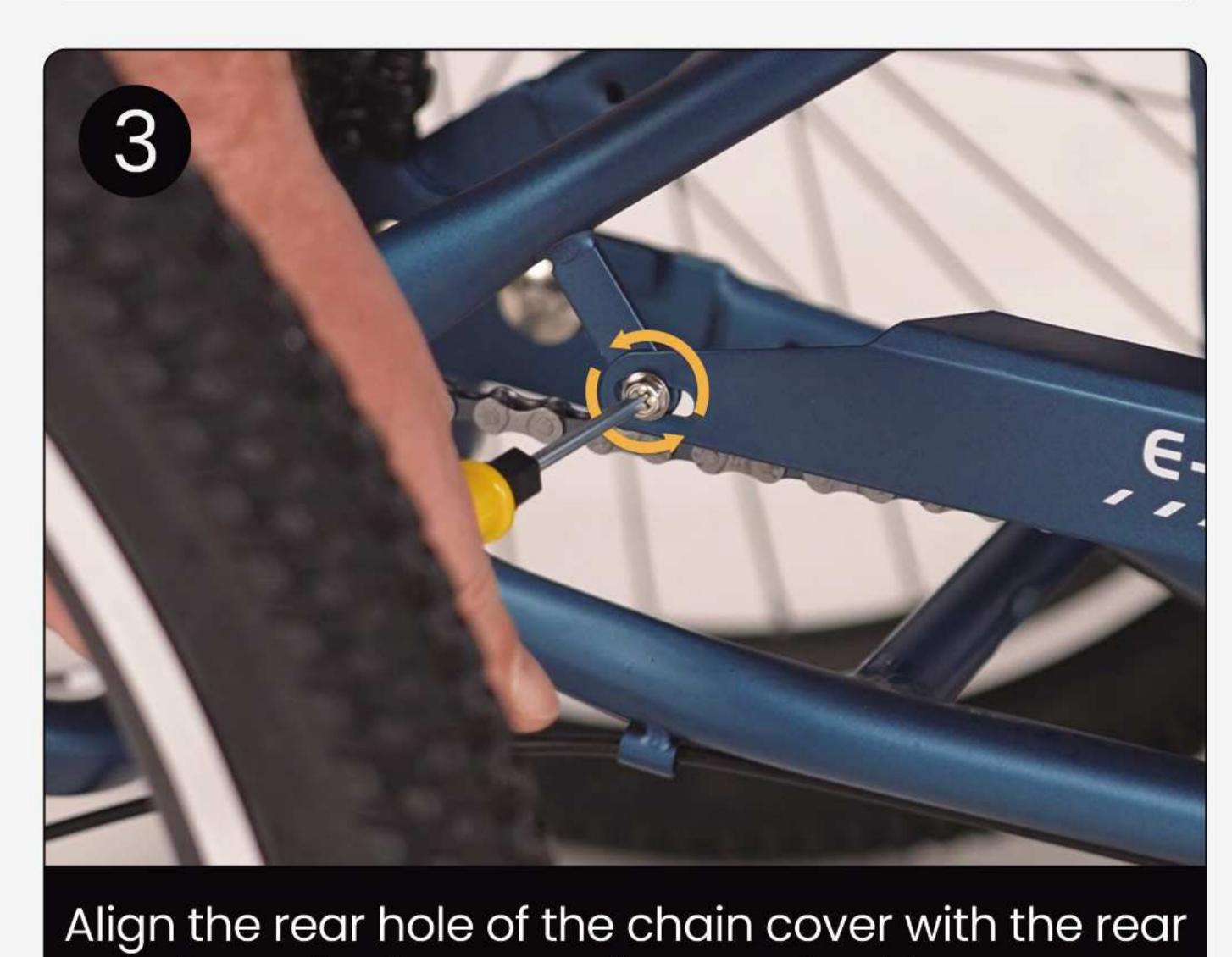




Assembly Steps





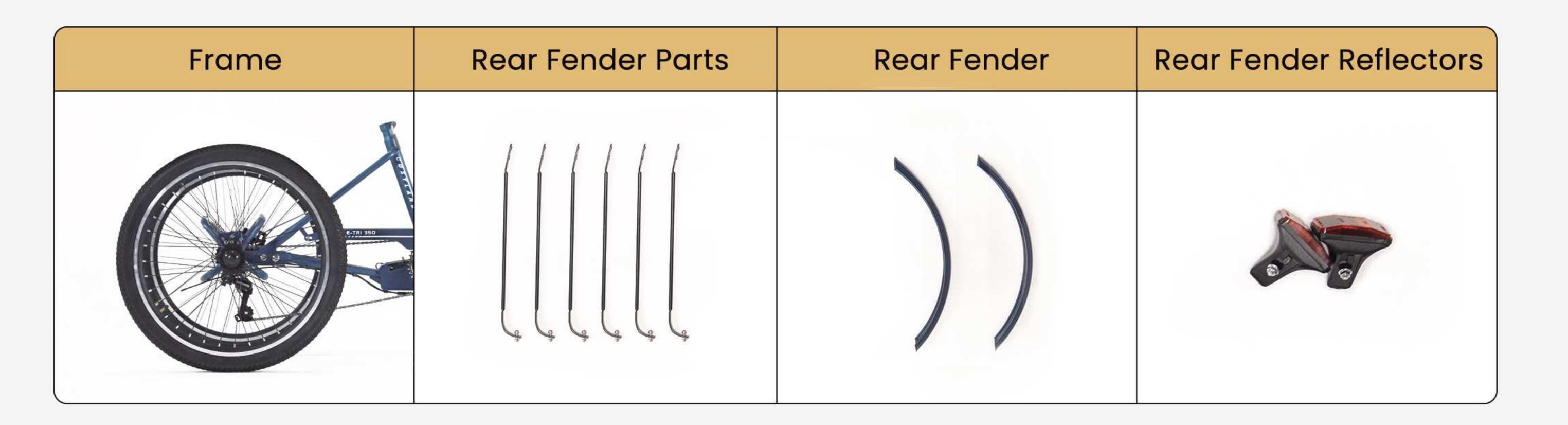


hole on the frame and secure it with a screw.

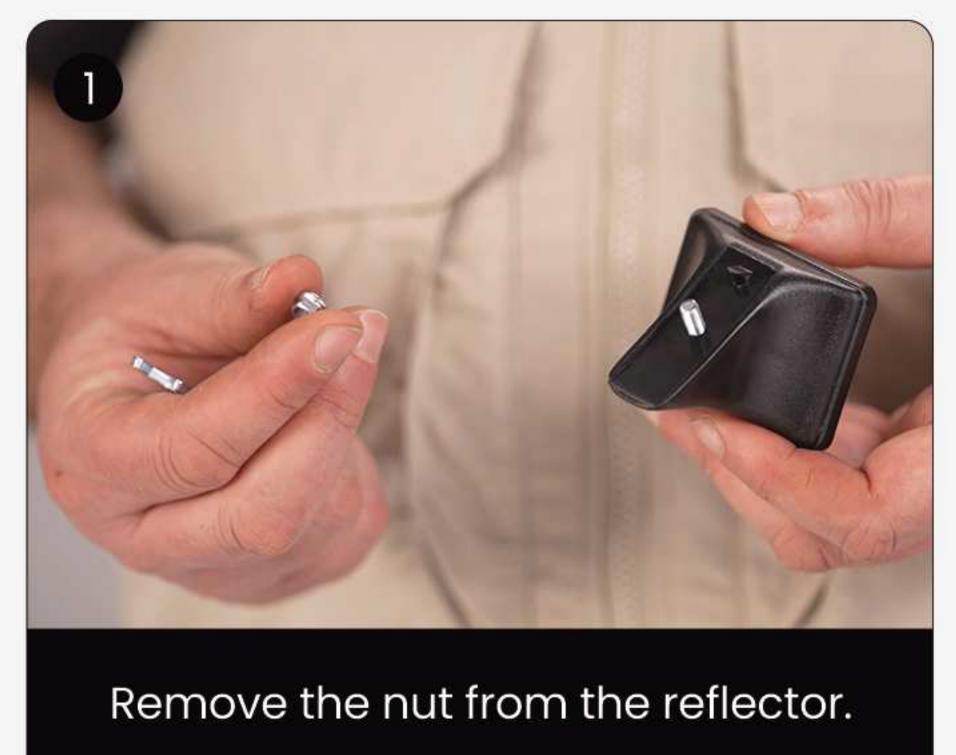
cover attachment point.



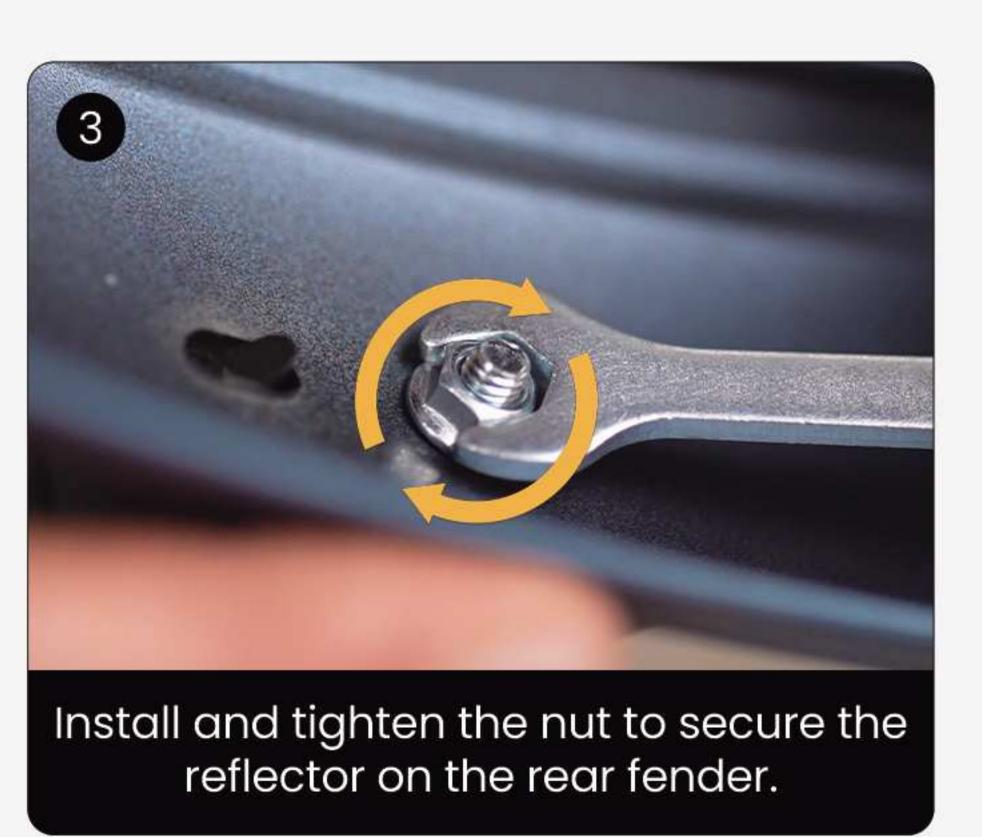
Parts and Tools

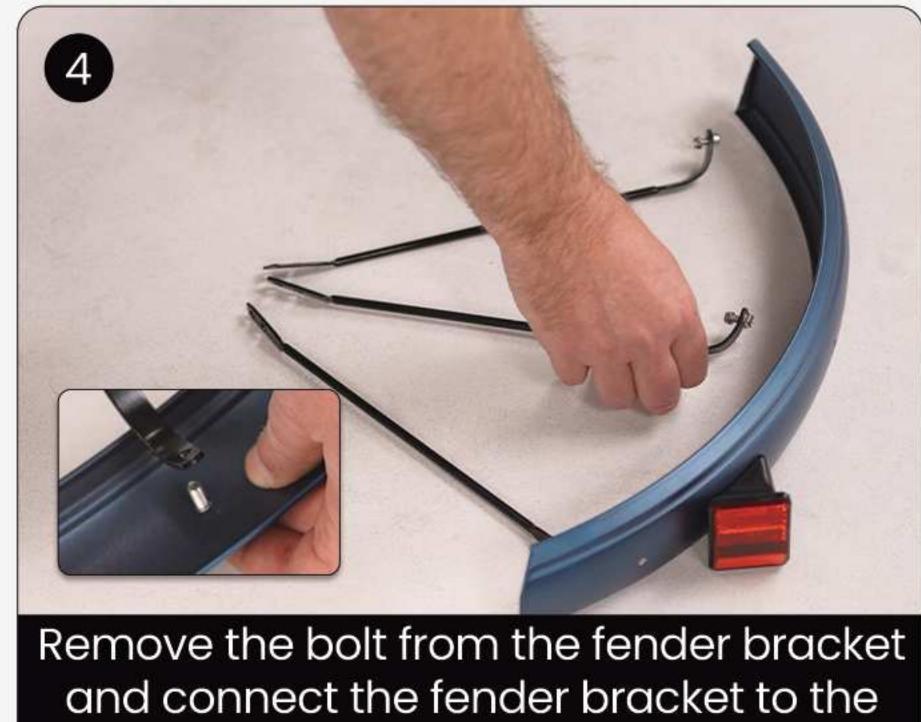


Assembly Steps







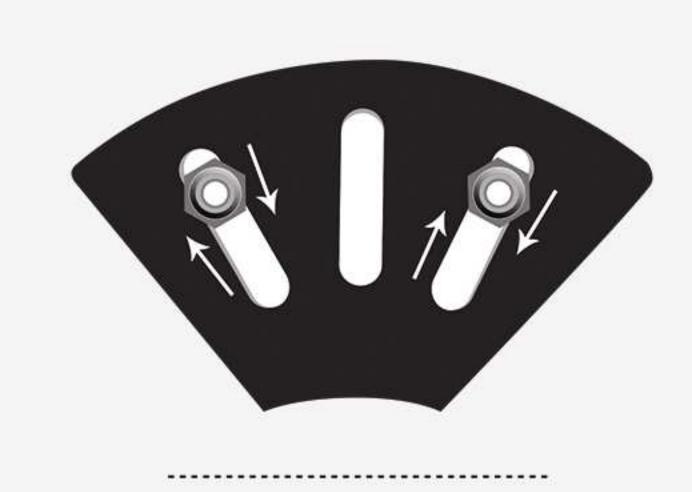




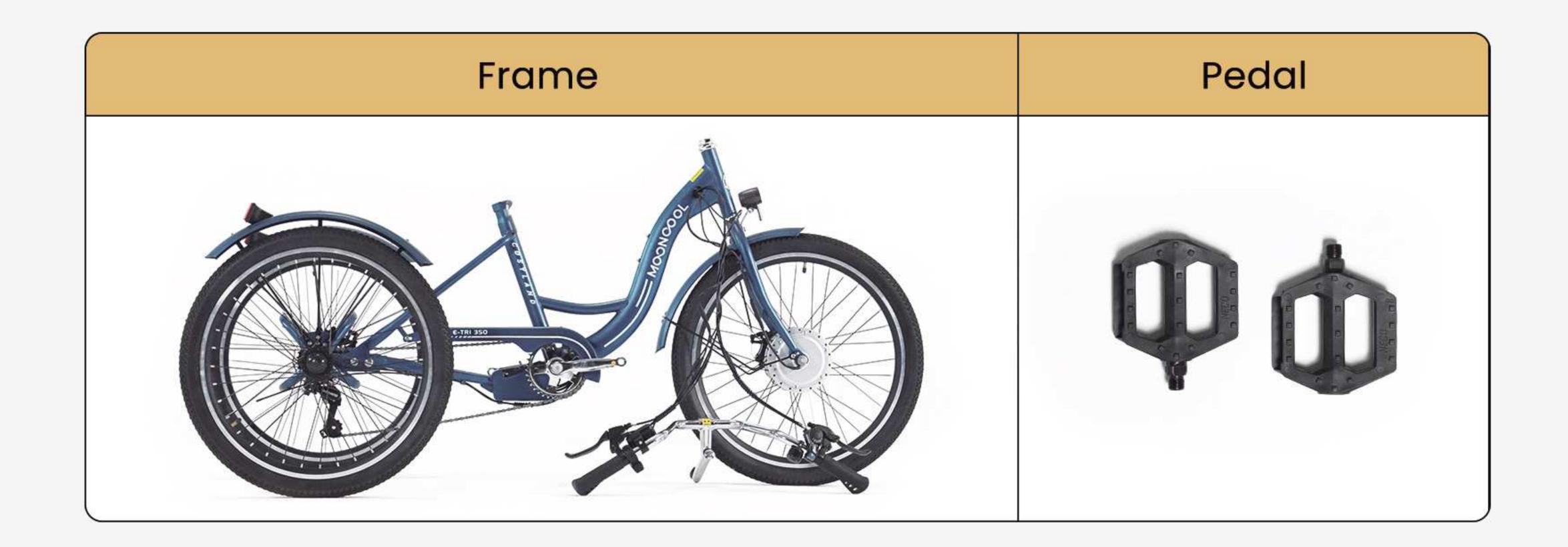




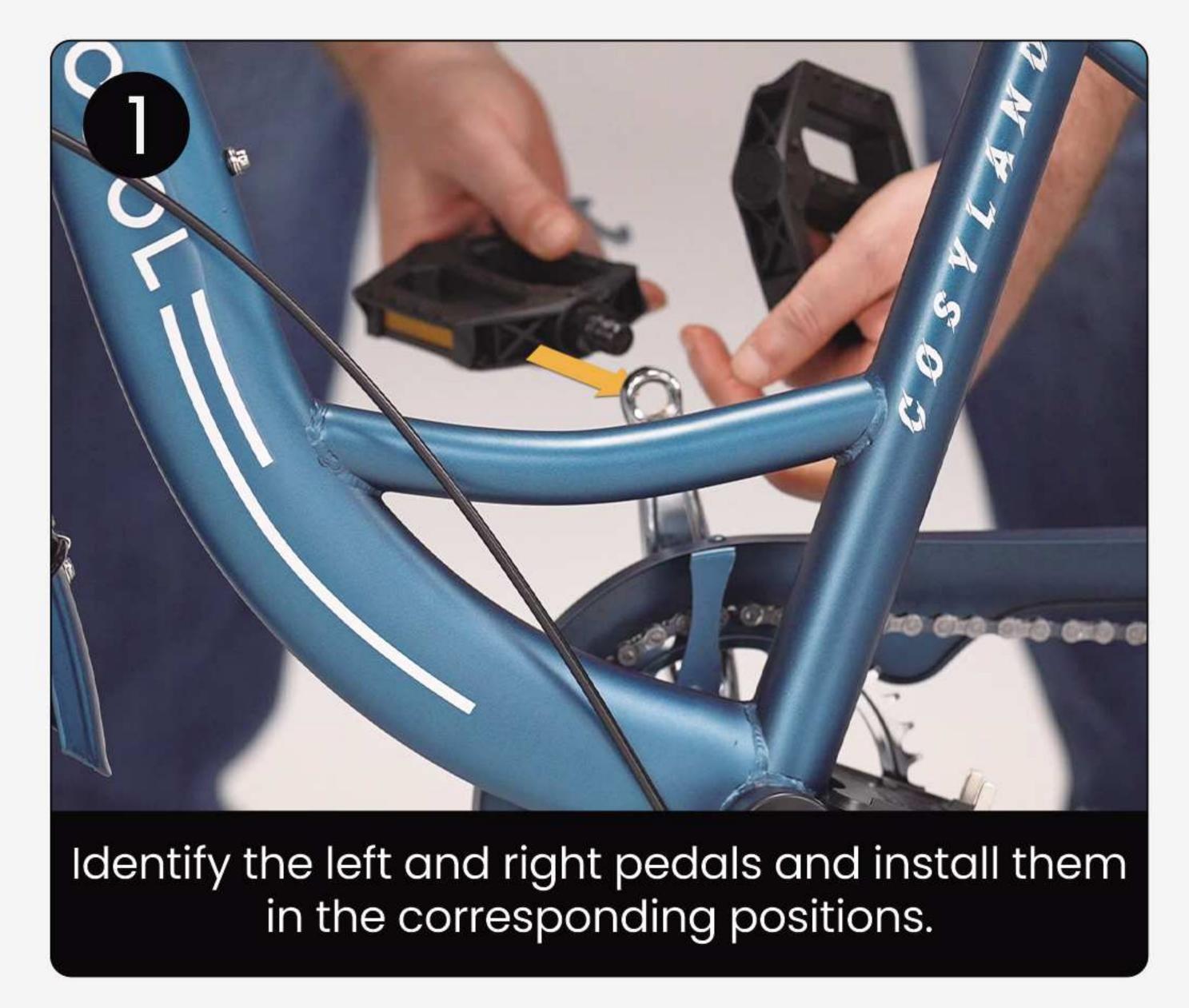


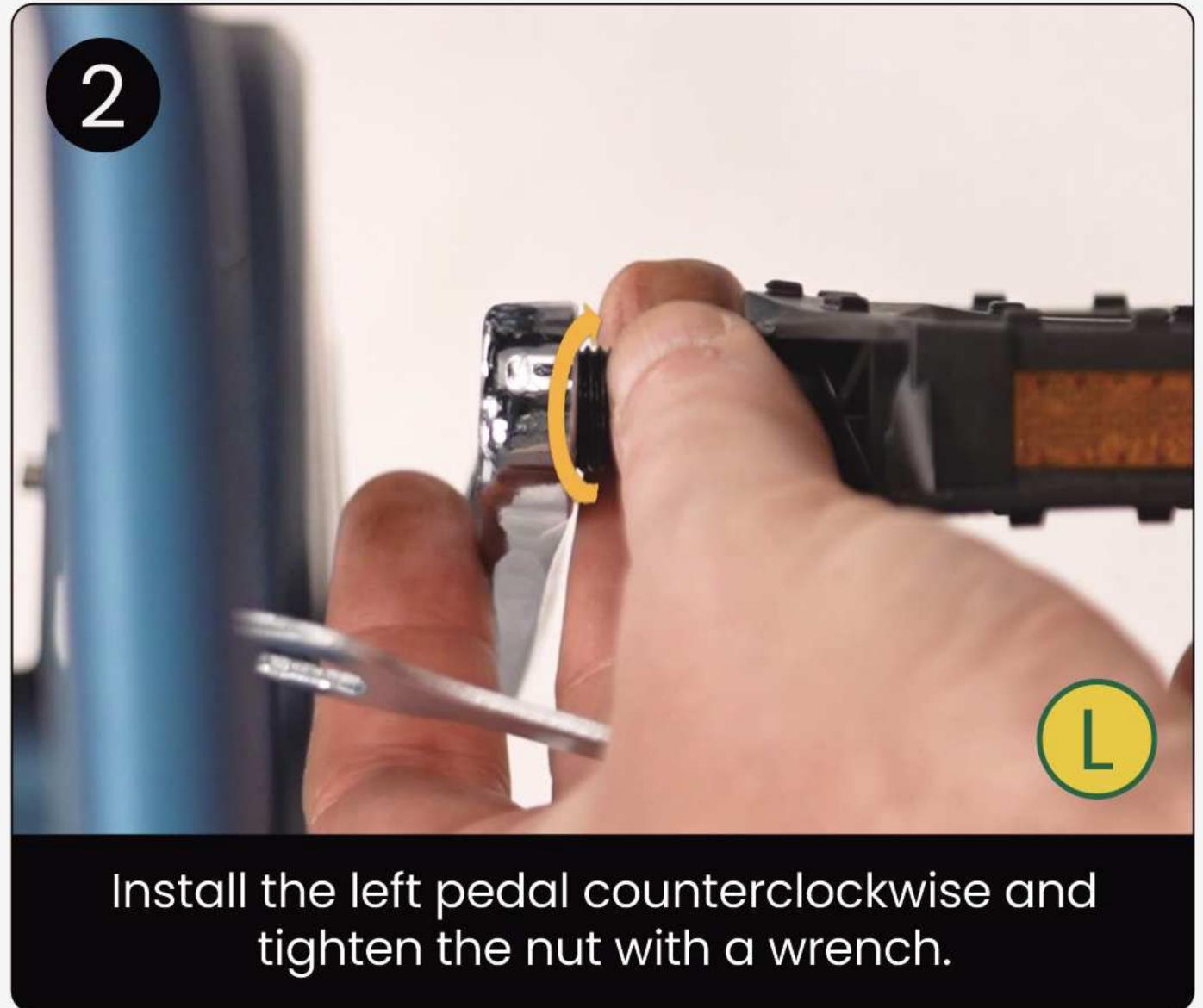


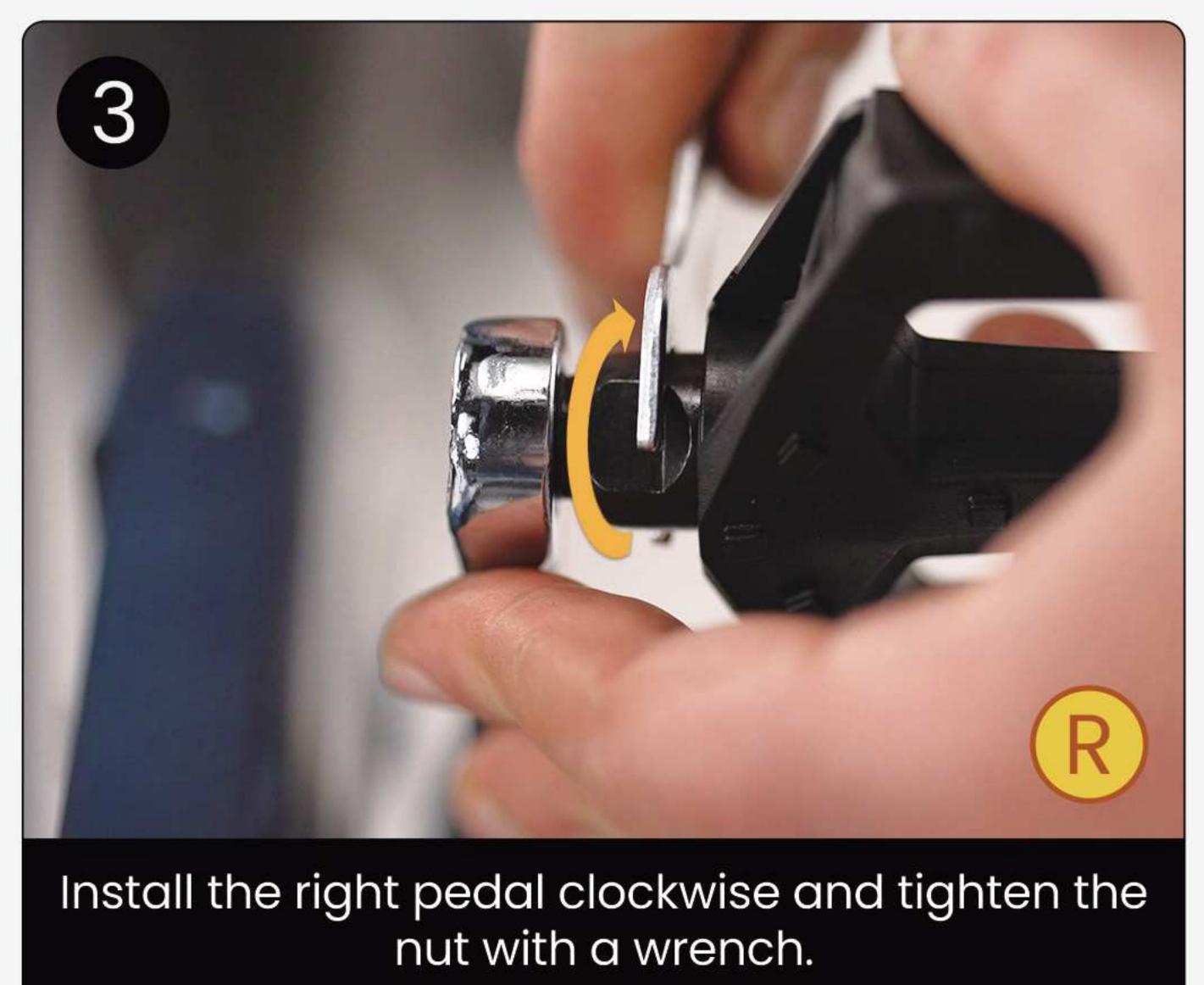
The number of screws differs from the types. Recommend to install as shown.

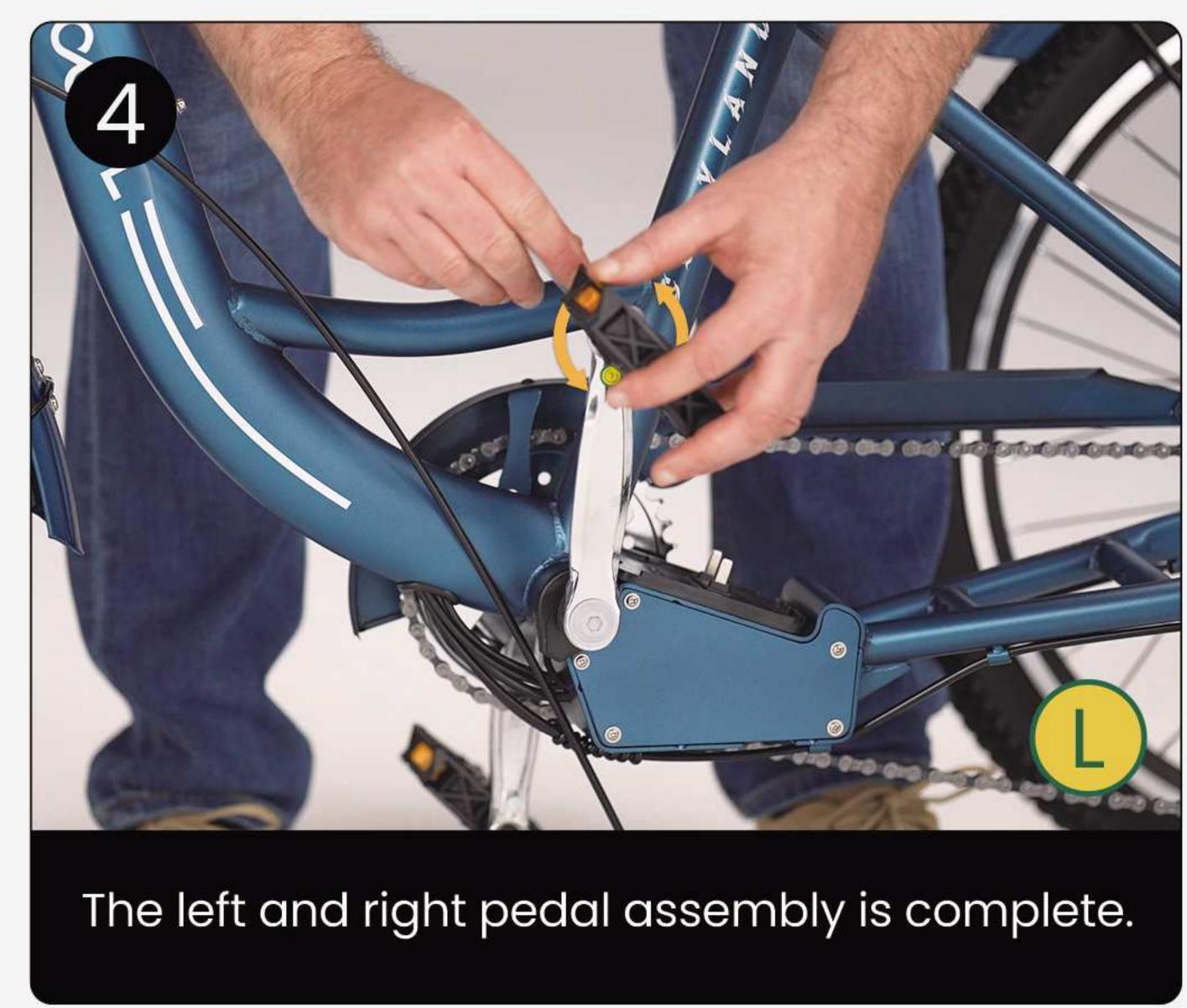


Assembly Steps





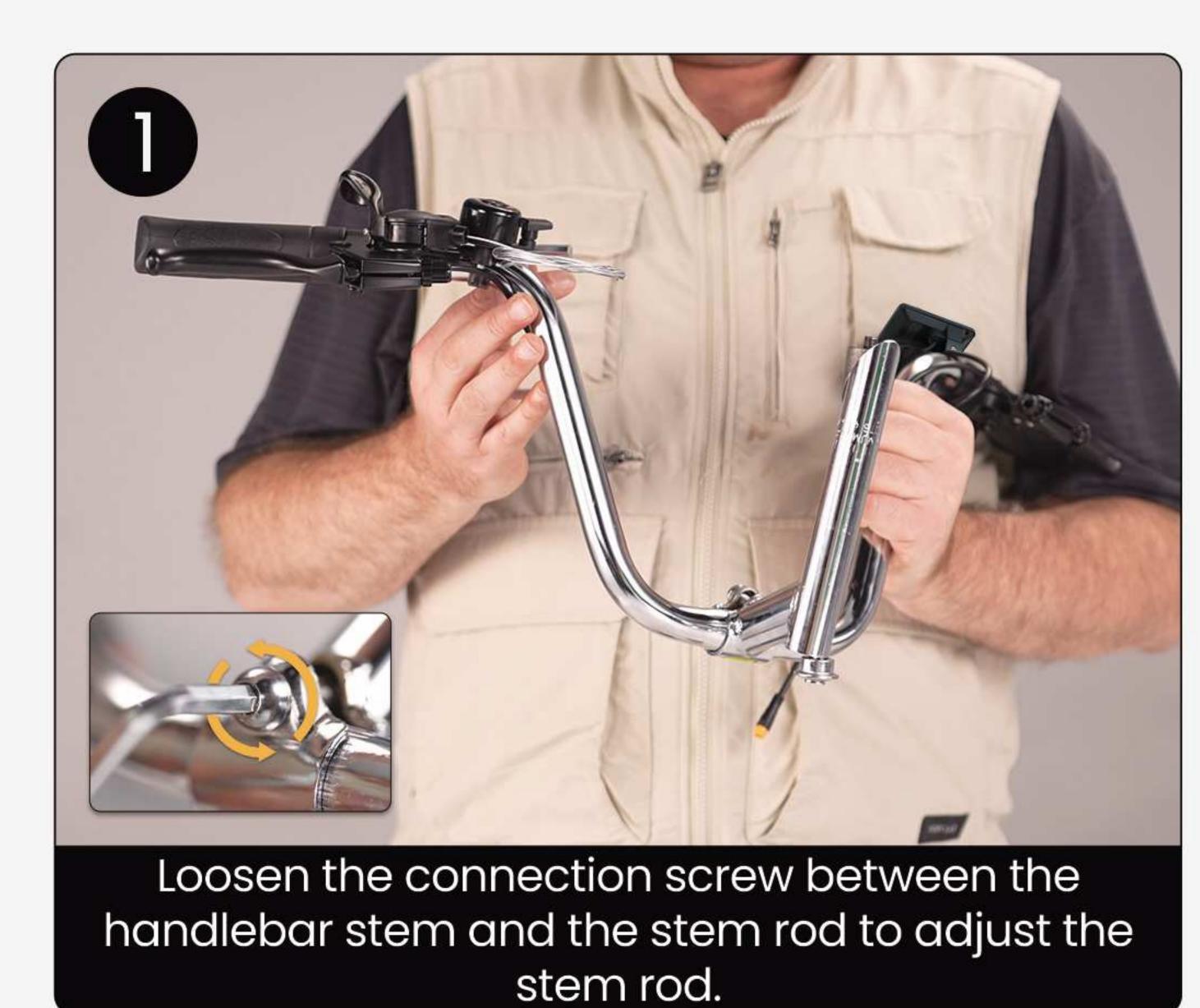




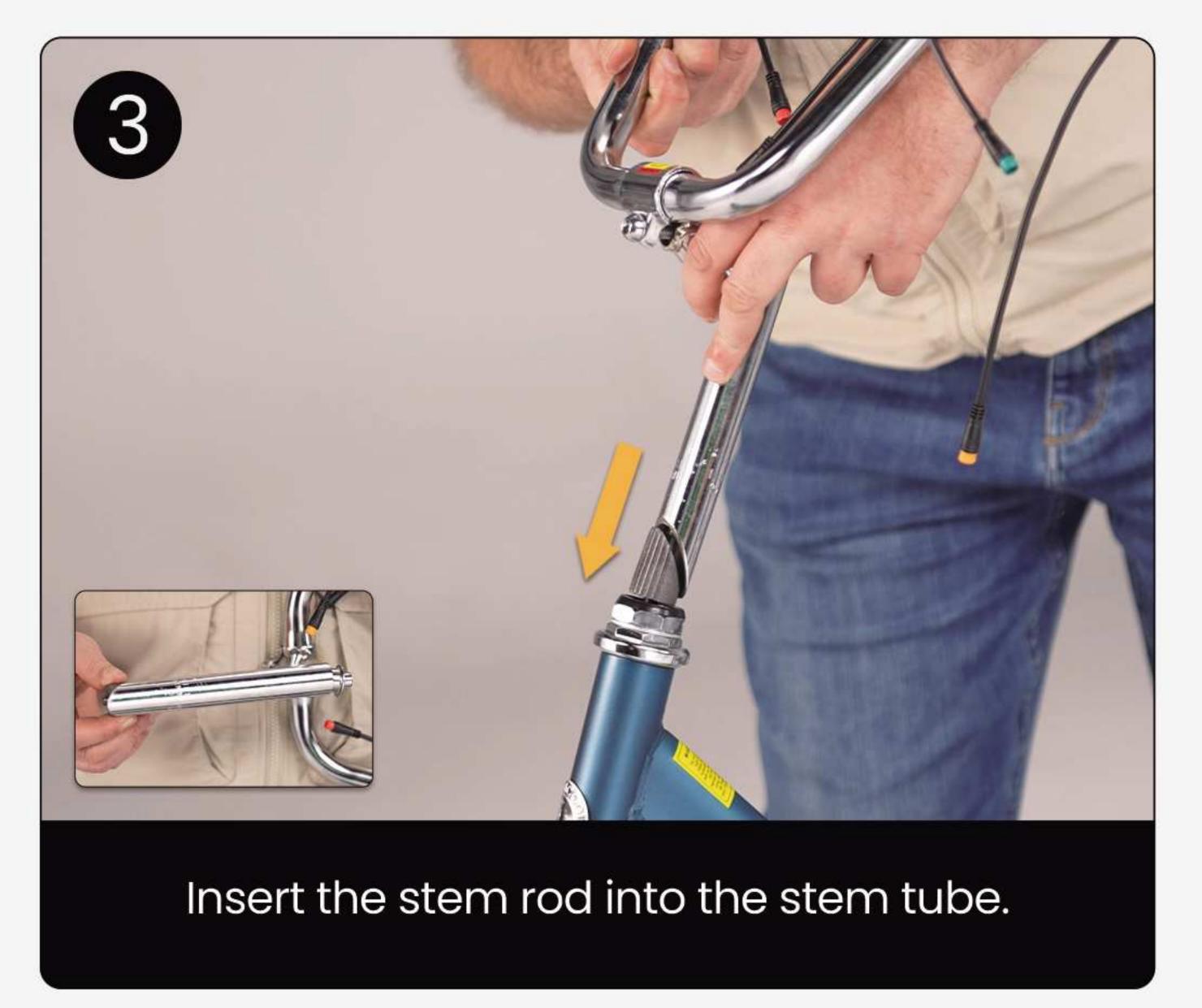
Parts and Tools

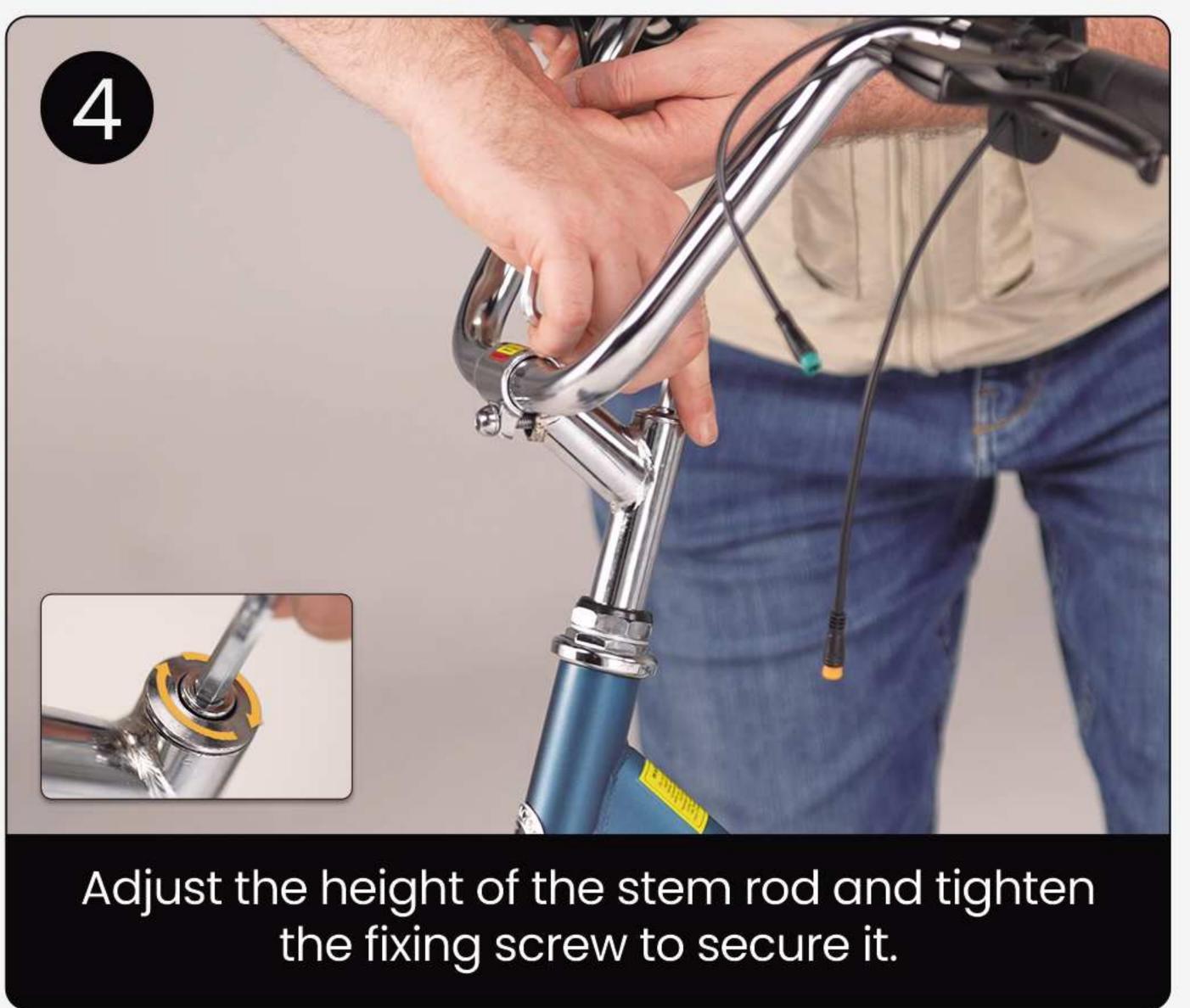


Assembly Steps









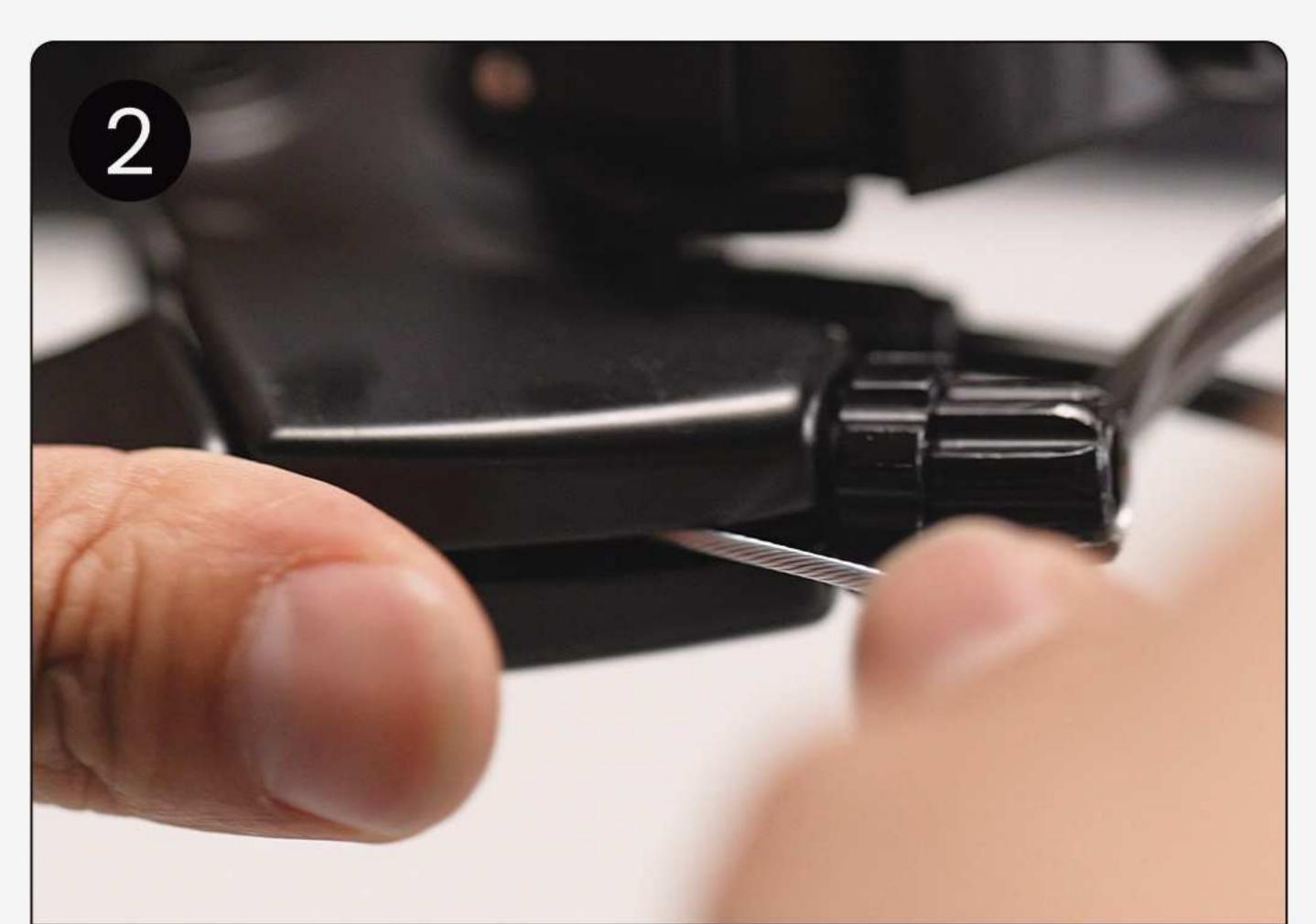
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Front Brake Assembly 2.13 Assembly Steps

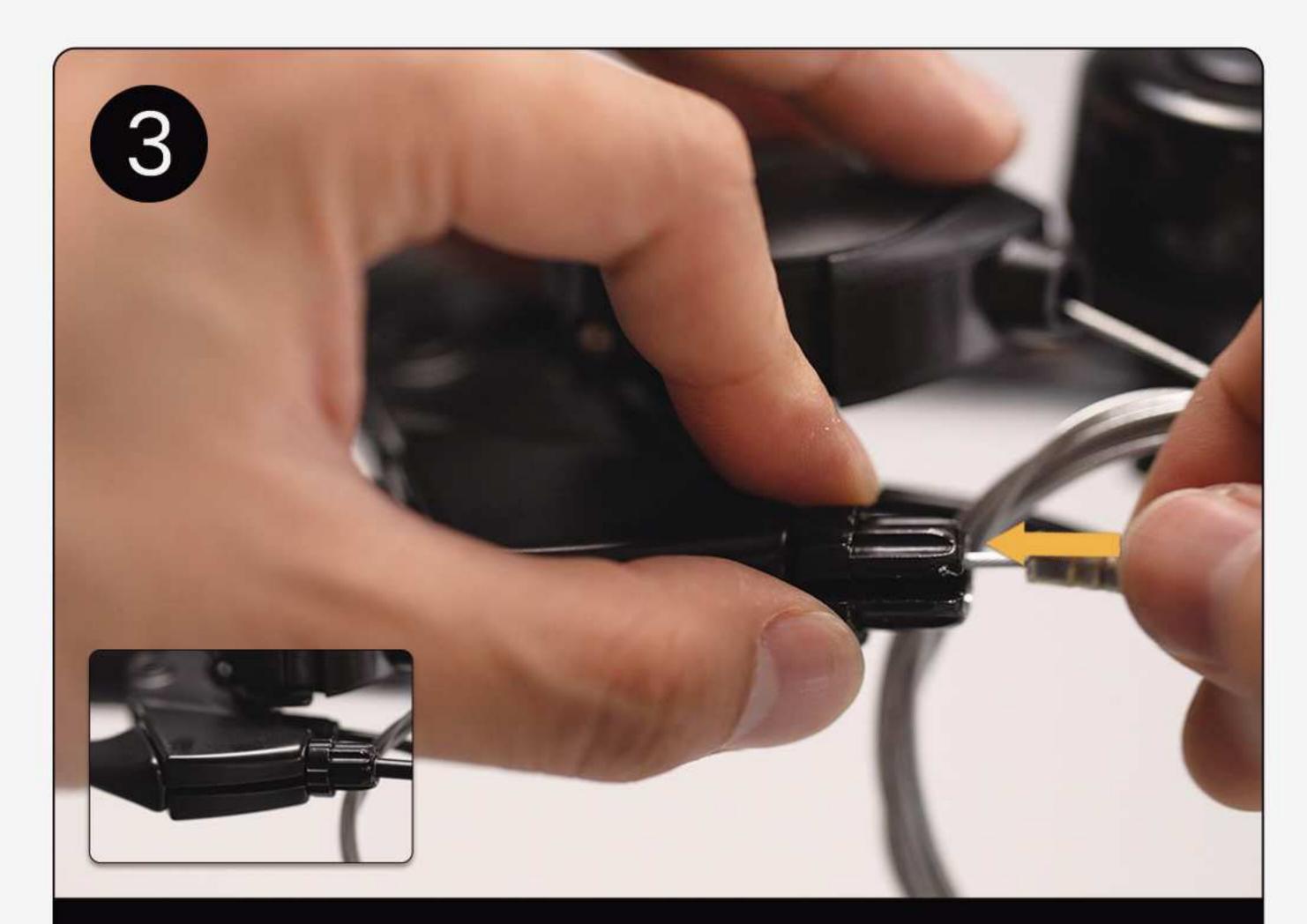
2.12 Rear Brake Assembly Assembly Steps



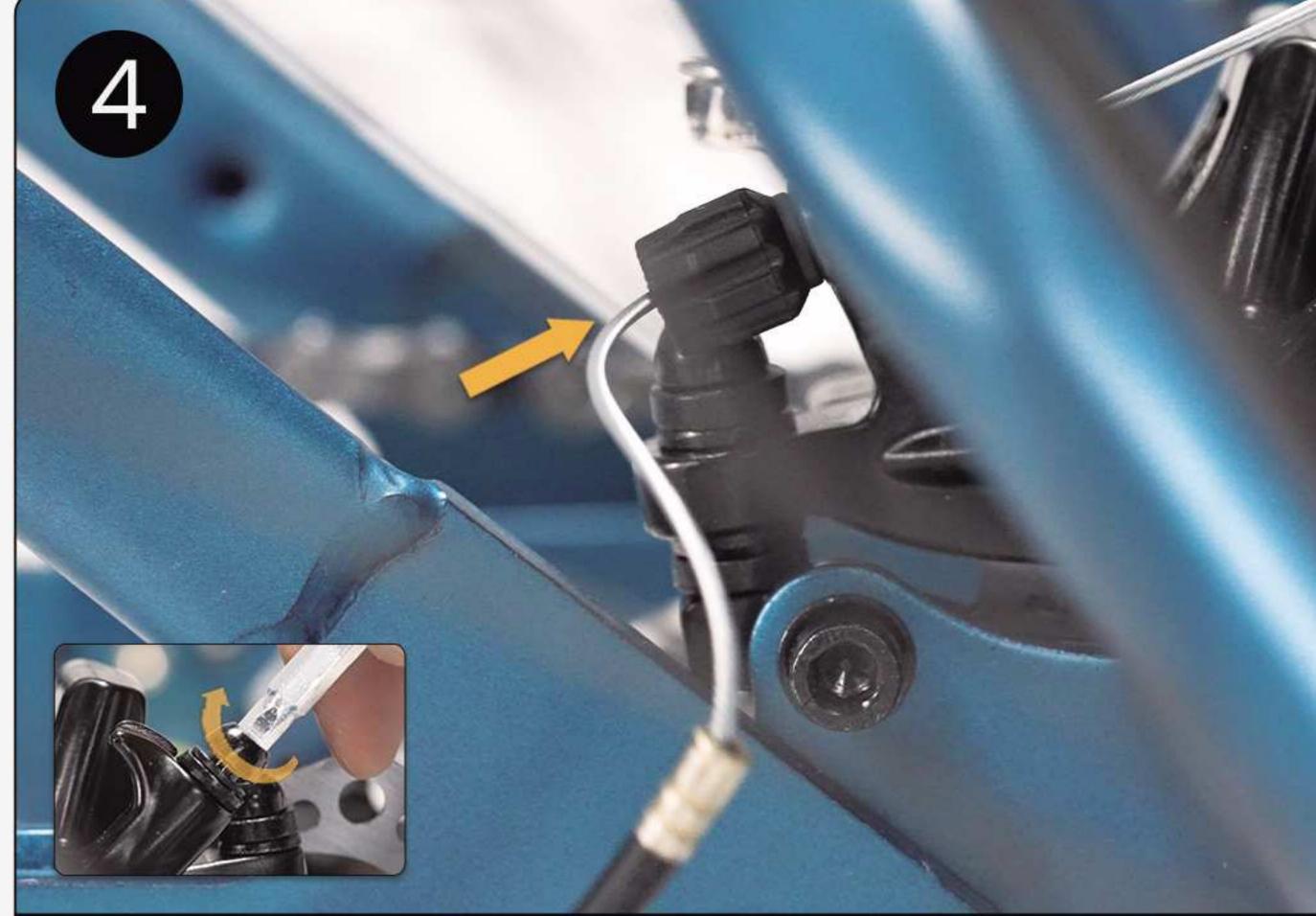
Press the right brake lever and insert the head of the rear brake cable into the lever hole.



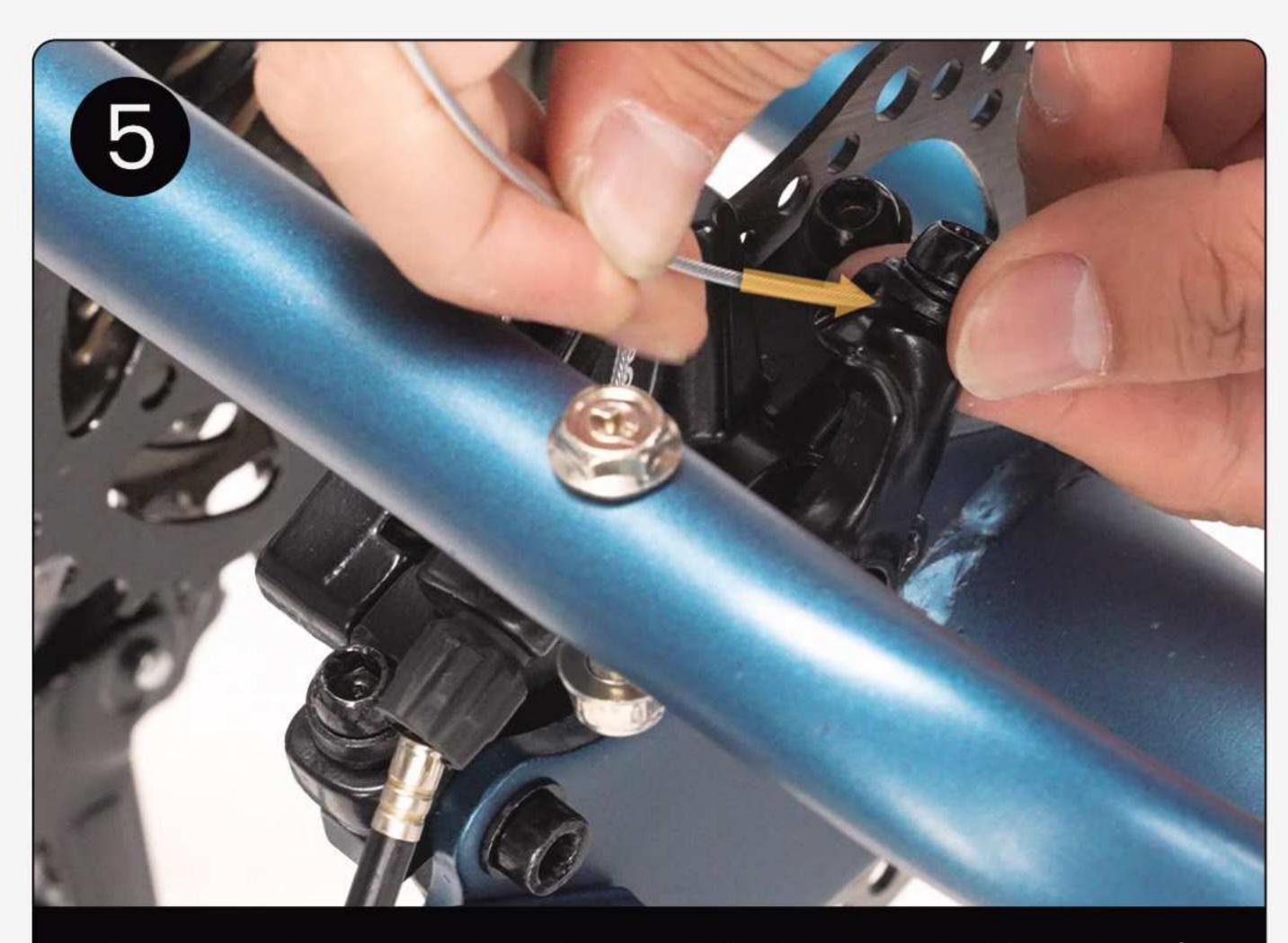
Pull the rear brake cable tight and insert it into the brake lever.



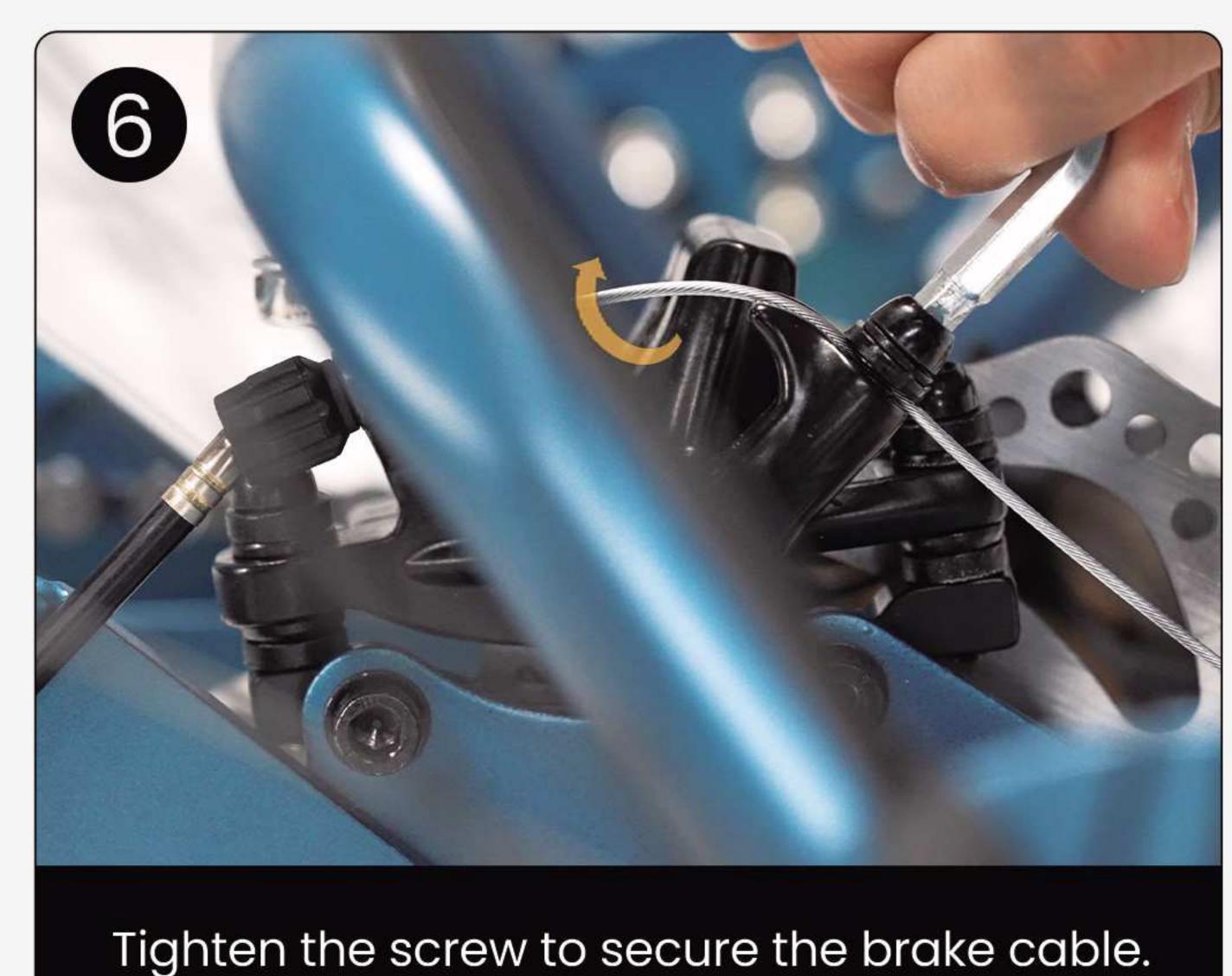
Hold the rear brake cable and tighten the screw on the brake lever to secure the cable.

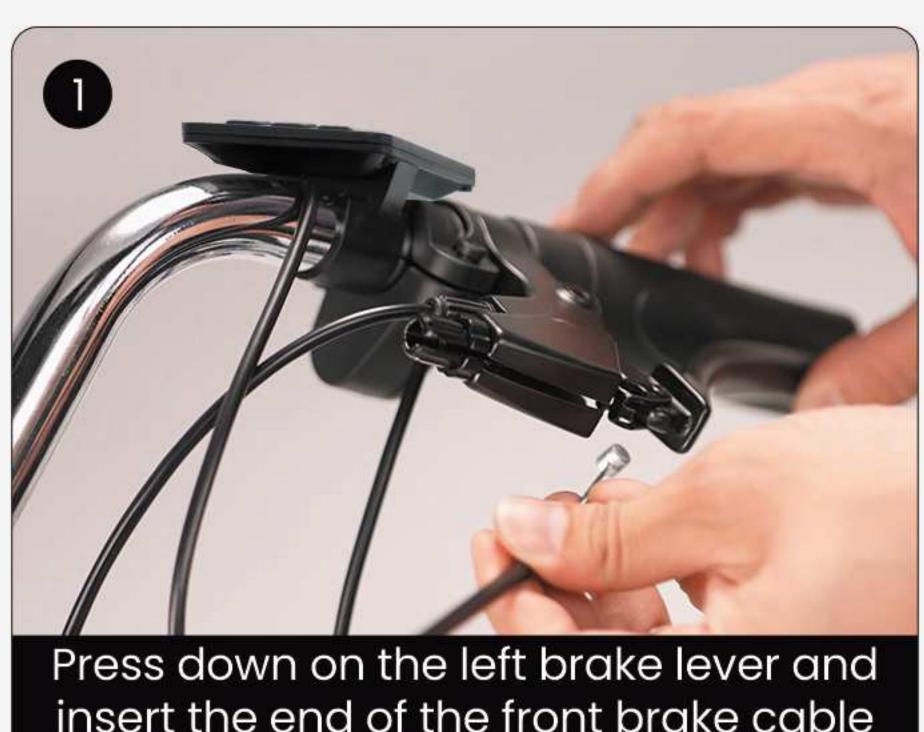


Thread the rear brake cable through the hole in the rear disc brake and tighten the screw to secure the brake cable core.



Thread the rear brake cable through the slot in the washer screw.





insert the end of the front brake cable into the hole in the lever.



Thread the front brake cable through the Thread the front brake cable through the screw hole in the front disc brake and tighten slot in the washer screw and tighten the the screw to secure the brake cable core. screw to secure the brake cable.

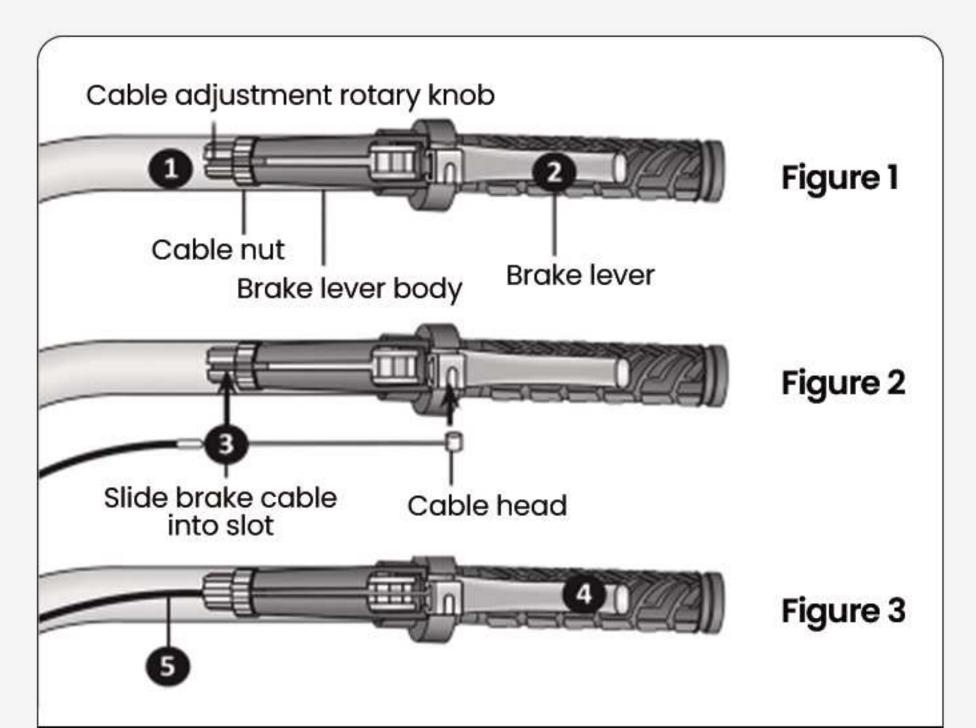


Hold the front brake cable in place and tighten the screw on the brake lever to secure the cable.





The front brake cable assembly is complete.



Brake Cable/Lever Connection

If there is difficulty connecting the brake cable to the brake lever, follow these steps.

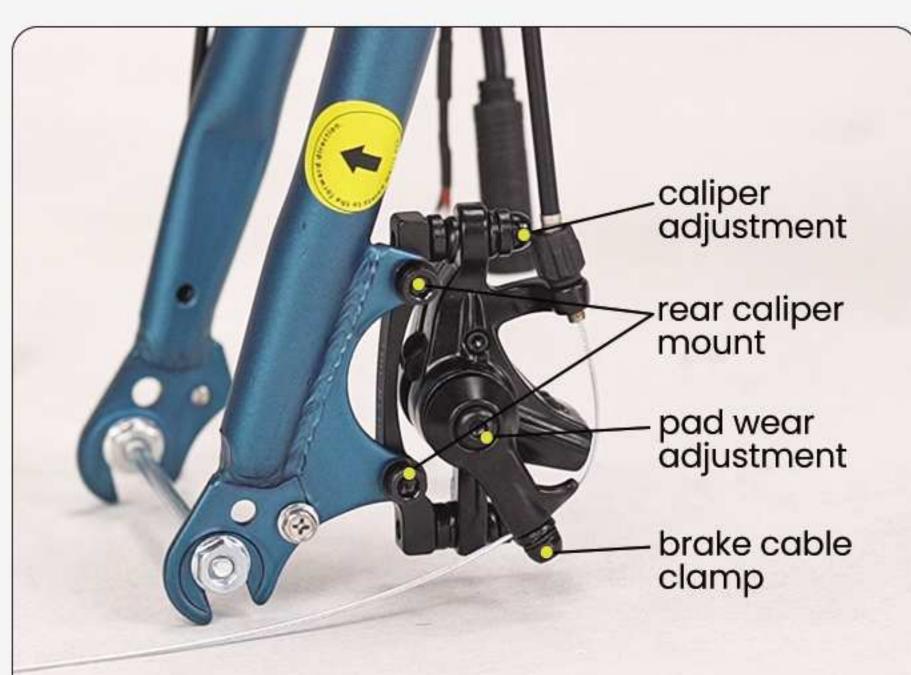
1) Rotate the parts until the slots are aligned (straight line). **Figure 1**

② Depress the brake lever to expose the needed parts.

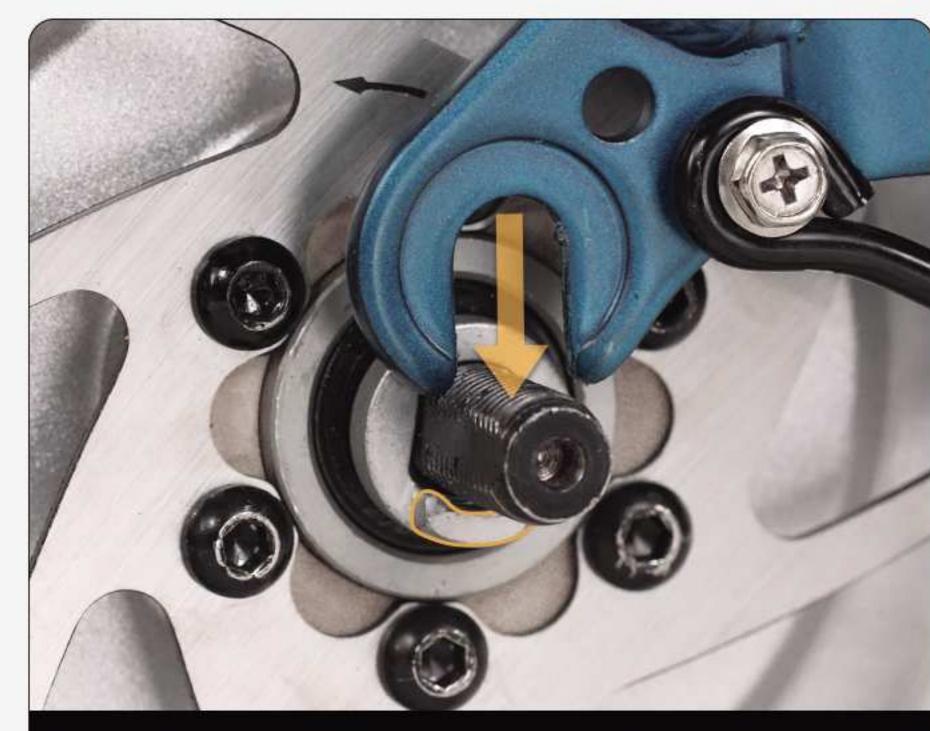
3 Slide the brake cable into place and secure the cable head so it cannot slide out.

4 Release the brake lever. Figure 3

⑤ Pull the cable, rotate knob, depress lever, checking to see that the cable stays in place.



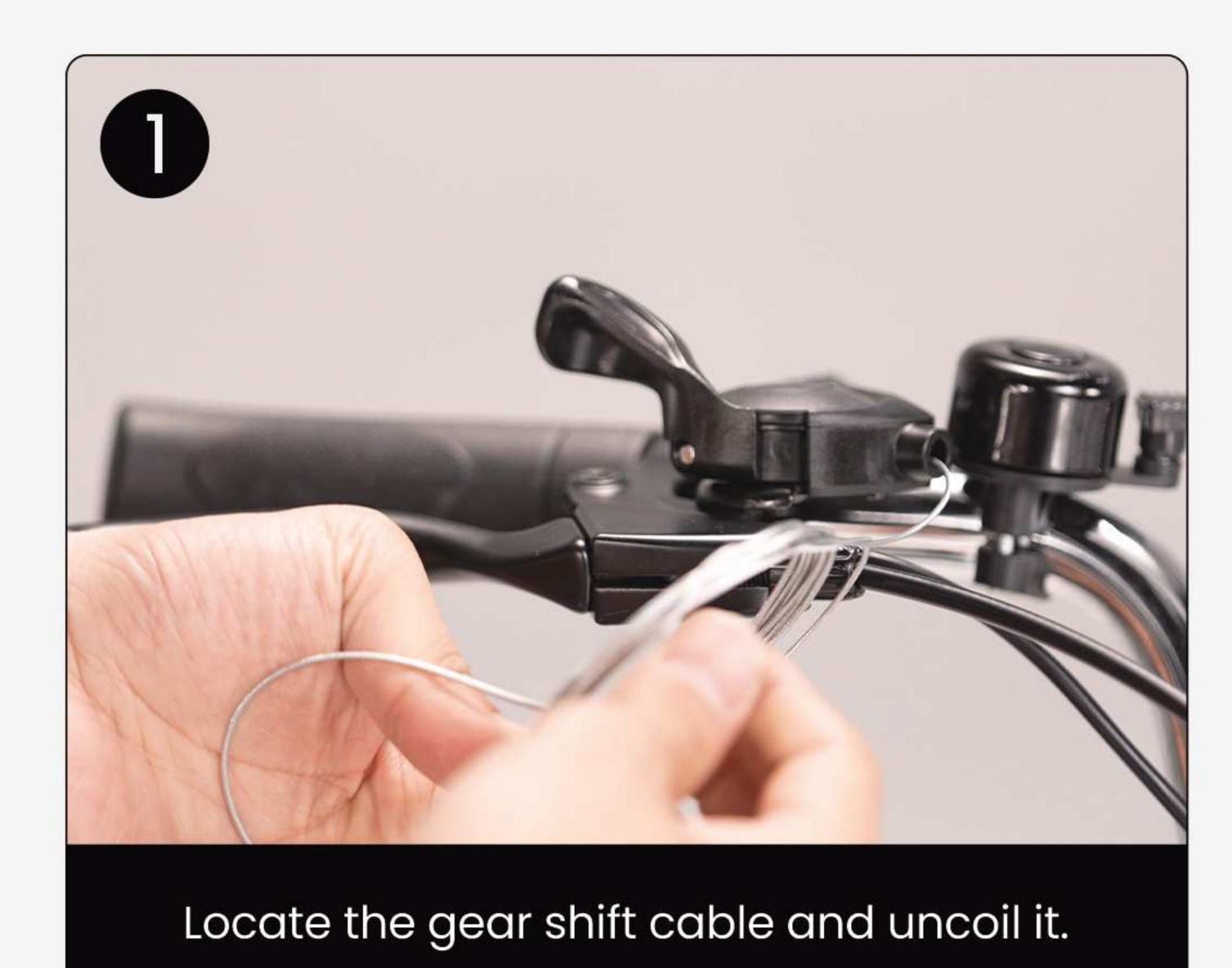
Caliper adjustment screw will be used while installing front wheel. Brake cable clamp will be used when installing front brake. Pad wear adjustment screw is used after the brake pads are worn aown.



Use a wrench to align the front axle with the slot at the bottom of the front fork. The brake disc slides between the brake pads at the same time. Take care to not damage the brake pads or aisc.

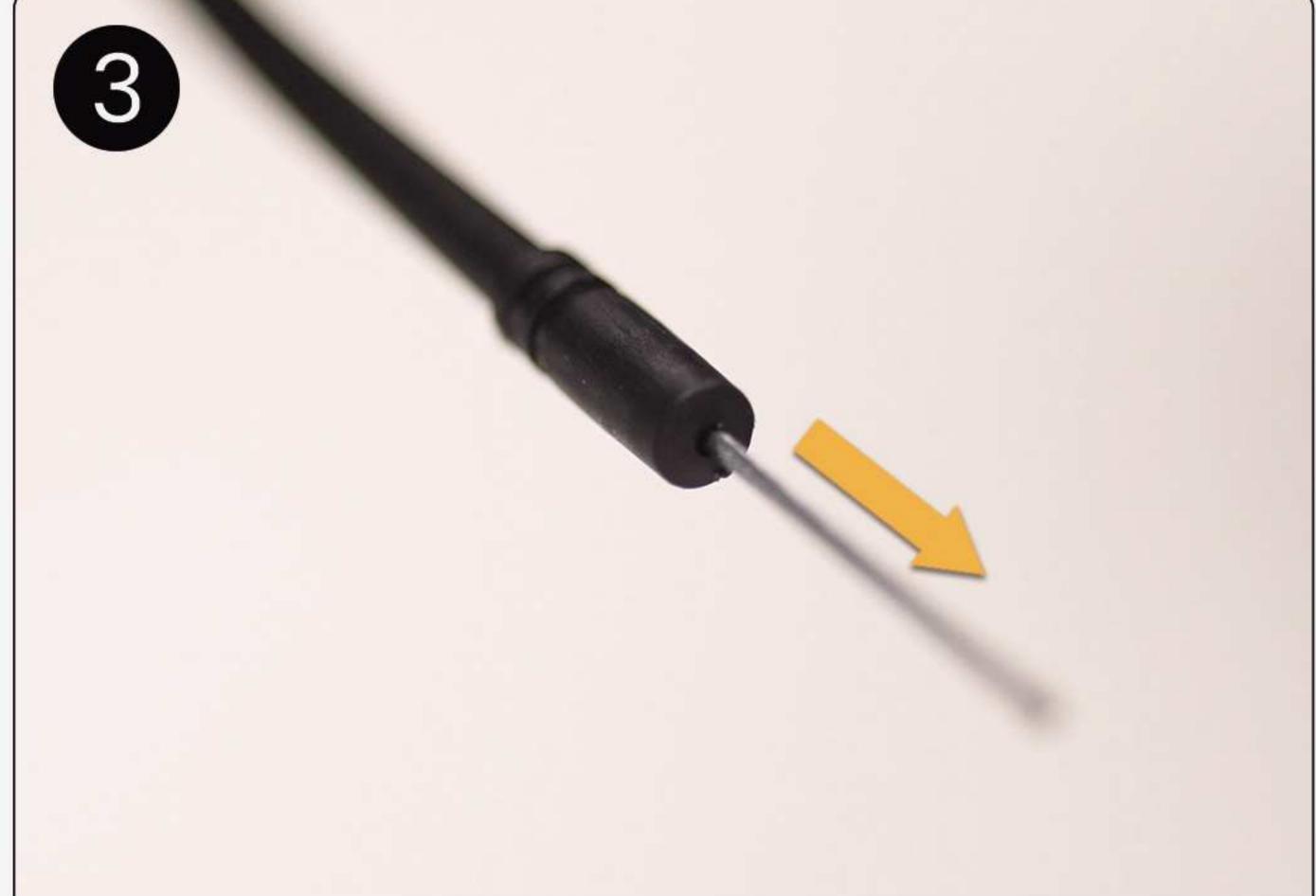
The Assembling of Shifter Cable 2.14 Assembly Steps

2.14 Shifter Cable Assembly Assembly Steps





cable tube.

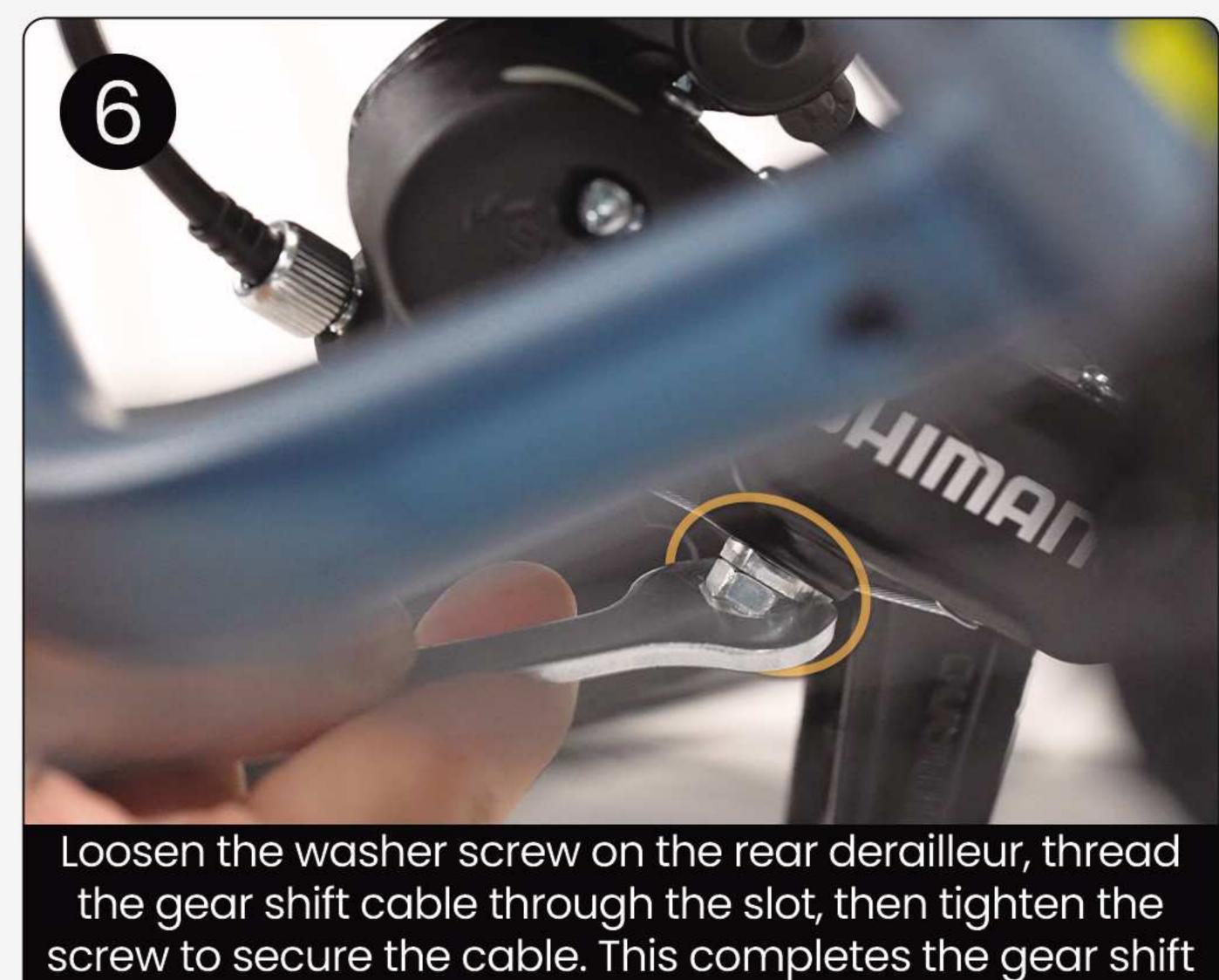


Thread the gear shift cable through the gear shift cable tube.

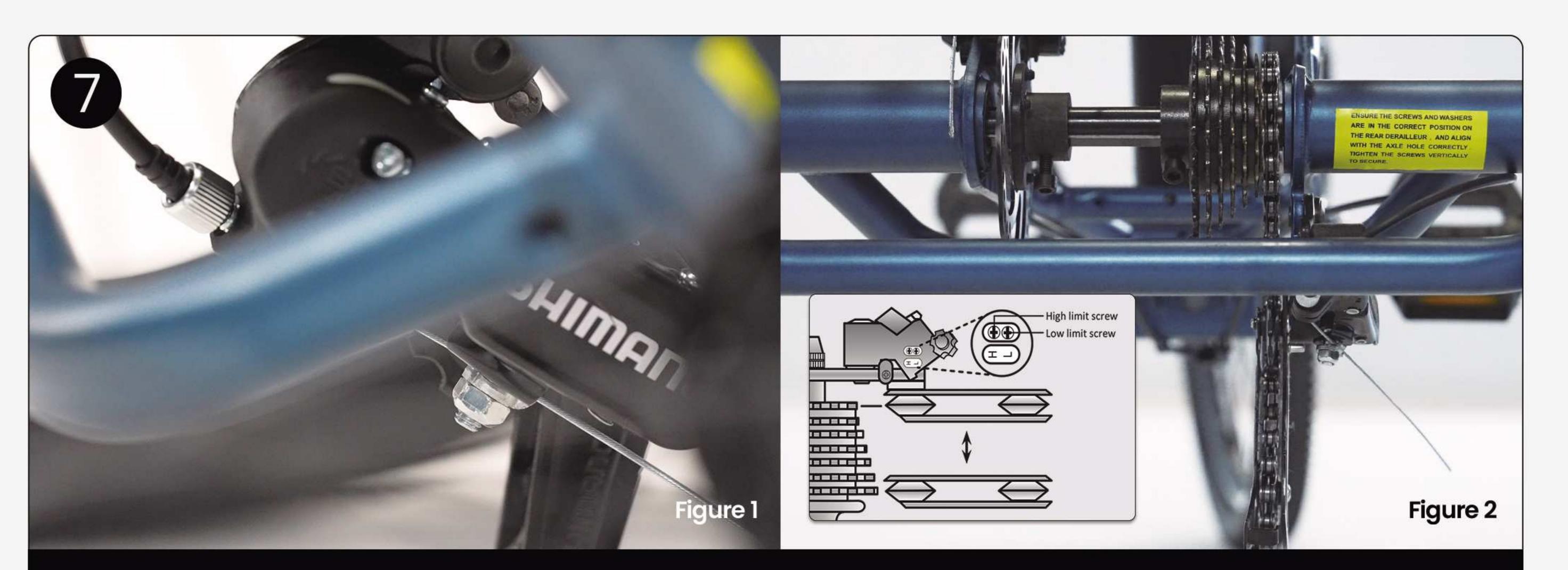


Thread the gear shift cable through the fine-tuning screw hole on the rear derailleur.





cable assembly.



Adjusting the Rear Derailleur

The low limit screw (L) controls how far the derailleur can move toward the left wheel and the high limit screw (H) controls derailleur movement toward the right wheel.

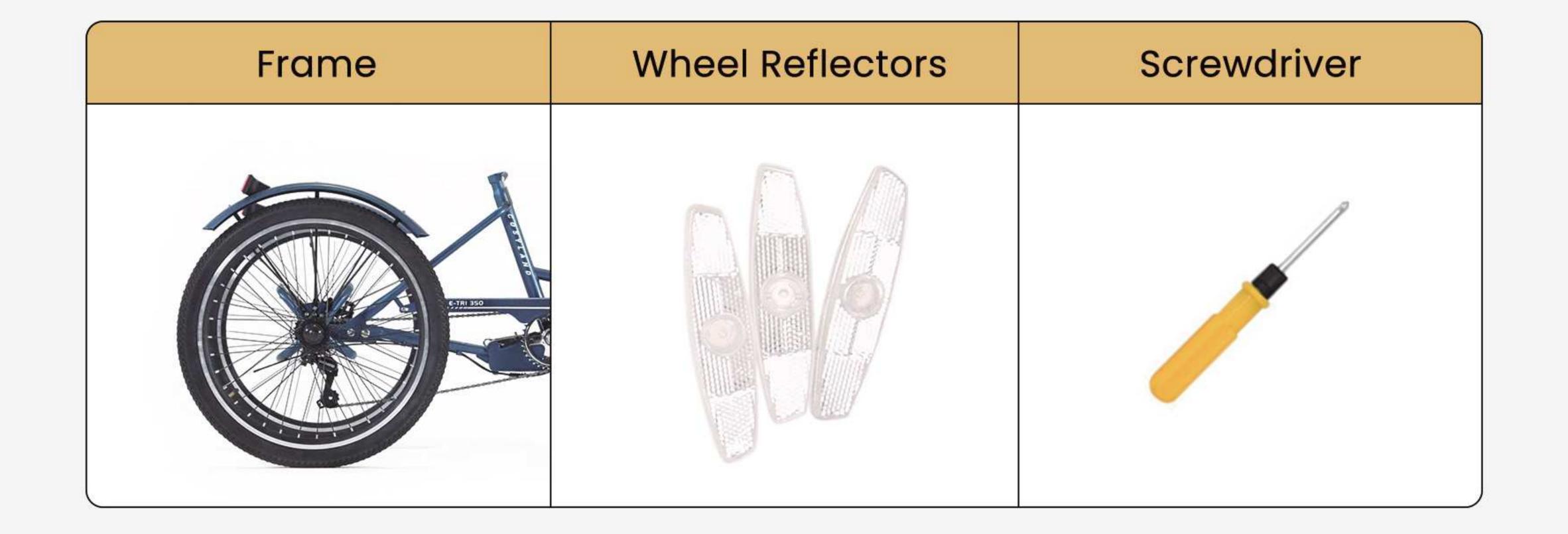
- 1) Adjust the shifter on the handlebar until the indicator arrow points to the number 7.
- ② Disconnect the derailleur cable from the retaining bolt (Figure 1) and manually move the chain to the smallest rear sprocket (Figure 2).
- ③ Use a screwdriver to adjust the high limit screw (H) so the guide pulley is directly lined up with the smallest sprocket (Figure 2).
- 4 Reconnect the cable, pull out any slack, and securely tighten the retaining bolt.
- ⑤ Have a helper tilt the trike so that the right wheel is off the ground. Move the handlebar shifter to 6 and use the pedal to spin the wheel. The derailleur should move the chain crisply to the next sprocket. If needed, use the barrel adjuster to fine tune the derailleur pulley's position by turning the barrel adjuster in the direction you want the chain to move. Check each gear in turn.
- ⑥ If you cannot shift smoothly to the lower gears (the larger sprockets: 1, 2, 3), manually place the chain on the largest sprocket and adjust the shifter so the indicator arrow points at 1.
- ① Use a screwdriver to adjust the low limit screw (L) in quarter-turn increments until the guide pulley is directly lined up with the largest sprocket.
- ® Using the same technique as in #5 above, shift through all gears twice to check for smooth shifting. If not, readjust the derailleur position as described above. Check again for smooth, crisp shifting.

- When installing the derailleur, the front shifter should be adjusted to the 7th speed.
- When installing the derailleur,the chain should be on the small sprocket farthest from the wheel.

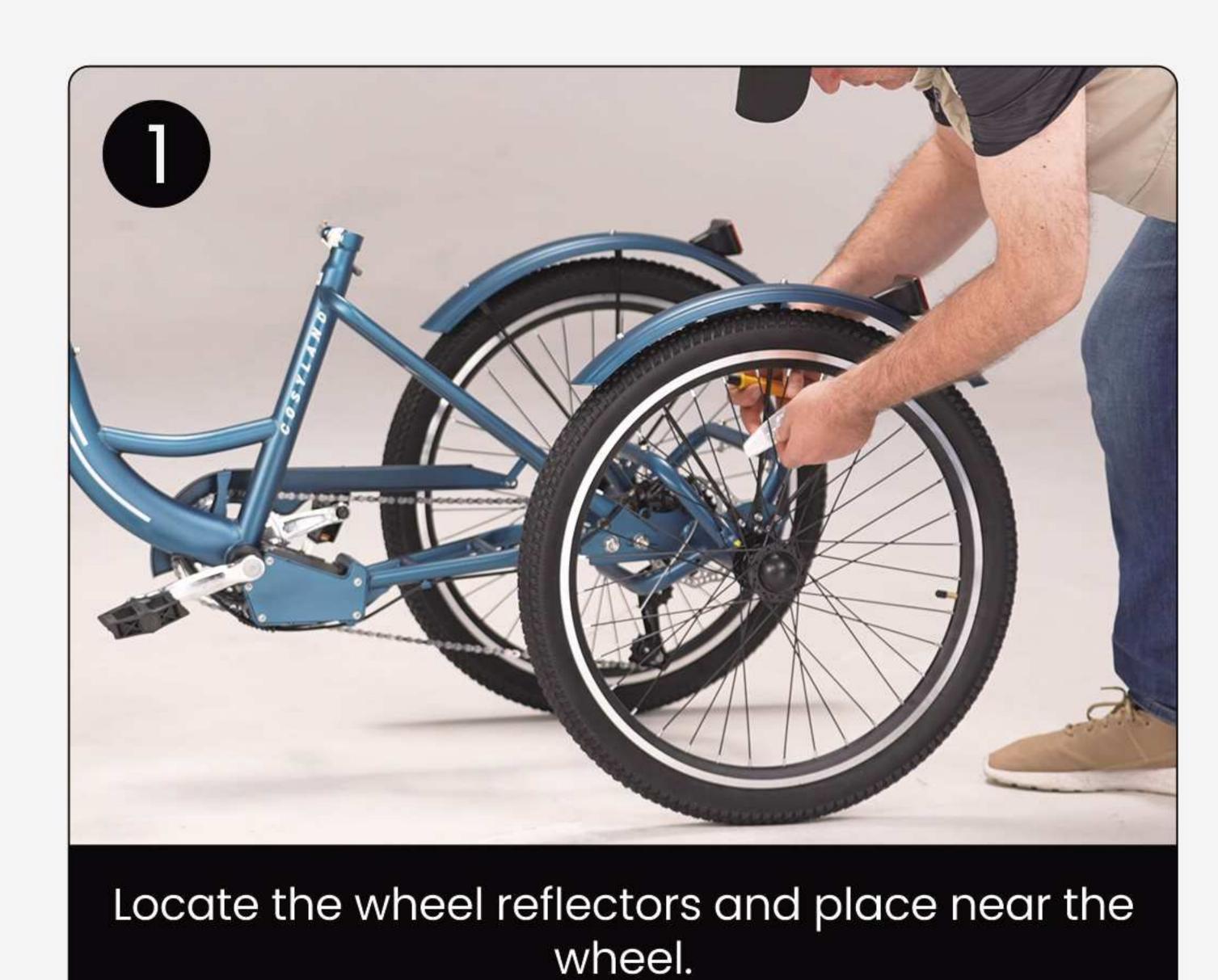
Basket Assembly 2.16 Assembly Steps

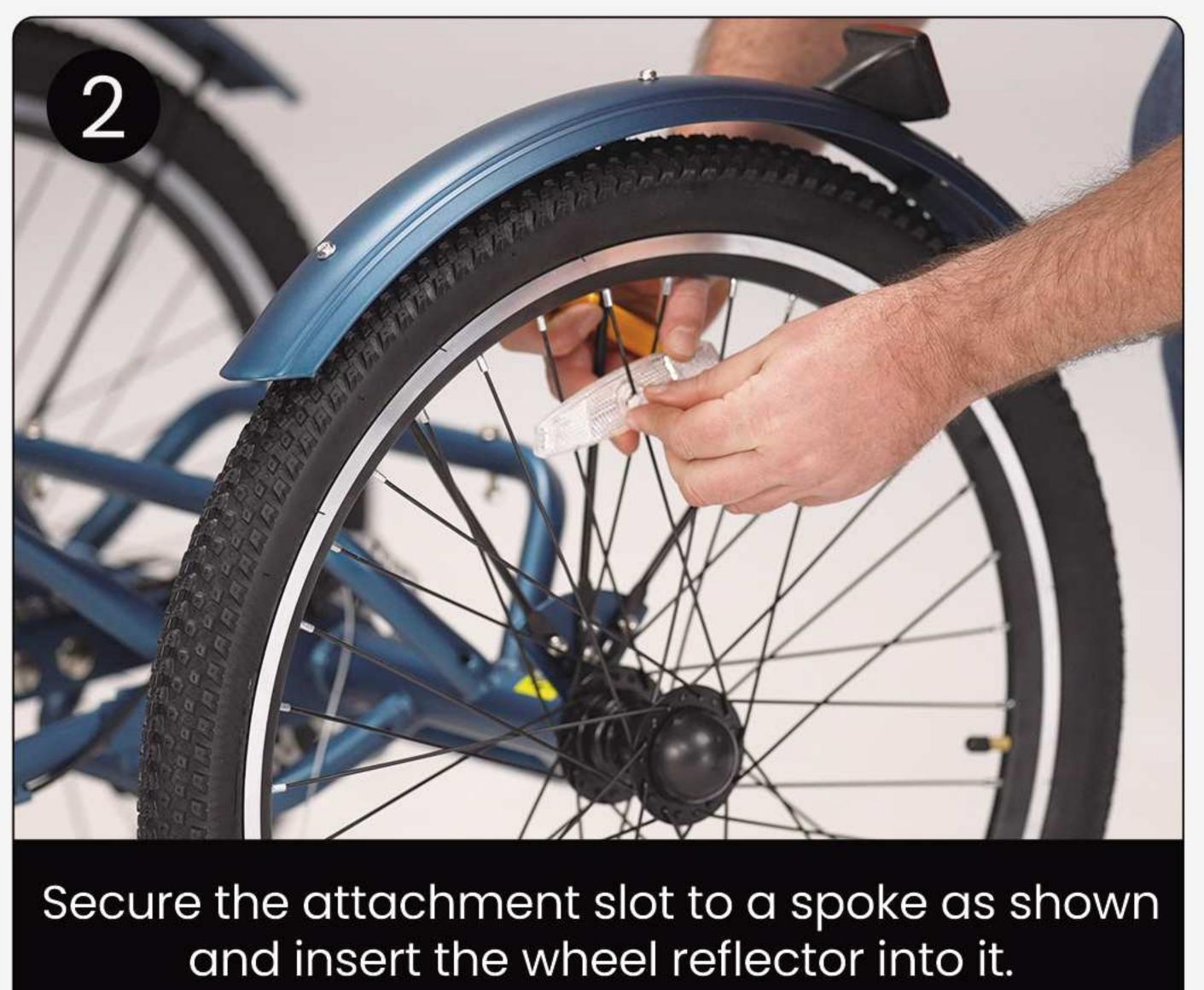
2.15 Wheel Reflector Assembly Assembly Steps

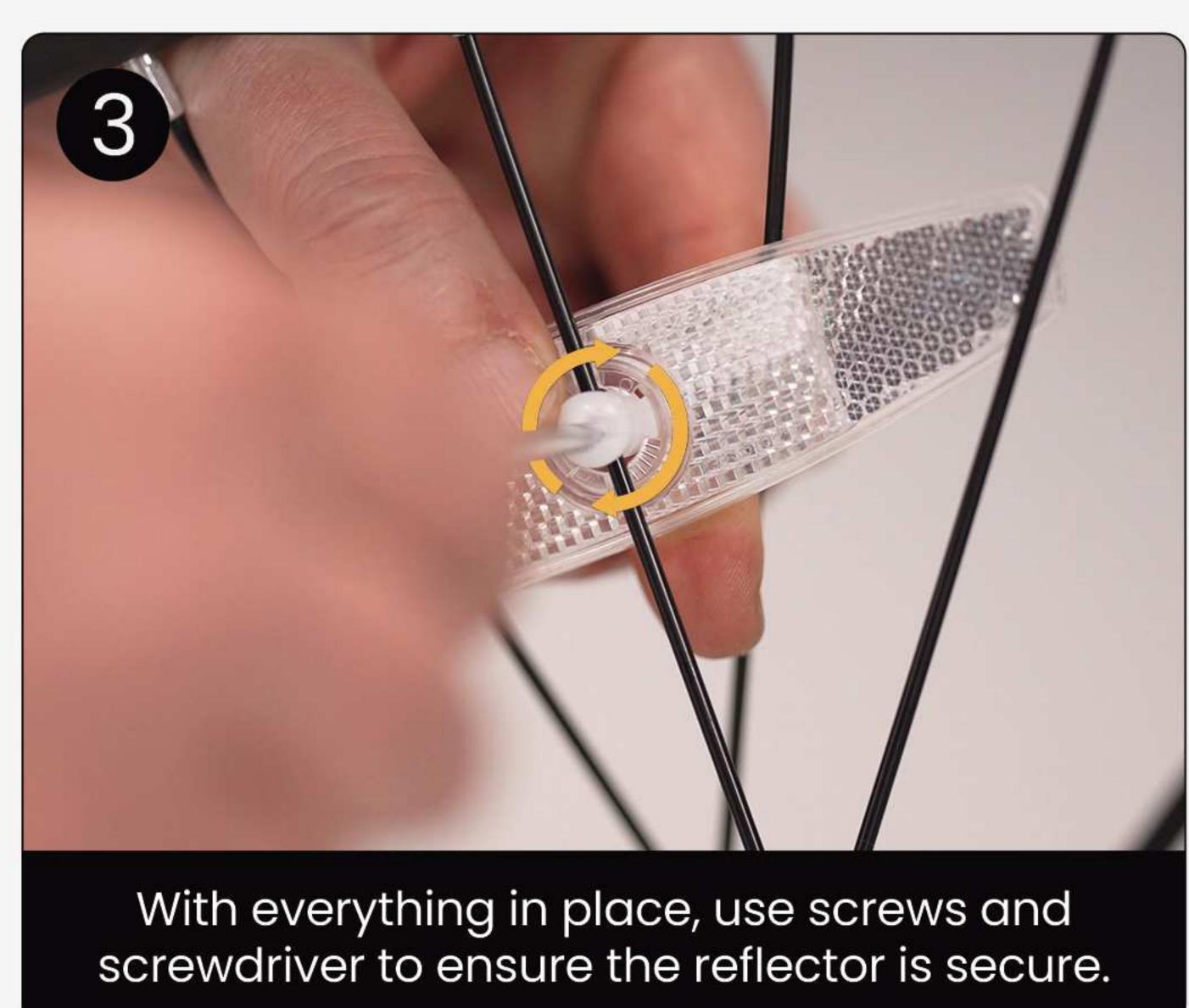
Parts and Tools

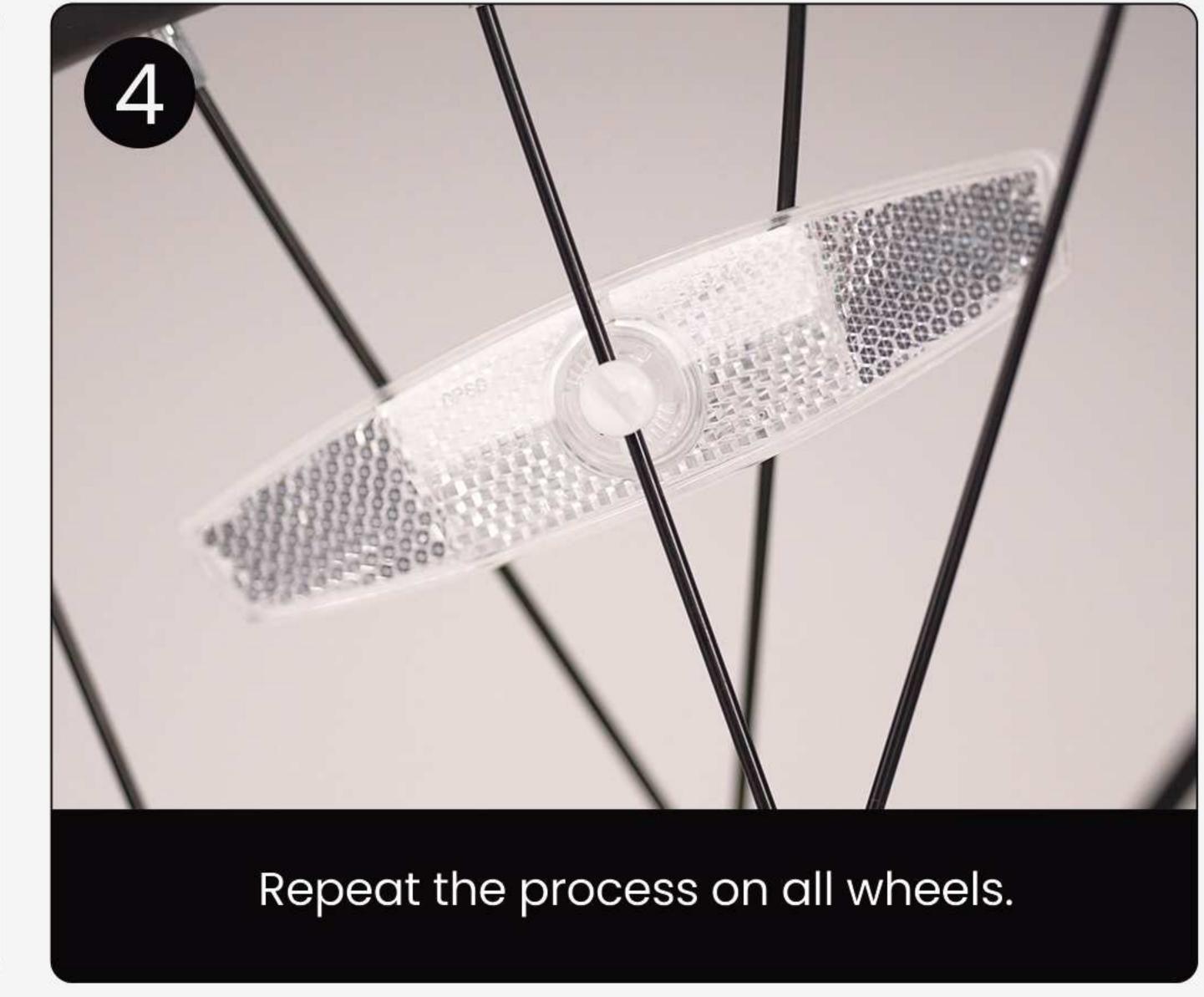


Assembly Steps

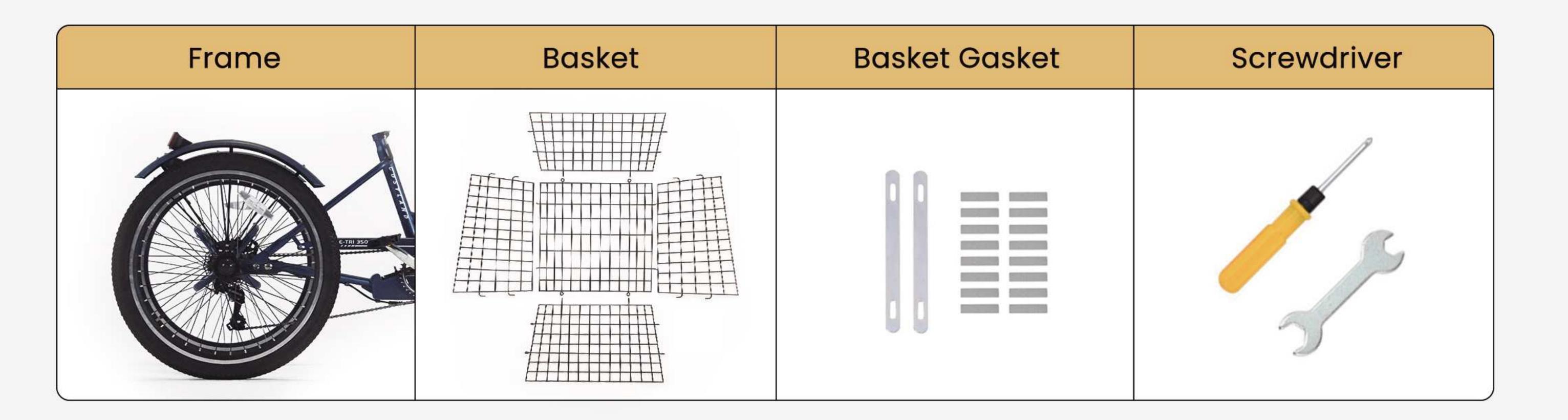




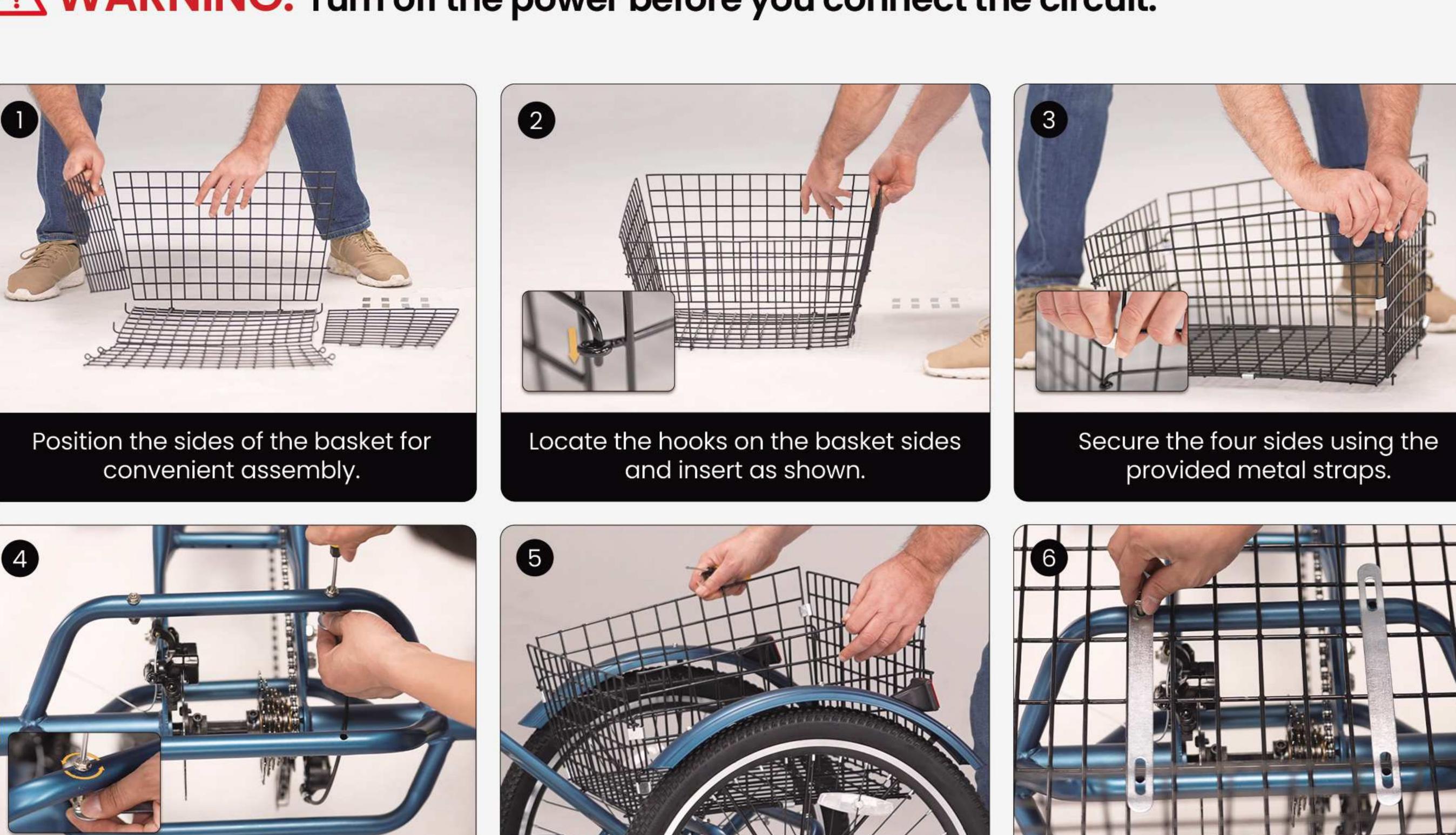




Parts and Tools



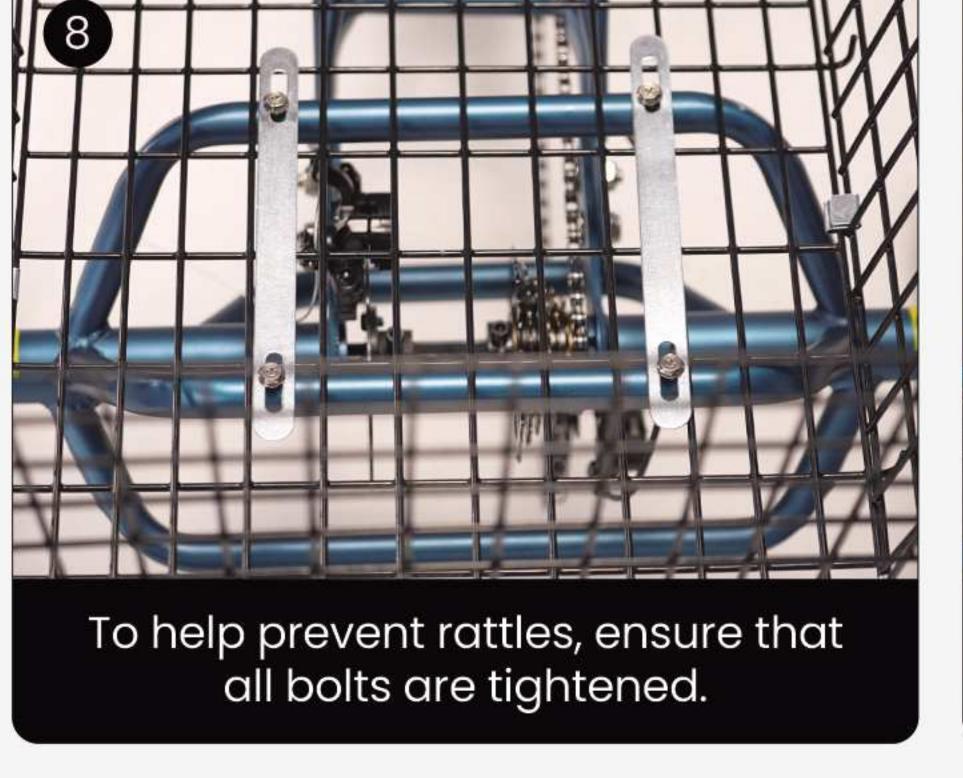
WARNING: Turn off the power before you connect the circuit.





Remove the four bolts from the frame

above the rear axel.



Place the rear basket on the frame as

shown.



Use the 2 long metal pieces to secure

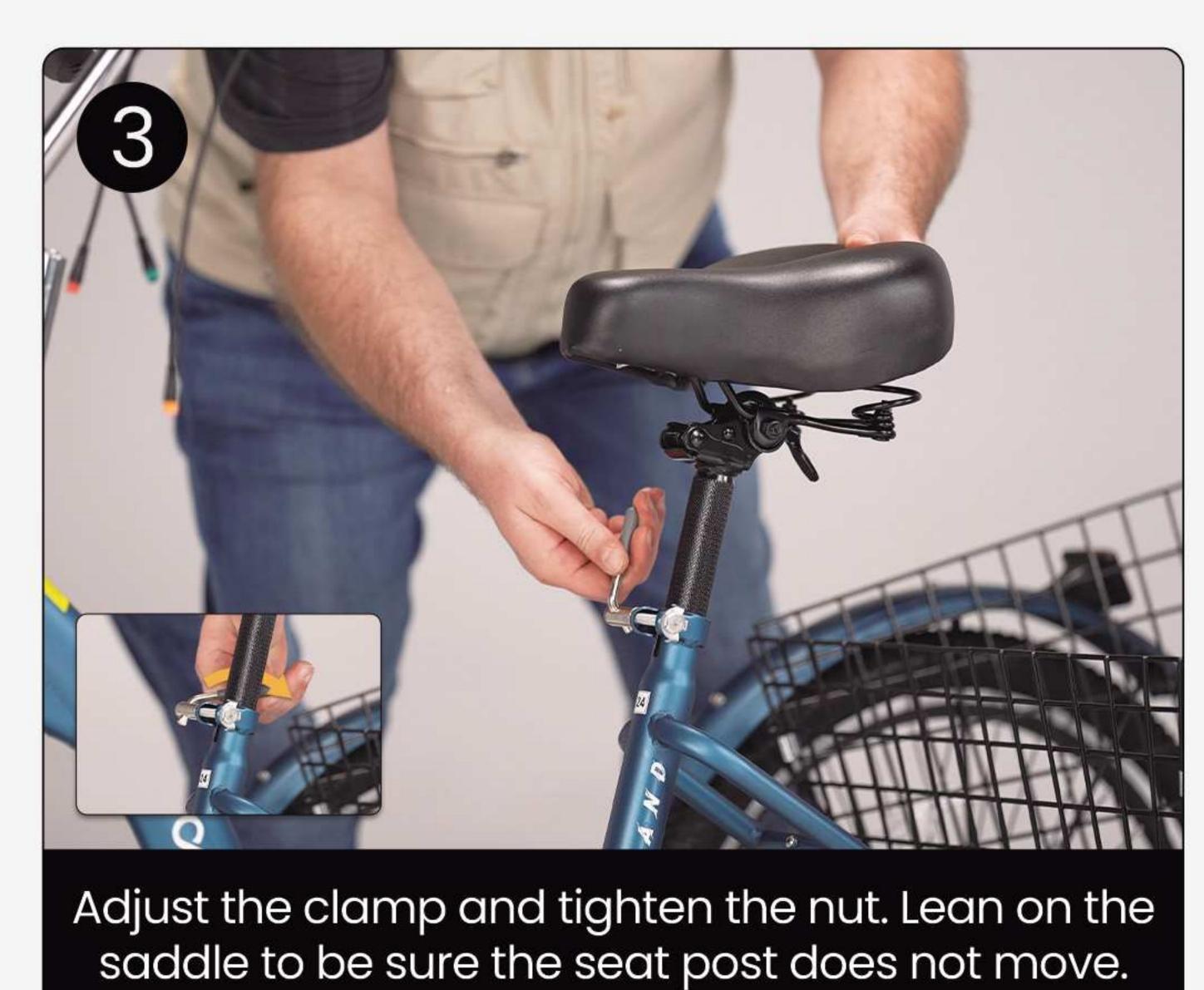
the basket to the frame.



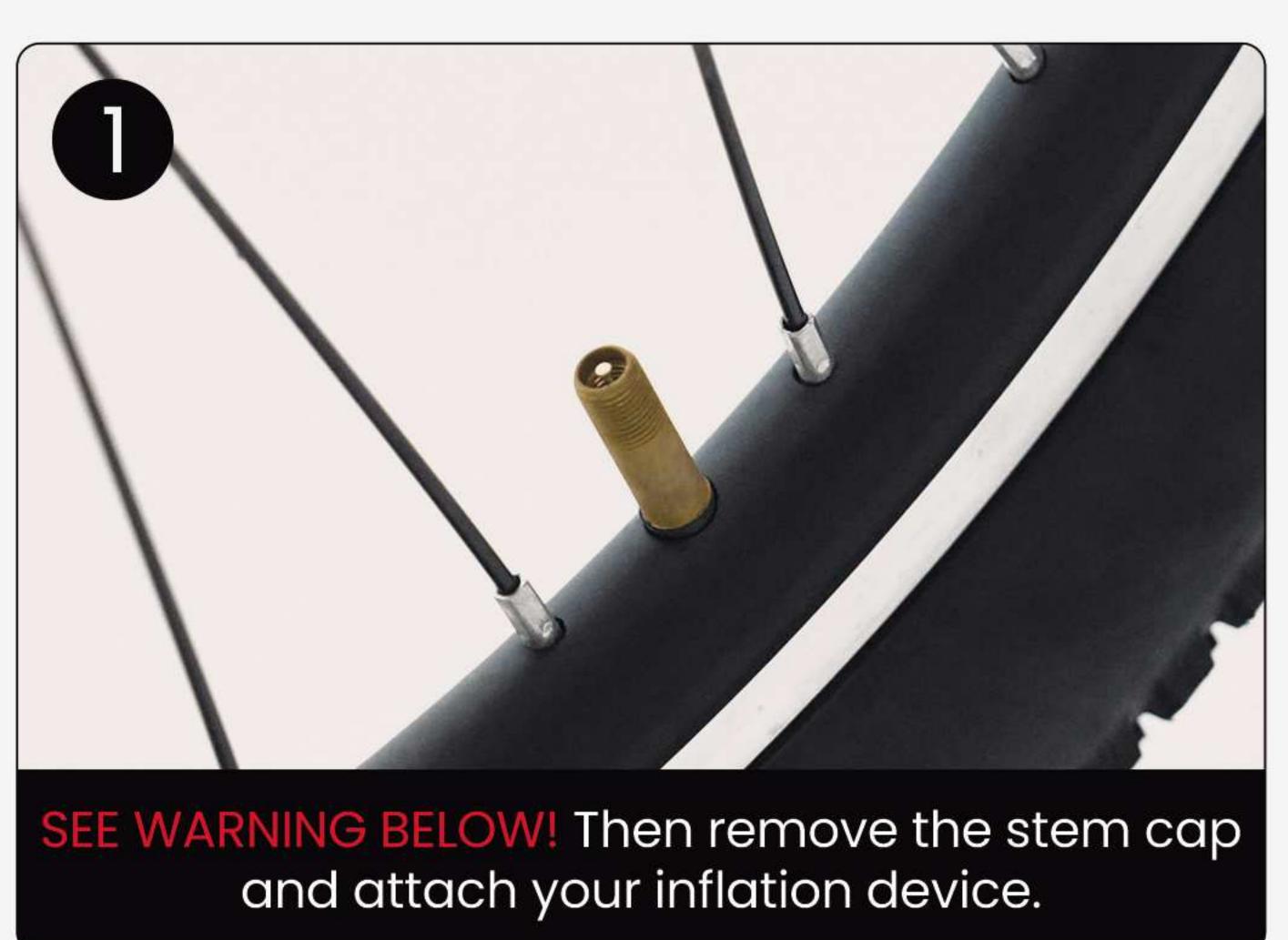
Assembly Steps

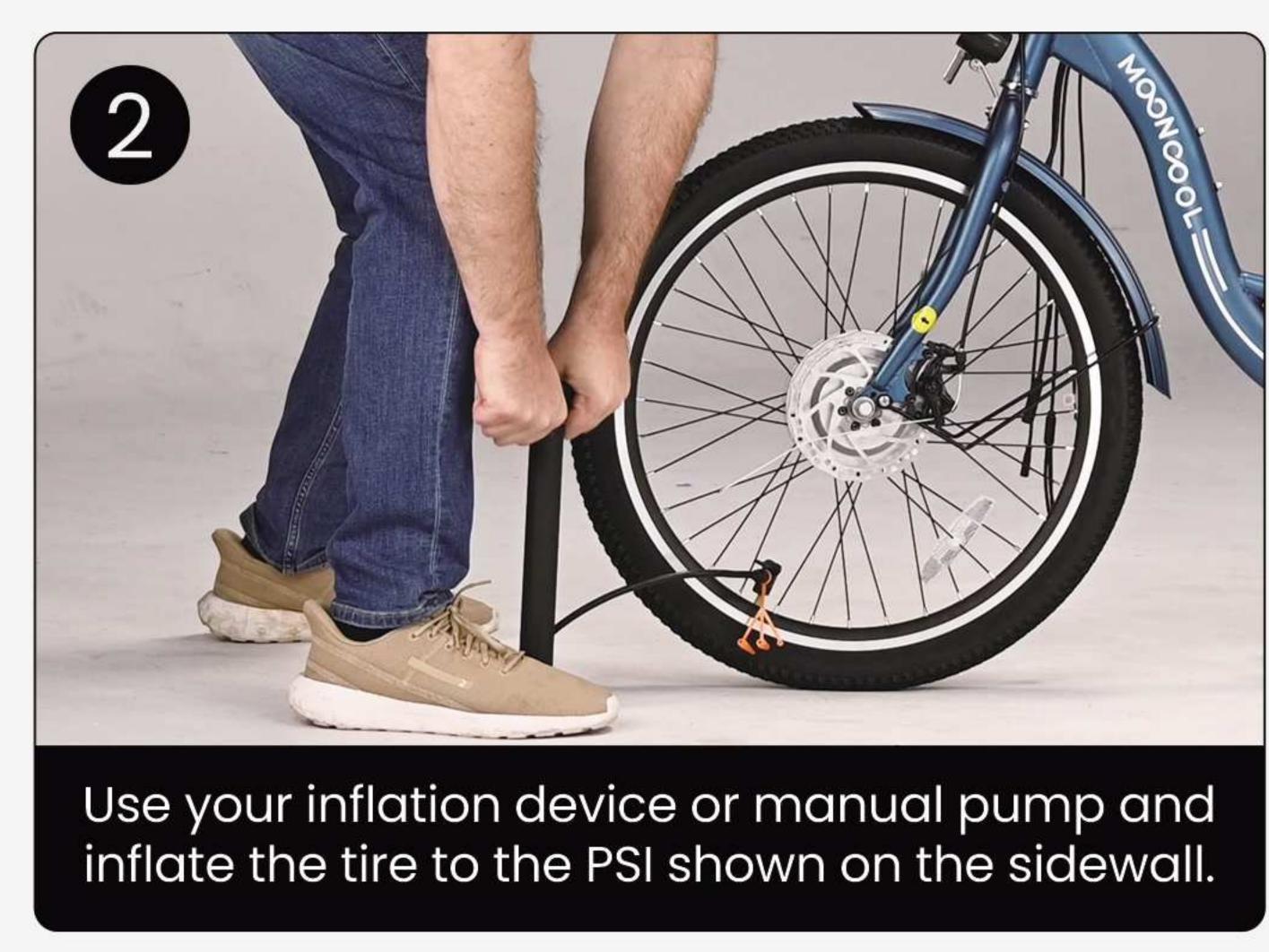




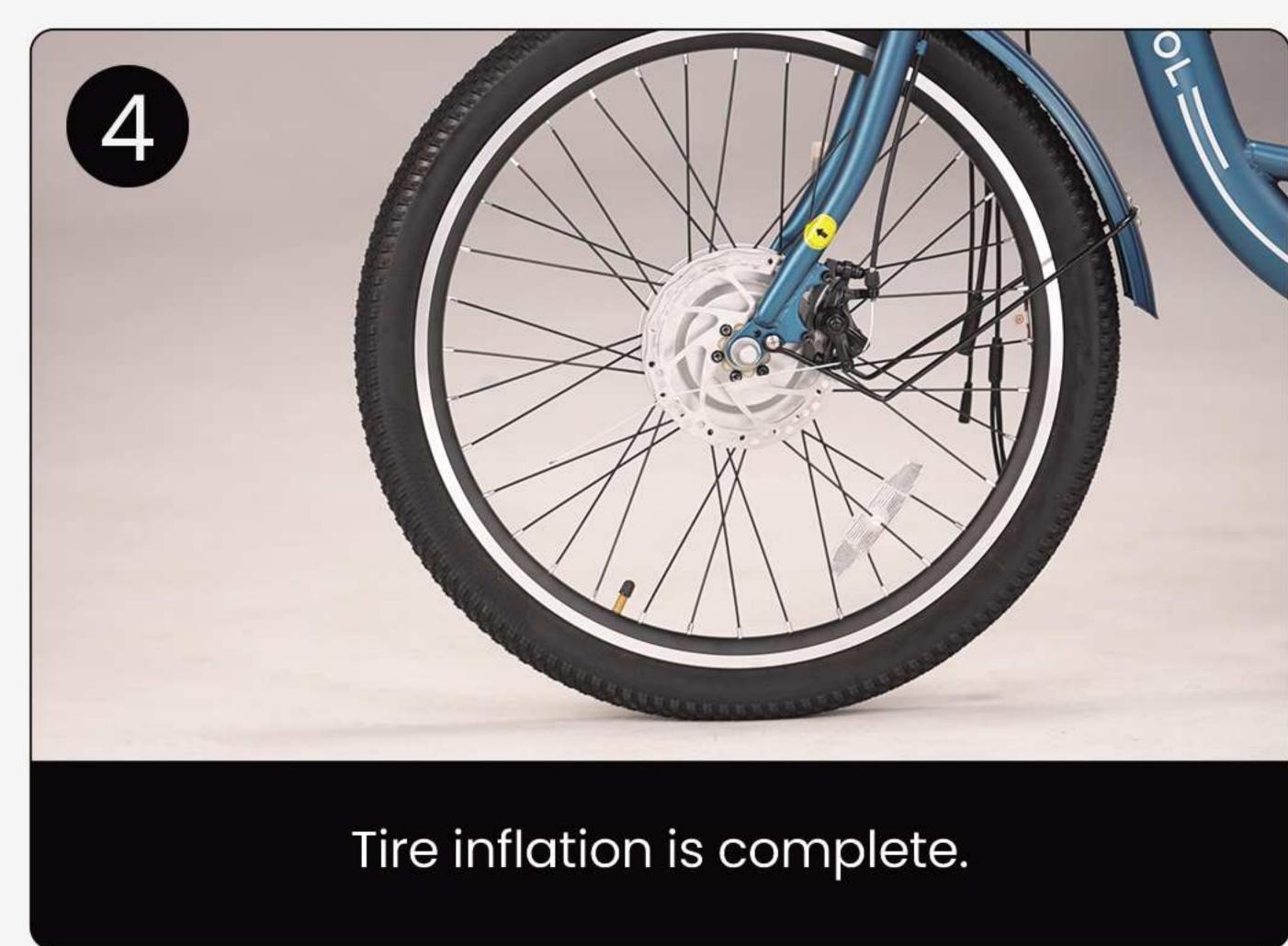














Tire Inflation Operation Warning:

- When it is necessary to replace a tire tube, place the new or patched tube evenly inside the tire. Then
 carefully insert the edge of the tire inside the wheel rim, one side at a time.
- 2. Inflate the tire to approximately 50% of the PSI stated on the sidewall. Then check all edges of the tire to ensure they are completely inside the wheel rim. If not, deflate and adjust.
- 3. Now continue inflating until the PSI stated on the sidewall is reached. Ensure that the safety line on the tire is evenly exposed around the rim on both sides.
- 4. Never exceed the maximum PSI stated on the sidewall.

 $\mathbf{2}$

Circuit Connection

LED Headlamp Circuit Connection



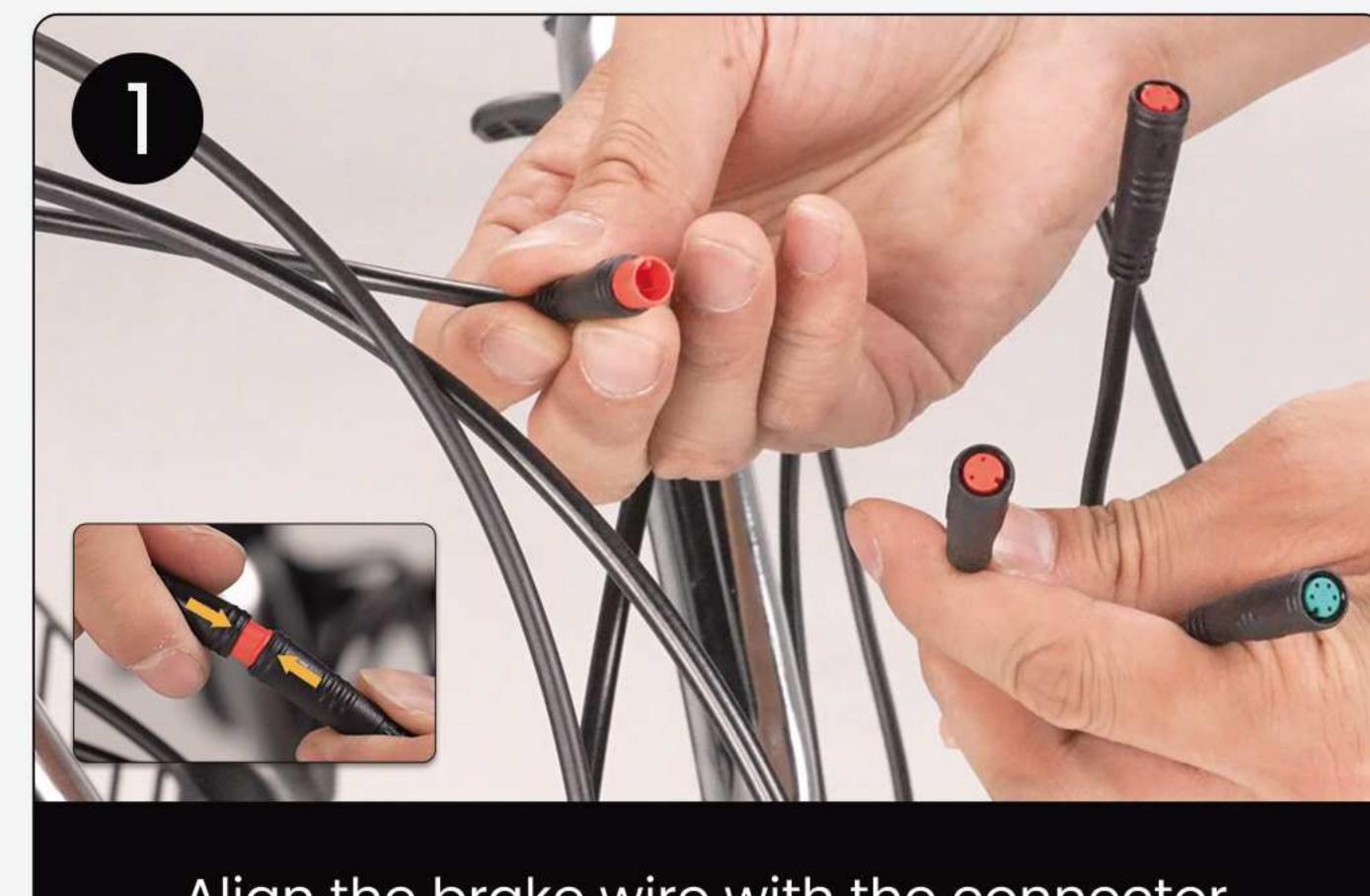
and identify the positive and negative terminals.

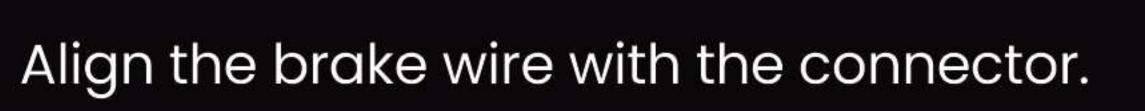


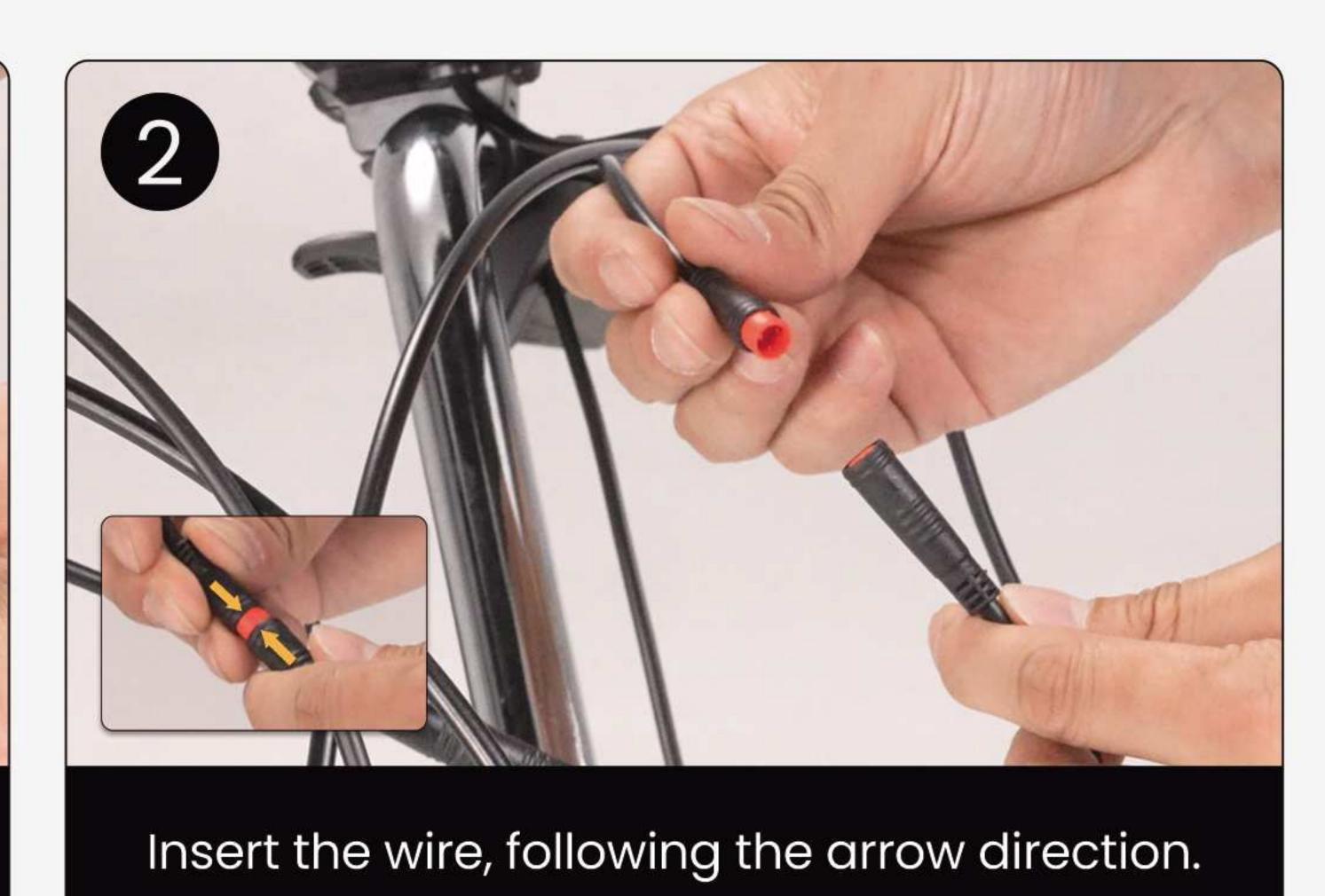
Other Circuit Connection

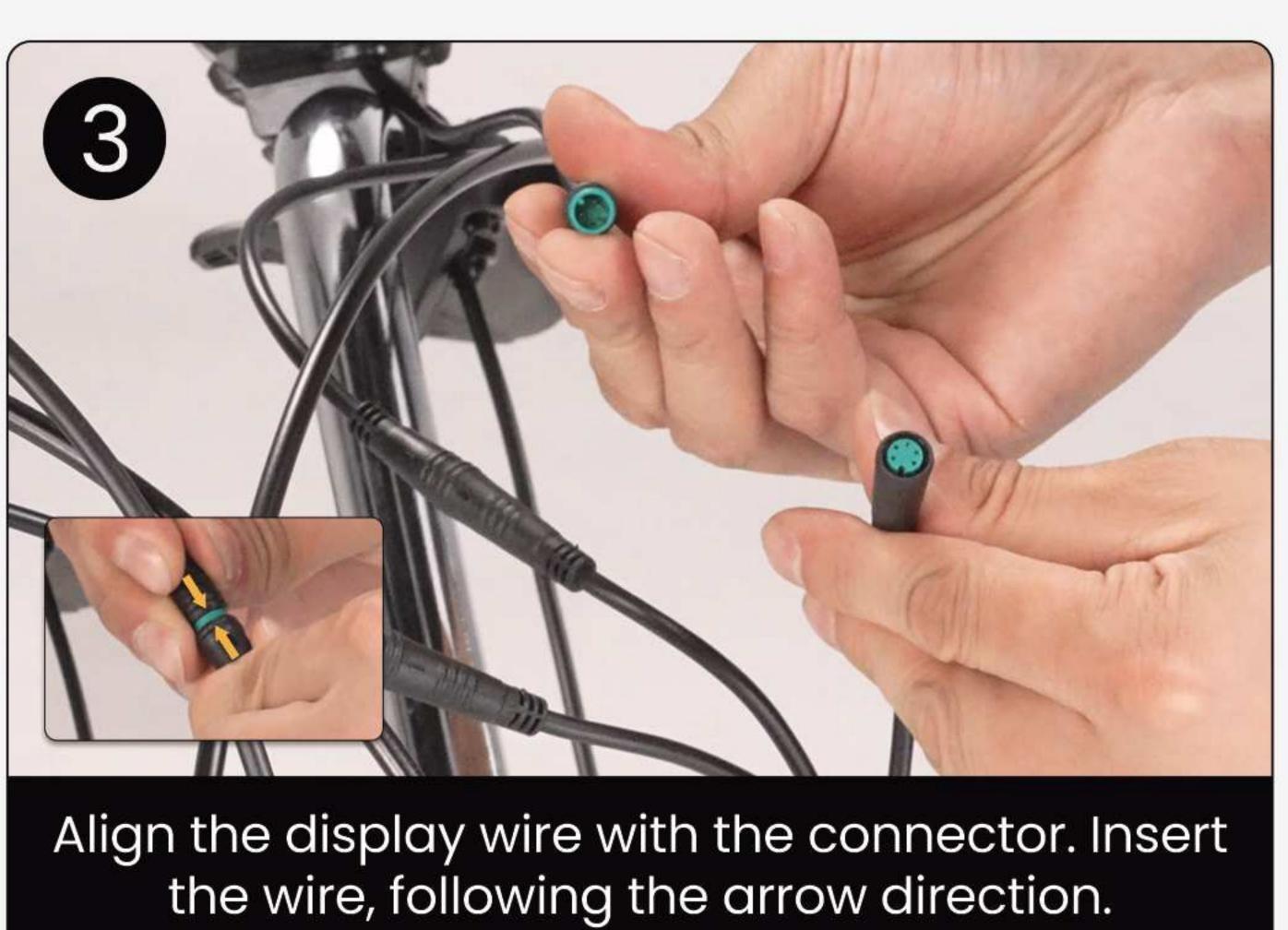
WARNING: 1. Make sure the color of the connector is the same.

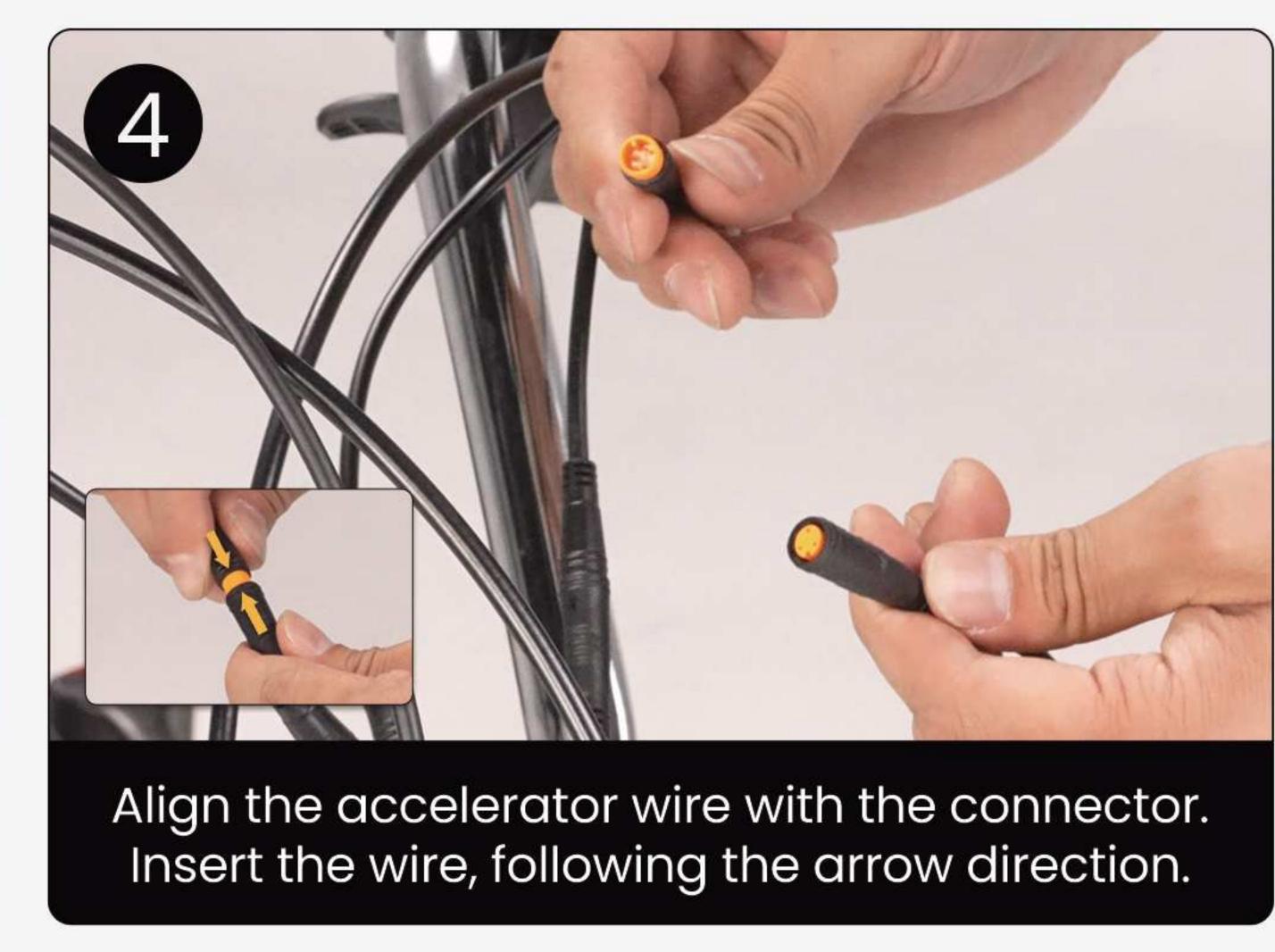
2. Assure the arrow sign on male & female connector in line before plug in.











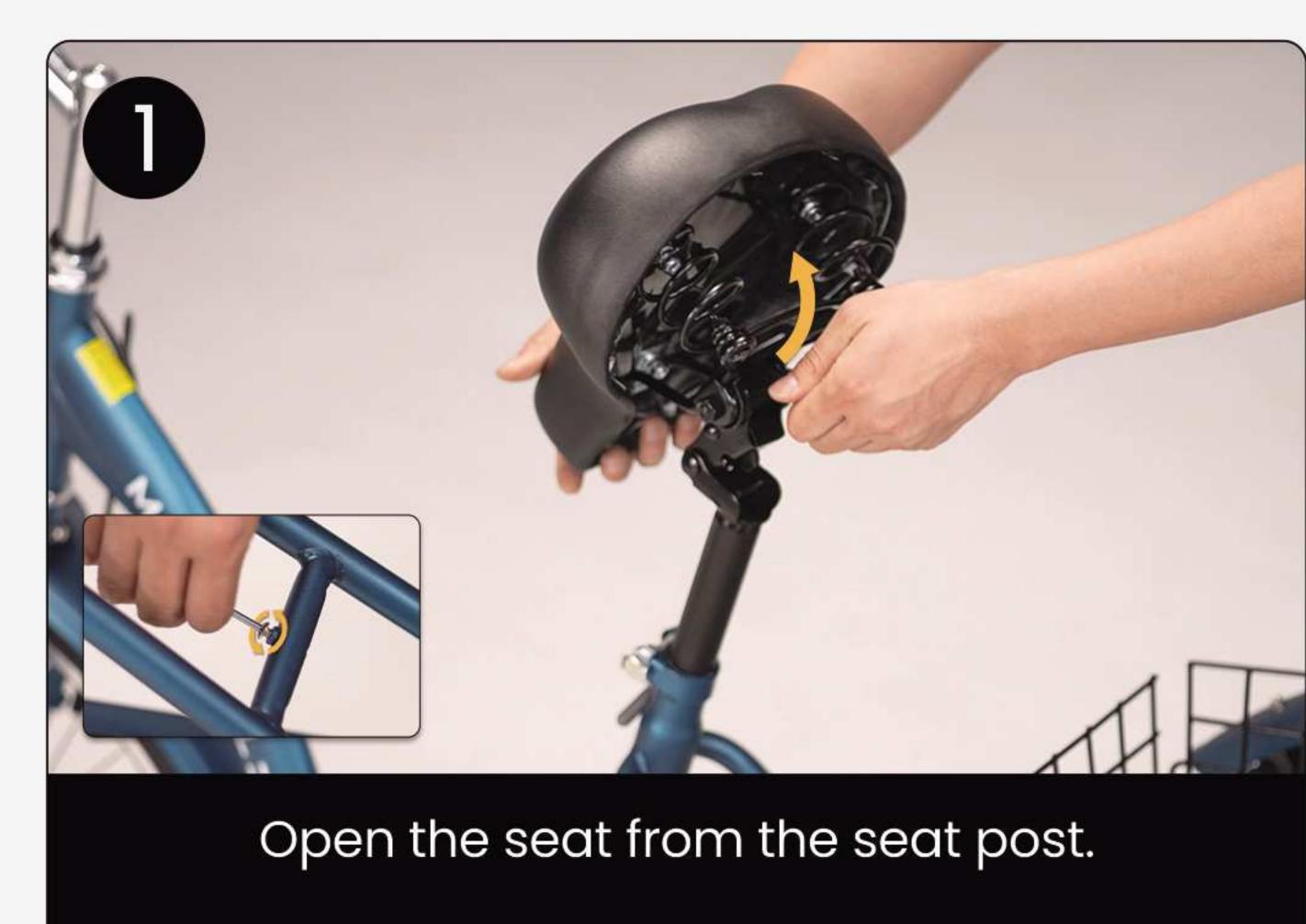
Motor Circuit Connection

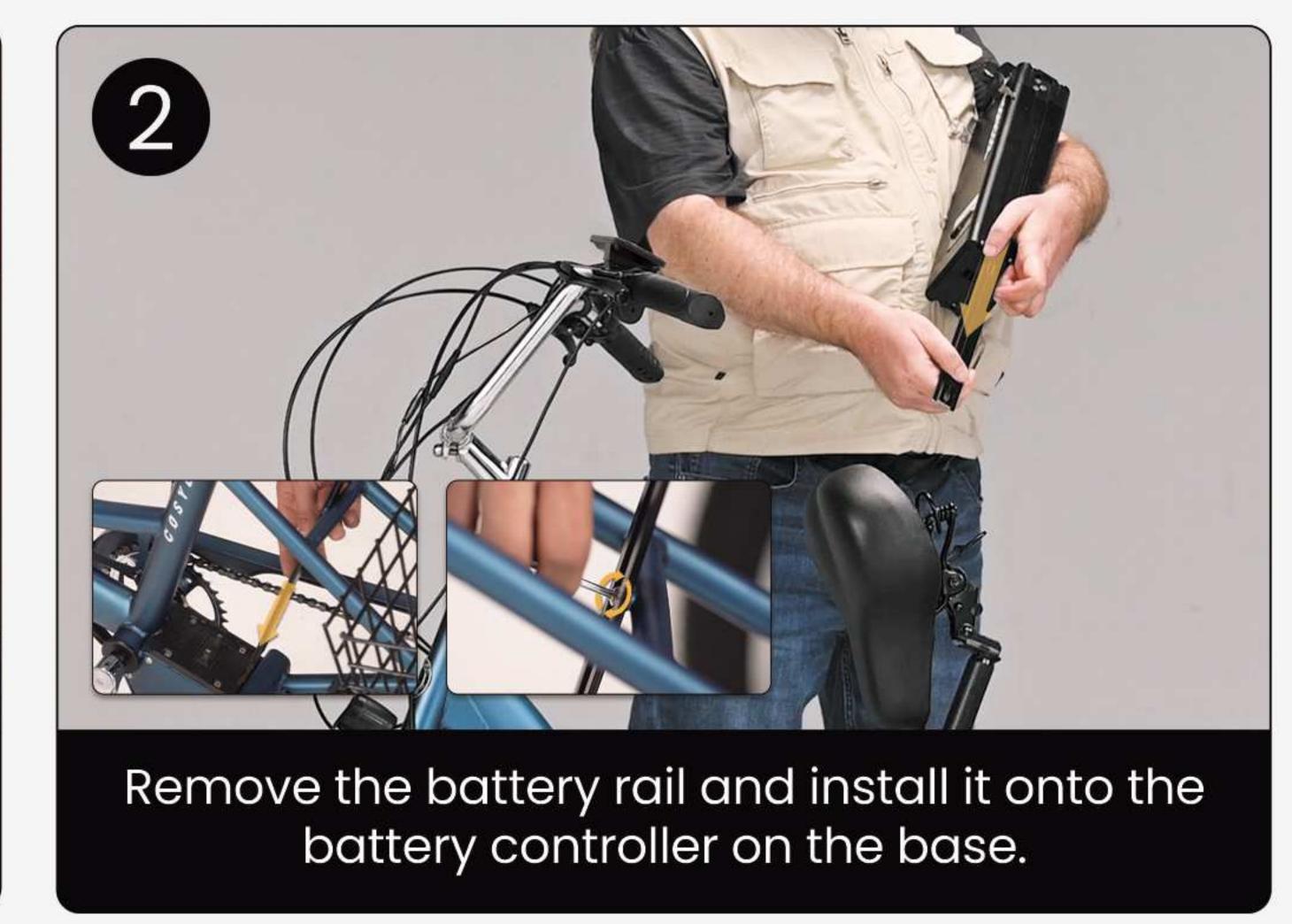


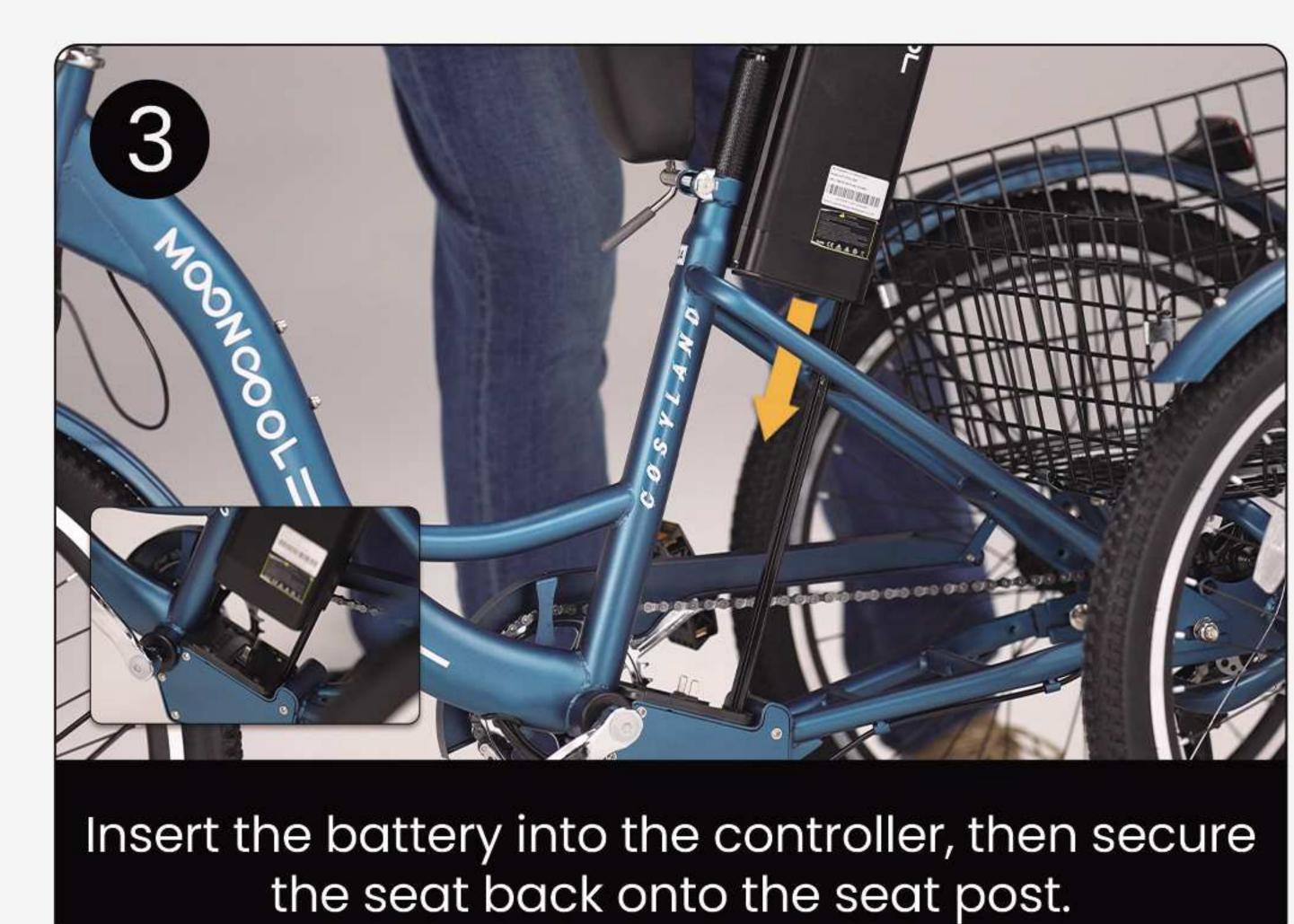


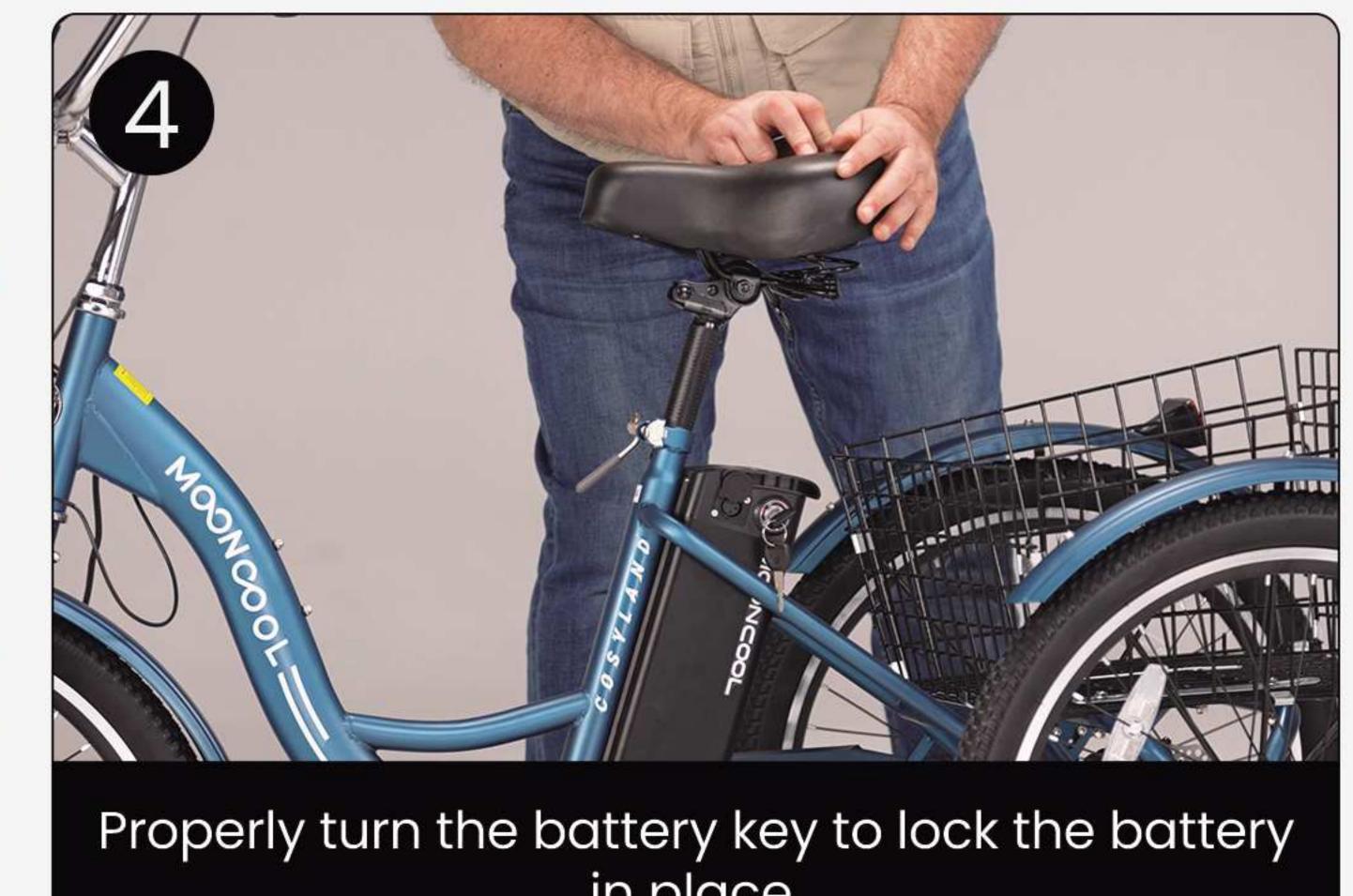
The Assembly of Power Supply

WARNING: Turn off the power before you connect the circuit.









in place.

Operation & Function

Pure Electric Mode





Press and hold the power button on top of the display for 3 seconds to turn on the screen; the display will light up, and the default gear will be "0," indicating the vehicle is in neutral.







Press the "-" button below the display to decrease the gear, with a minimum of gear "0."



Press and hold the power button on top of the display for 3 seconds again to turn off the screen.

Electric Mode as Assistance





Switch the Light on/off



Press and hold the "+" button at the bottom of the display for 2 seconds to turn on the headlight. To turn it off, press the power button at the top of the display once.

Operation & Function

Specifications

- 36V power supply
- Rated operating current: 25mA
- Maximum operating current of the display: 30mA
- Shutdown leakage current: <1uA</p>
- Operating current supplied to the controller: 50mA
- lacktriangle Use temperature: -20 \sim 60 $^\circ\! {
 m C}$
- $lue{}$ Storage temperature: -30 \sim 70°C

Appearance

Display appearance and dimensional drawing

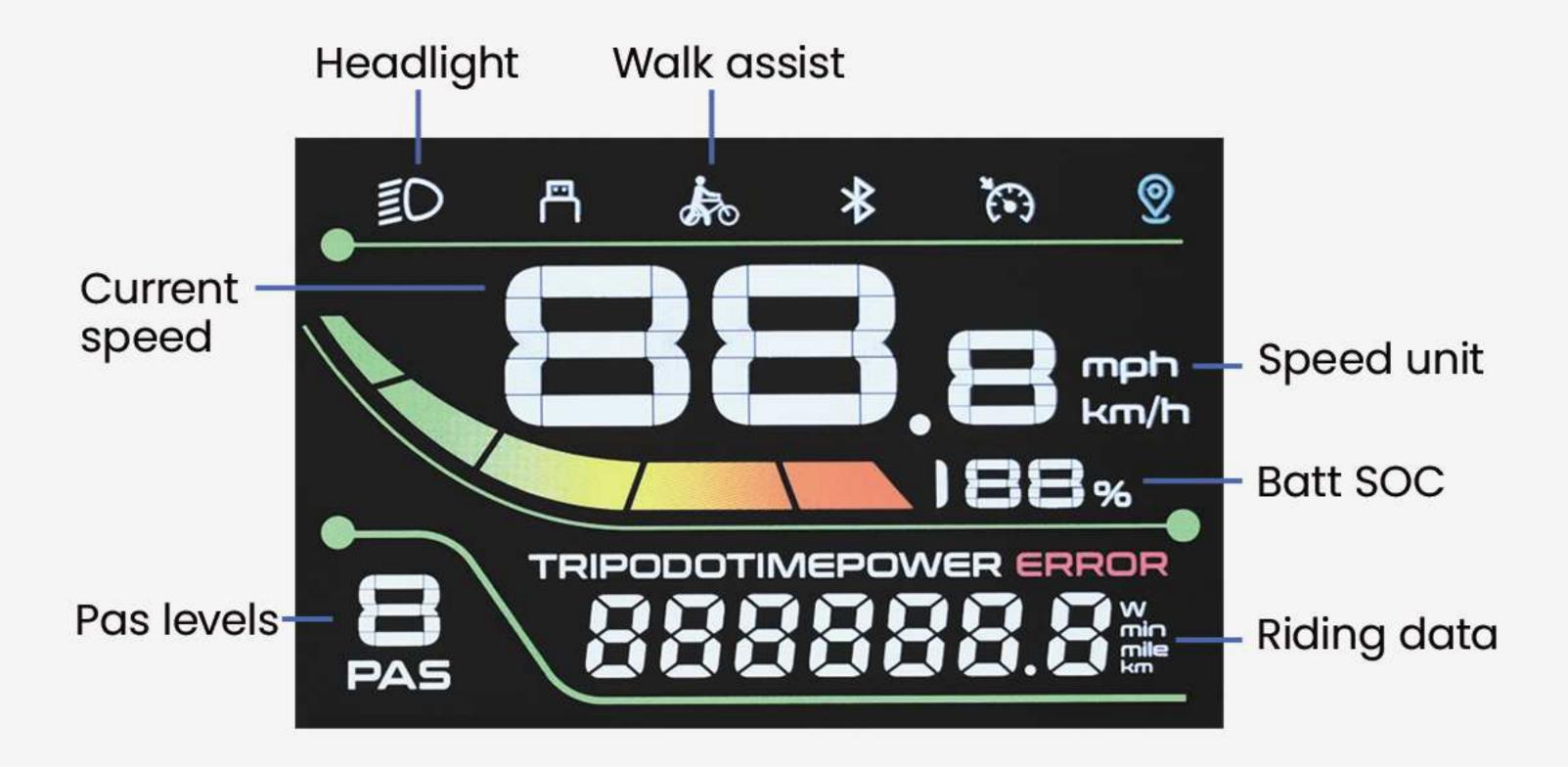


Functional Overview and Functional Area Distribution

Display offers a variety of features to meet your riding needs,including:

- Intelligent battery SOC
- Motor power indication
- Assist level control
- Speed display (including real-time speed, maximum speed,average speed)
- Mileage display (including TRIP and ODO)
- Walk assistance control
- Riding time
- Backlight control
- Error code
- Multiple parameter settings
- Reset to defaults

♦Functional Area Distribution



General operations

Button Definition

The display has three buttons, including the on/off, plus and minus buttons. In the following instructions, the button is replaced by the words "ON/OFF", the button is replaced by the word "UP" and the button is replaced by the word "DOWN".

Poweron/off

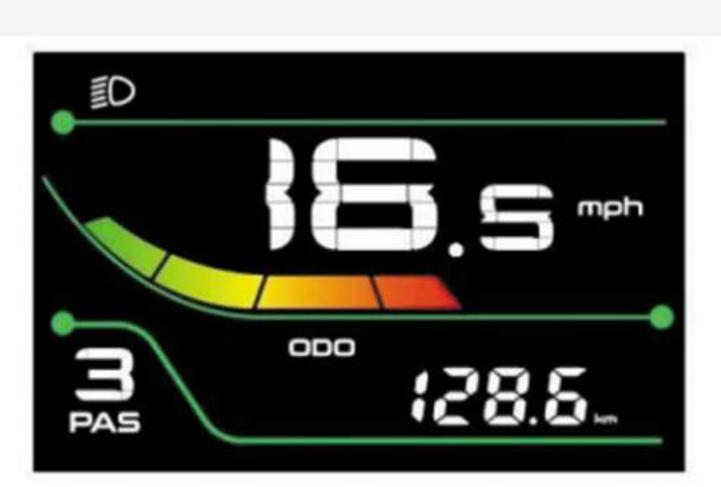
After long pressing " button for 2S, the meter starts to work and provide the working power for the controller. In the power-on state, long press " button for 2S to turn off the power of the bike. In the off-state, the display no longer uses the power from the battery and the leakage current of the display is less than luA.

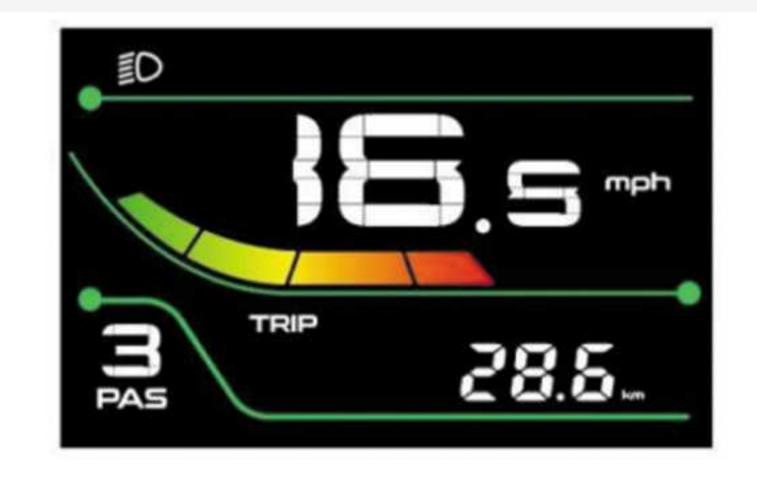
■ The display automatically shuts off if the electric bike is not used for more than 5 minutes.

Display Interface

After the display is turned on, it will display real-time speed (km/h) and single mileage (km) by default. Short press "ON/OFF" button to display information between single mileage TRIP (km), total mileage ODO (km), riding time

TIME (min), power POWER (W), and it cycles back to Trip again.









Display interface switching

Walk assist

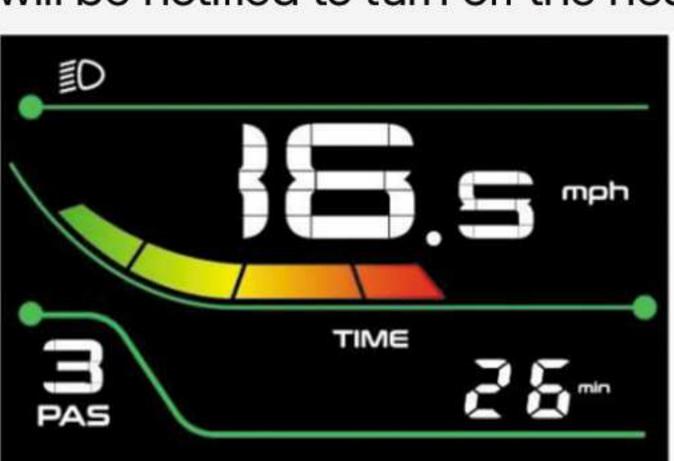
Press and hold the "-" button, after 2 seconds, the electric bike enters the walk assist state and bike moves at a constant speed of 6 kilometers per hour. At the same time, the screen displays ".". If release the "-" button, the bike will immediately stop power output and return to the state before walk assist is engaged.



Walk assist

- The walk assist function can only be used when the user pushes the e-bike, please do not use it in the riding state.
- Turn on/off the backlight

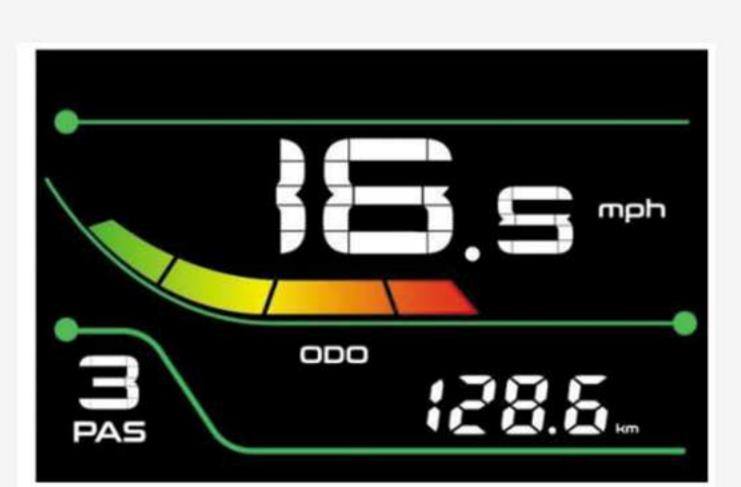
Press and hold the "up" button for 2s, the brightness of the backlight of the display will decrease, and the controller will be informed to turn on the headlight at the same time. Press and hold the "up" button again for 2s, the LCD backlight brightness will be restored and the controller will be notified to turn off the headlight.



Turn on the backlight interface

Assist level Selection

Short press **the** "+" or "-" button to switch the electric bike assist levels and change the motor output power, the default range of assist level is 0-3, level 0 is no assistance, level 1 is the lowest power, level 3 is the highest power. When it reaches 3 gears, press "+" button briefly again, the interface still displays 3. When the assist level reaches 0, press "-" button briefly again, the interface still displays 0.



Assist level interface

Motor power display

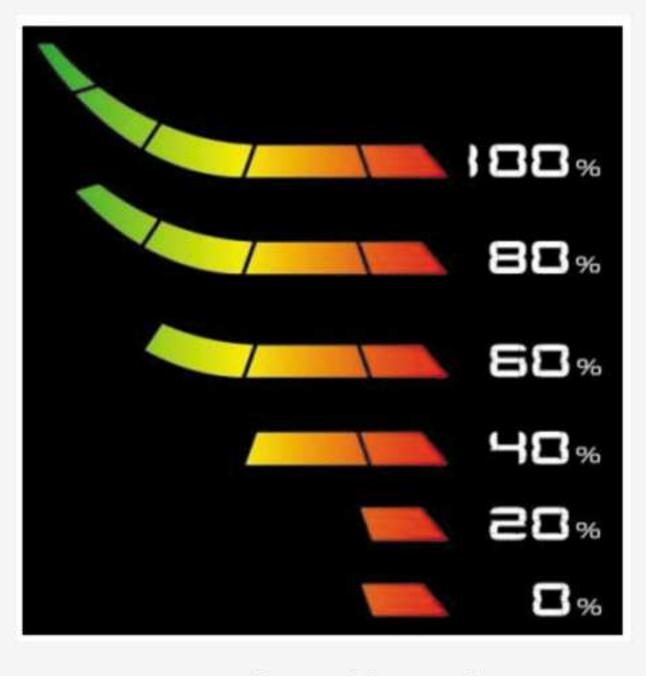
Motor output power can be known through the display, shown in the figure below.



Motor power interface

Battery level

The battery level is divided into 5 bars to display, the following are, undervoltage-0% (no battery please charge), 20%, 40%, 60%, 80%, 100% power status.



Battery level interface

Error code display

When there is a malfunction in the electric control system of the electric bike, the display will automatically display the error code, see Appendix 1 for the detailed definition of the error code.



Error Code Display Screen

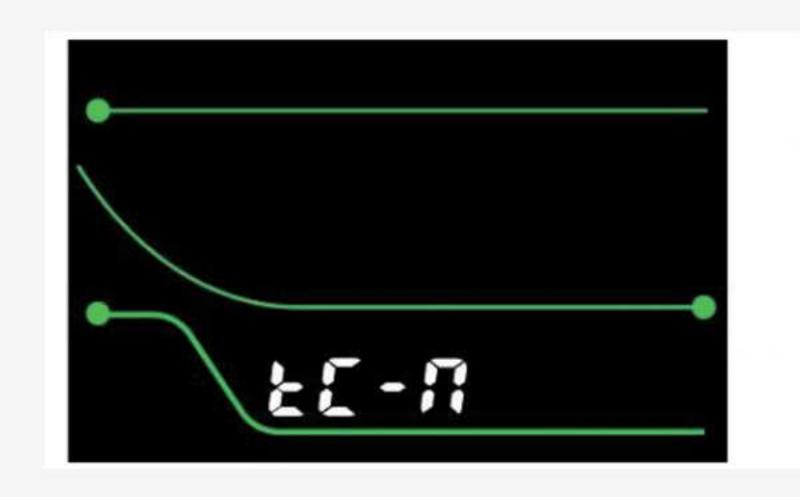
■ When an error code is displayed, please troubleshoot the problem in time, or else the electric vehicle will not be able to run normally after the problem occurs.

Settings

- Each setting item needs to be performed with the vehicle in stationary condition.
- Trip clearance

In the main interface, press and hold down "DOWN" and "ON / OFF" **key 2S** at the same time to enter the single mileage clearing interface.

TC stands for clearing single trip mileage. Press "up" or "down" button briefly to select Y/N, Y means clearing single ride mileage, N means not clearing single ride mileage; press "ON/OFF" button briefly to confirm. Press "ON/OFF" button to confirm.





Trip clearance interface

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Operation & Function

Operation & Function

Reset to defaults

At home interface, press and hold down the "UP" and "ON/OFF" buttons at the same time to enter the interface of restoring factory settings. Short press "UP" or "DOWN" button to select Y/N, Y means restoring factory settings, N means not restoring factory settings; short press "ON/OFF" button to confirm.

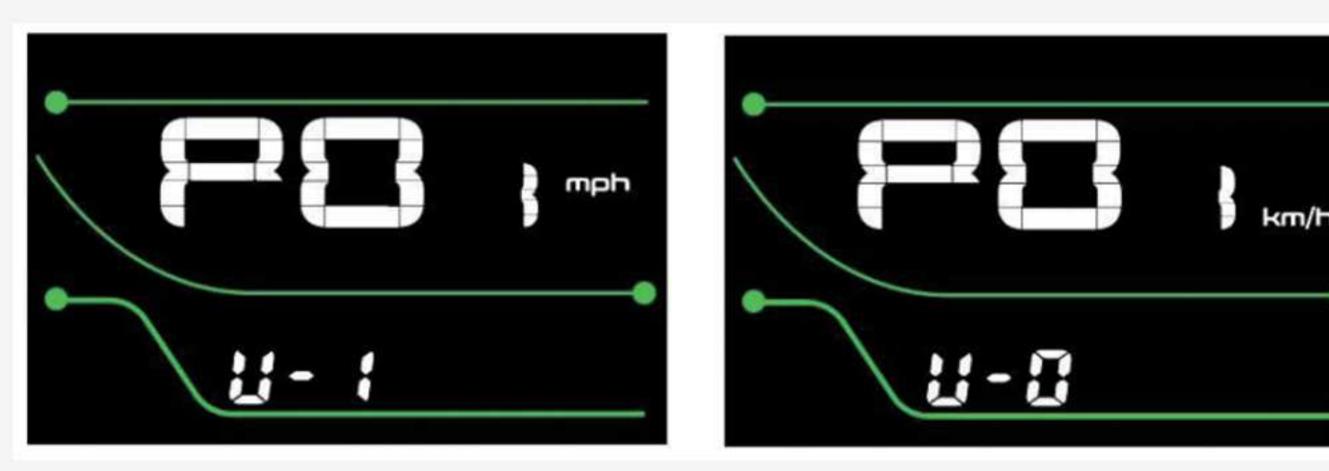


Reset to defaults

When the vehicle is stationary and in the power-on state, press and hold down the "+" and "-" buttons at the same time for more than 2 seconds for the display to enter the general setting state.

Conversion of imperial and metric units

PO1: Unit setting: U stands for unit, 1 stands for imperial system, 0 stands for metric system. Press "+" or "-" button to change the unit of speed and mileage, short press "ON / OFF" button to confirm, long press "ON / OFF" button to confirm and exit the general setting status. Short press "ON / OFF" button to confirm, long press "ON / OFF" button to confirm and exit the general setting state.



Unit Conversion Setting

♦ Speed Limit info

P02: Speed limit info. The default speed limit is 25km/h, **not adjust-able**, short press "ON / OFF" to enter the next setting parameters.



Speedlimit Interface

Automatic shutdown time

P03: It stands for the setting of auto power off time (auto power off time when there is no more speed and stationary state). Press"UP" or "DOWN" to select the auto shutdown time, the range is "1-10" (min), the default is 5min auto shutdown. Short press "ON/OFF" button to save and enter the next setting interface. Long press "ON/OFF" button for more than 2s to save and exit the general setting interface.



Auto Power Off Time Setting Screen

Brightness of backlight

P04:Backlight Brightness Setting. bL represents the backlight brightness. Parameter 1,2,3 can be set to indicate the brightness of backlight, 1 is the darkest, 3 is the brightest, the default brightness is 3. The default brightness is 3. Short press "UP" or "DOWN" button to change the backlight brightness parameter, short press "ON/OFF" button to confirm and exit the routine. Press "UP" or "DOWN" button to change the backlight brightness parameter.



Backlight brightnesssetting interface

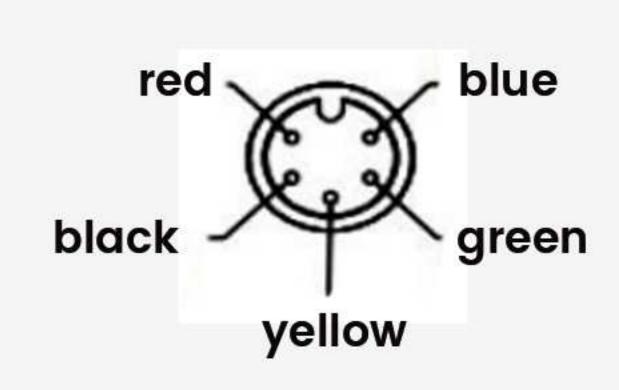
Exit Settings

In the setting state, short press "ON/OFF" button is to confirm the input to save the current setting; long press "ON/OFF" button (more than 2 seconds) is to confirm to save the current setting and exit the current setting state; long press "-" button (more than 2 seconds) is to cancel the current operation and exit the setting without saving the current setting data. Long press "ON/OFF" button (more than 2 seconds) is to confirm saving the current setting and exit the current setting state; Long press "-" button (more than 2 seconds) is to cancel the current operation and exit the setting, without saving the current setting data.

■ If no operation is performed for one minute, the meter automatically exitsthe setup state.

Wiring diagram

Standard connector wiring sequence



Standard connector wiring diagram

Standard Wiring Sequence	Standard Cable Color	Functionality
1	Red (VCC)	Display Power Cord
2	Blue (Key)	KP
3	Black (GND)	Display GND
4	Green (RX)	Data receiving line of the display
5	Yellow (TX)	Data transmission line of the display

■ Some products have waterproof connectors for the leads, so the user cannot see the color of the leads inside the harness.

Quality Commitment and Warranty Coverage

I. Warranty information:

- 1. Where the normal use of the product itself due to quality problems caused by the failure, in the warranty period the company will be responsible for giving limited warranty.
- 2. The warranty period of the product is within 24 months from the meter's factory.

II. The following are not covered by the warranty

- 1. Shell is opened
- 2.Connector is damaged
- 3.Meter factory,shellscratches orshell damage
- 4. Meter lead wire scratched or broken
- 5. Failure or damage due to irresistible (e.g., fire, earthquake, etc.) or natural disasters(e.g., lightning strikes, etc.)
- Product out of warranty

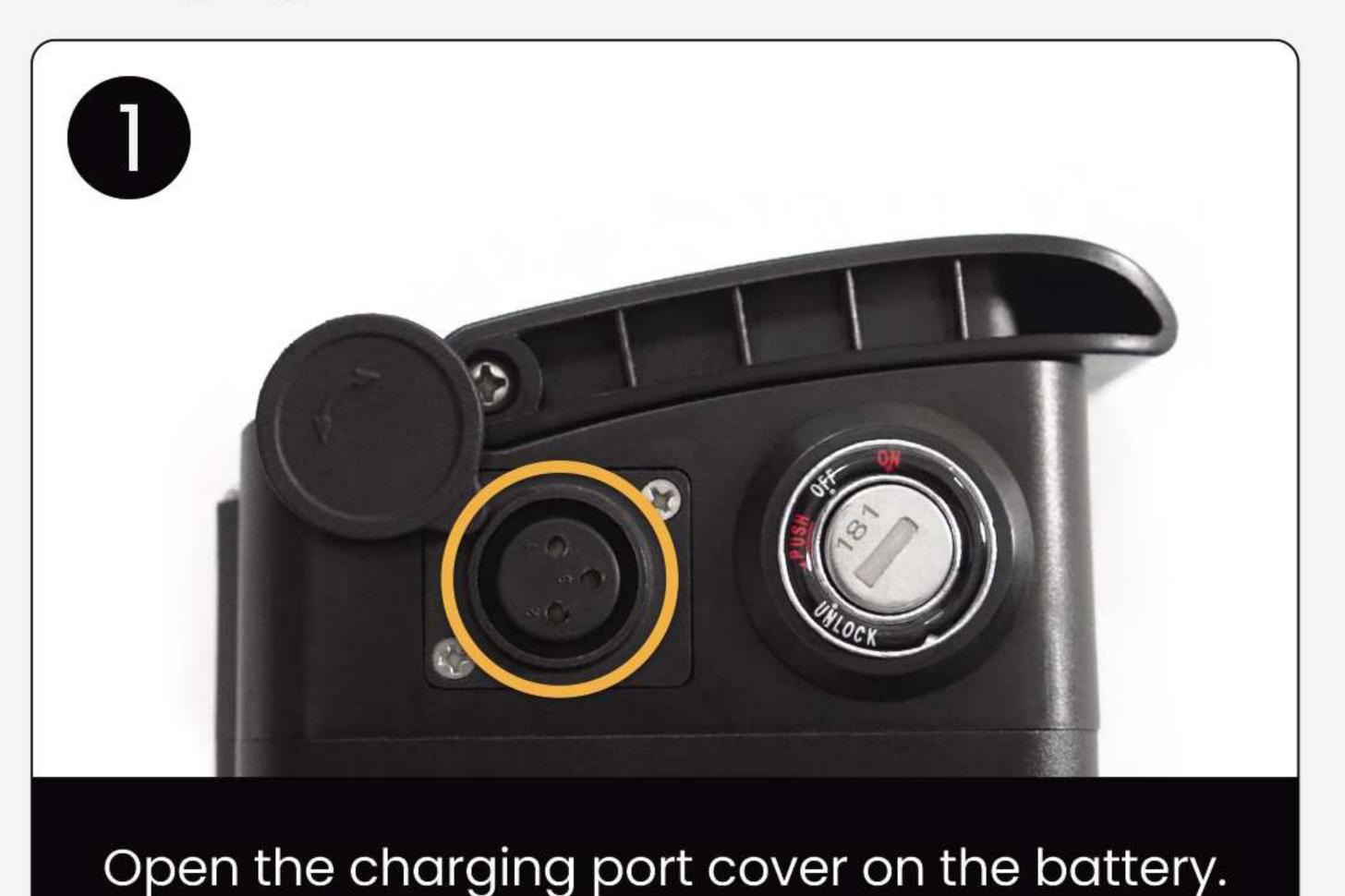
Warnings

- Avoid bumping the display as much as possible.
- do not plug and unplug the display in power-on status.
- ◆ Regarding the background parameter settings of the meter, please do not change them arbitrarily, otherwise normal riding cannot be guaranteed.
- ◆ When the meter does not work properly, send it for repair as soon as possible.

Appendix 1: Error Code Definition Table

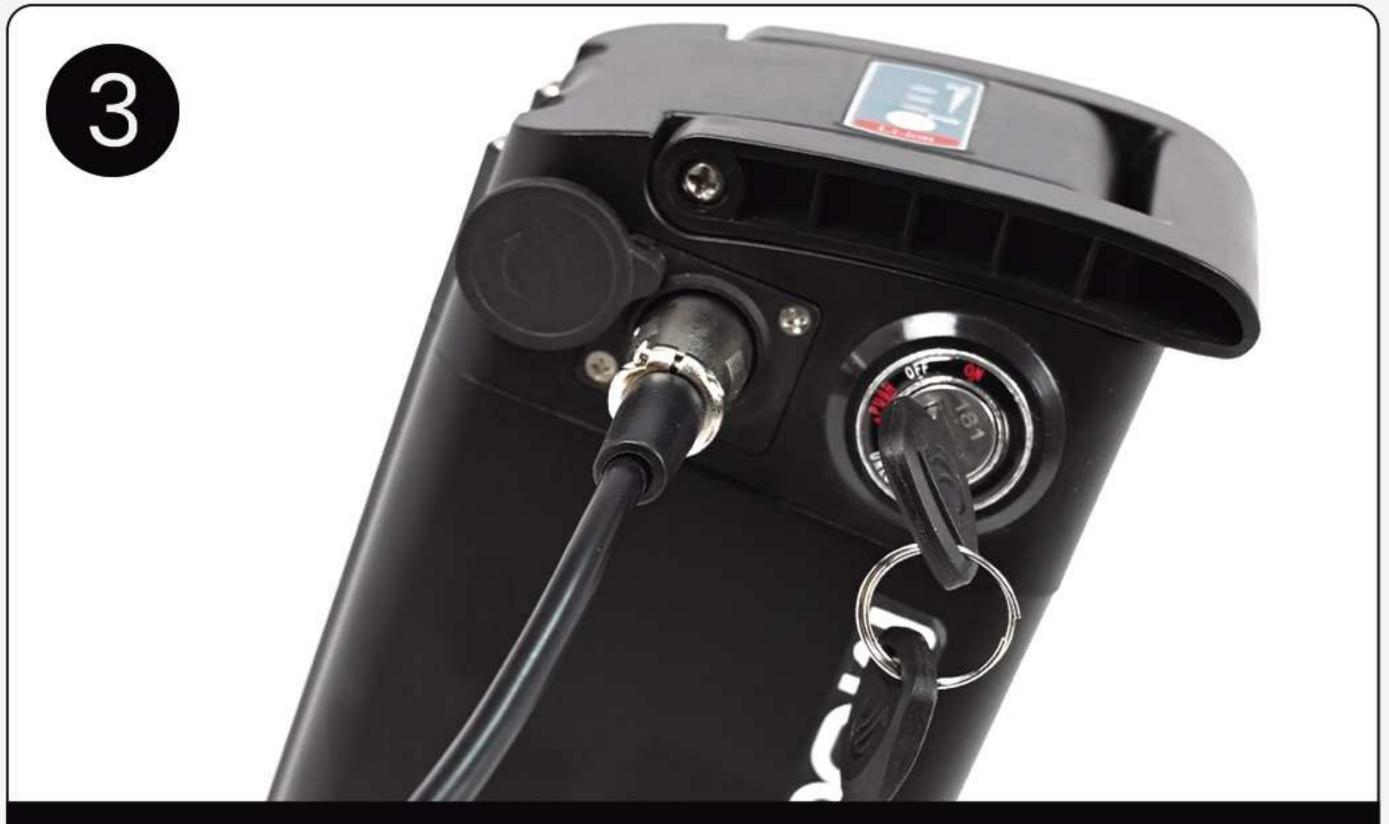
Error code	Definition
21	Current fault
22	Throttle fault
23	Motor phase loss
24	Motor Hall signal abnormality
25	Brake abnormality
30	Communication fault

Charging





Use the charger to charge the battery while it is installed on the tricycle.







light), promptly turn off the power.





Always check the remaining power of your battery. If it is less than 20%, please charge your battery as soon as possible.

Precautions and Guidelines for the Battery



Reading and understanding the following points can help you properly use, maintain, and store your battery, which is very important for improving the performance of your e-bike.

WARNING: If the battery stops working, use an appropriate charger to recharge the battery, as the lithium-ion battery can be severely damaged if fully discharged. Keeping the battery charged will help to preserve it. The battery can be fully charged in approximately 7-8 hours under normal conditions.

WARNING: Improper removal, maintenance or storage of the battery may result in serious consequences. It is strictly prohibited to use the battery of your electric tricycle for other vehicles or devices, which may result in serious consequences such as fire, serious bodily injury or death.

WARNING: Never short-circuit the battery which may result in an explosion, fire, and serious harm to your health.

WARNING: Do not use the battery if it gives off an odor, generates heat, becomes discolored or deformed, or appears abnormal in any way. If the battery is in use or being recharged, remove it from the device or charger immediately and discontinue to use it.

NOTE: Do not place any objects on the battery and charger during charging as this may cause overheating and serious consequences.

CAUTION: Never charge for more than 12 hours to avoid overcharging.

WARNING: Please charge with the supplied battery. If you use other chargers, the battery may be damaged, resulting in fire, injury or death.

WARNING: Do not pierce the battery case with nails or other sharp objects. Do not crack the battery case with a hammer or step on it.

TIP: You can recharge your battery at any time. If you do not charge the battery in time, the performance and life of the battery will be influenced. The service life of the battery can be extended through proper use and maintenance, but the reduction of total capacity is inevitable.

Factors Influencing the Range of your electric tricycle

- Life and state of charge of the battery.
- External temperatures.
- Tire pressure.
- The rider's weight.
- Riding style and choice of assistance level.
- Road/path conditions.
- Weather conditions.
- Frequent stops and restarts.
- Cleanliness and inertness of bearings and all moving parts.

Range Optimisation

- Fully charge the battery.
- Check tire pressure.(recommended depending on body weight, load and route profile)
- Reduce the load.
- Do not ride too fast.
- Maintain a constant speed.

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Troubleshooting

Long Time Storage

If stored for a long time (Don't use it over three months.), the battery should be stored in a dry and cool place. The battery should be stored at a temperature of 23+ and a humidity of 45%-75%.

Long-term unused batteries should be charged every 3 months.

Disposal of Waste Batteries

According to the battery law, we are obliged to inform you.

Regarding the sale of batteries or the delivery of equipment containing batteries/rechargeable batteries/lamps, we are obliged to inform you of the following.

Do not dispose of your old device in the household waste!

You are legally obligated to return used batteries/rechargeable batteries/lamps as the end user. In the case of a removable battery/accumulator or illuminant, you must return them separately to the appropriate return system. You can return used devices/batteries/lamps to the collection points of the public waste disposal authorities.



Basic Troubleshooting

Symptoms	Possible Causes	Most Common Solutions
The bike does not work.	 Insufficient battery power andfaulty connections. Battery not fully seated in the tray. Improper sequence to tun on. Brakes are applied. Blown discharge fuse. 	 Charge the battery. Clean and repair the connectors. Install battery correctly. Turn on the e-bike in proper sequence. Disengage brakes. Replace discharge fuse.
Irregular acceleration and/or reduced top speed.	 Insufficient battery power. Loose or damaged acceleration handle. 	 Charge or replace the battery. Replace the acceleration handle.
The motor does not respond when the bike is powered on.	 Loose wiring. Loose or damaged acceleration handle. Loose or damaged motor plug wire. Damaged motor. 	 Repair and/or reconnect. Tighten or replace. Secure or replace. Repair or replace.
Reduced range.	 Low tire pressure. Low or faulty battery. Driving with too many hills, headwind, braking, and/or excessive load. Battery discharged for a long period of time without regular charges, aged, damaged, or unbalanced. Brakes rubbing. 	 Adjust tire pressure. Check the connections or charge the battery. Assist with pedals or adjust the route. Balance the battery; contact mechanic if reduced range persists. Adjust the brakes.
The battery can not be charged.	 Charger not well connected. Charger damaged. Battery damaged. Wiring damaged. Blown charge fuse. 	 Adjust the connections. Replace. Replace. Repair or replace. Replace charge fuse.
The wheels or motor make strange noises.	Loose or damaged wheel spokes or rim. Loose or damaged motor wiring.	 Tighten, repair, or replace. Reconnect or replace the motor.

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Error Detection

Your electric tricycle is equipped with an error detection system integrated into the display and control-ler. If the electronic control system breaks down, an error code should be displayed. The following error codes are the most common and can aid in troubleshooting. If your electric tricycle has an error code displayed at any time, it is recommended that you cease operation and contact us immediately.

Error Code Definition Table					
Fault Code	Fault Name		Fault Code	Fault Name	
E021	Abnormal current.		E024	Hall component failure.	
E022	Acceleration handle failure.		E025	Brake handle failure.	
E023	Motor phase loss.		E030	Communication failure.	

- 1. The communication error is because the instrument cannot detect the reply of the controller data within 10 seconds. Possible causes are as follows: ① The communication wire harness of the display screen and the controller is wrongly connected or broken. ② The controller does not match with the instrument protocol. ③ The display communication circuit is burnt.
- 2. Possible causes of Hall component failure: ① Hall sensor of motor is damaged. ② Hall wire is wrongly connected or not connected properly.
- 3. Possible causes of acceleration handle failure: ① The handle does not return to its original position. ② The handle is not connected properly. ③ The handle is damaged.
- 4. Possible causes of motor phase failure: ① Motor phase line is not well connected or wrongly connected. ② Short circuit between motor phase lines.
- 5. Possible causes of brake failure: ① The brake handle does not return. ② The brake is not properly connected or damaged.
- 6. Possible causes of abnormal current: The MOS of the controller is damaged or abnormal.

Additional Information about Wear

Components of the electric tricycle are subject to higher wear when compared with tricycles without power assistance. This is because the electric tricycle can travel at a higher average speed than regular tricycles and has a greater weight. Higher wear is not a defect of the product.

When the useful life of a component is surpassed, it can cause unexpected loss of function, which can result in serious injuries or even death. Therefore, pay attention to the wear characteristics such as cracks, scratches and changes in the color of components or operation, which could indicate the useful life has been exceeded.



Worn components should be replaced immediately. If you are unfamiliar with regular maintenance, a certified electric tricycle mechanic should be consulted.

Main Parameters of Vehicle	
Maximum speed	16 Mph
Maximum permissible load	350 LBS

Main Battery Parameters		
Battery type	Lithium-ion	
Nominal voltage	36V	
Nominal Capacity	10.4Ah	

Main Parameters of the Motor		
Front wheel hub motor		
Power	≤350W	
Voltage	36V	

Controller Parameters	
Undervoltage protection value	31V
Overvoltage protection value	18A

Battery Charger		
Input voltage	AC 100-240V~50/60Hz 2.5A	
Output voltage	42V DC	
Output current	2A	

Safety Signal Words

The following safety signal words indicate a safety message.

Warning & Safety

The symbol alerts you to potential hazards. Failure to follow the warning may result in damage to property, injury, or death.

This manual contains many Warnings and Cautions concerning the consequences of failure to follow safety warnings. Because any fall can result in serious injury or even death, we do not repeat the warning of possible injury or death whenever the risk of falling is mentioned.

A WARNING!

Indicates a hazard or unsafe practice that will result in severe injury or death. Failure to read, understand and follow the safety information in this manual may result in serious injury or death.

A CAUTION!

Indicates a hazard or unsafe practice that could result in minor injury.

NOTICE

Indicates a hazard unrelated to personal injury, such as property damage.

User Responsibility

WARNING!

Do not install any kind of power plant or internal combustion engine to a bicycle. Adapting a bicycle in this manner poses an extreme safety risk to rider and could result in loss of control or death.

All persons assembling, using, and maintaining the bicycle must read and understand the safety warnings and operating instructions in this manual before using the bicycle.

It is the responsibility of the user, or in the case of a child rider, an adult, to ensure the bicycle is properly maintained and in proper operating condition. Doing so will reduce the risk of injury. Always conduct regular maintenance and inspection of your bicycle. Complete the Safety Checklist at the end of this section before each use.

A responsible adult must always supervise the use of the bicycle by a child. You must ensure:

- The child is wearing the proper protective attire and approved bicycle helmet.
- The child is seated securely and the bicycle is properly fitted to the child.
- The child understands applicable laws and common sense rules of safe responsible bicycling.

Personal Safety

WARNING!

Riding a bicycle without protective gear, clothing, or a helmet may result in serious injury or death. Always wear protective gear, clothing, and helmet when riding the bicycle. Ensure protective gear does not interfere with steering, braking, and pedaling.

Protective Gear and Clothing

Always wear: Figure 2

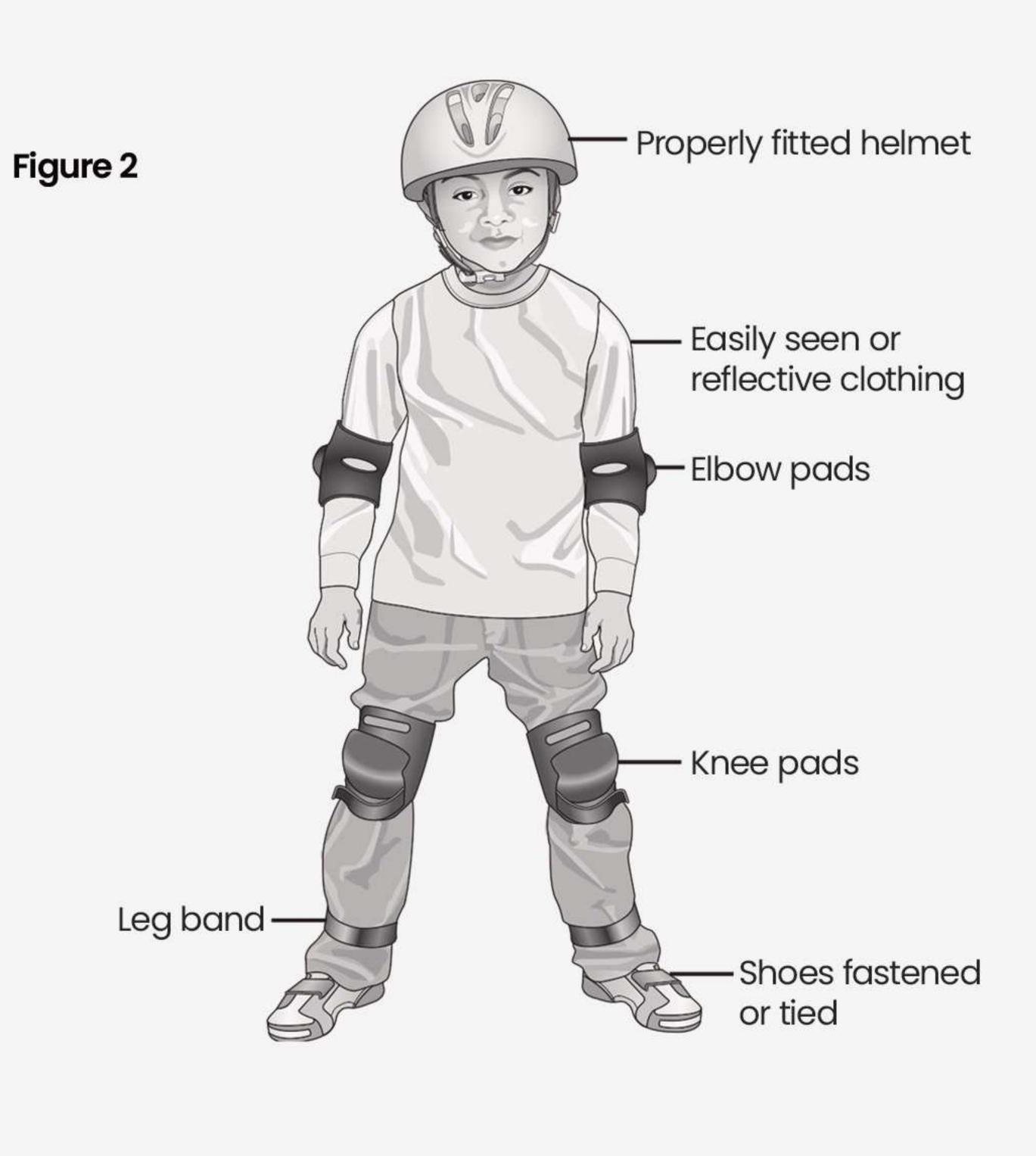
- Colors that are easily seen and, if possible, reflective clothing.
- Clothing appropriate for the weather conditions.
- Use of protective gear such as pads for the knees and elbows is highly recommended for children.
- A properly fitted, ASTM or SNELL approved, bicycle helmet shall be worn at all times by riders of the bicycle.

Do not wear:

 Loose clothing parts, strings, or jewelry that may become entangled with moving parts on the bicycle or interfere with handling of the bicycle.

Pants with loose pant legs. If necessary, always tuck pant legs into a sock or use a leg band to avoid the clothing becoming caught in the drive chain.

Shoes with untied shoe laces.



Quick-release Levers

WARNING!

Improper setup or maintenance of the quick-release levers may result in an unexpercted movement, loss of control, and serious injury or death. Before riding always check that the quick-release lever is firmly locked in place and the seat does not move.

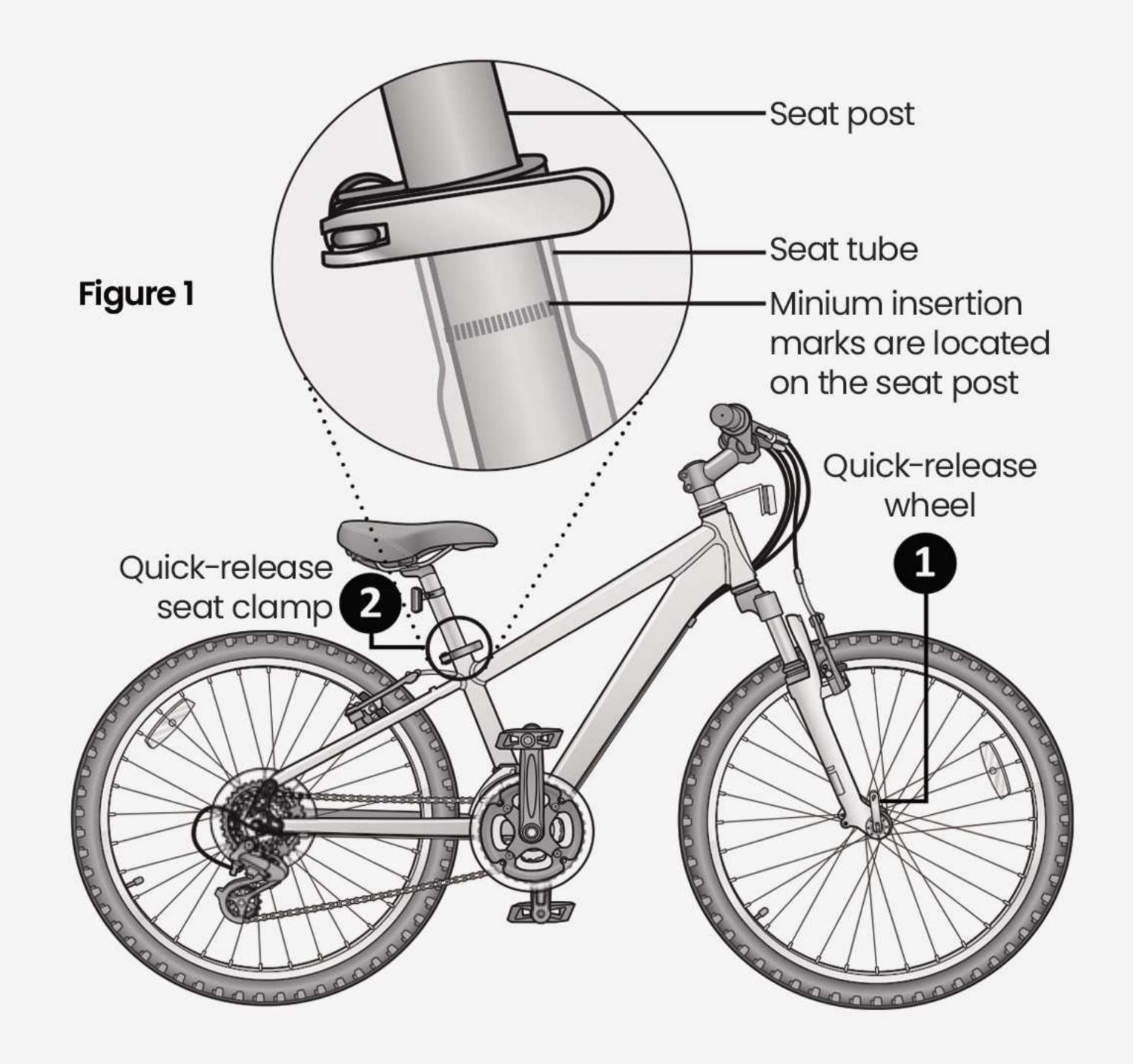
Wheels

Some bicycles will come equipped with quick-release levers for the front wheel. The wheels must be securely locked. Ensure the wheel quick-release lever is firmly locked in place. Figure 1

Seat Post

Ensure the seat post's **minimum insertion marks** are not visible above the quick-release seat clamp and the clamp is locked in place.

Note: See Section 4: Adjusting the Seat Height if adjustments are needed.



Helmet Use

Important! Many states and provinces have passed helmet laws. Make sure you know your state's helmet laws. It is your job to enforce these rules with your children. Even if your state/province does not have a children's helmet law, it is recommended that everyone wear a helmet when cycling. When riding with a child carrier seat or trailer, children must wear al helmet.

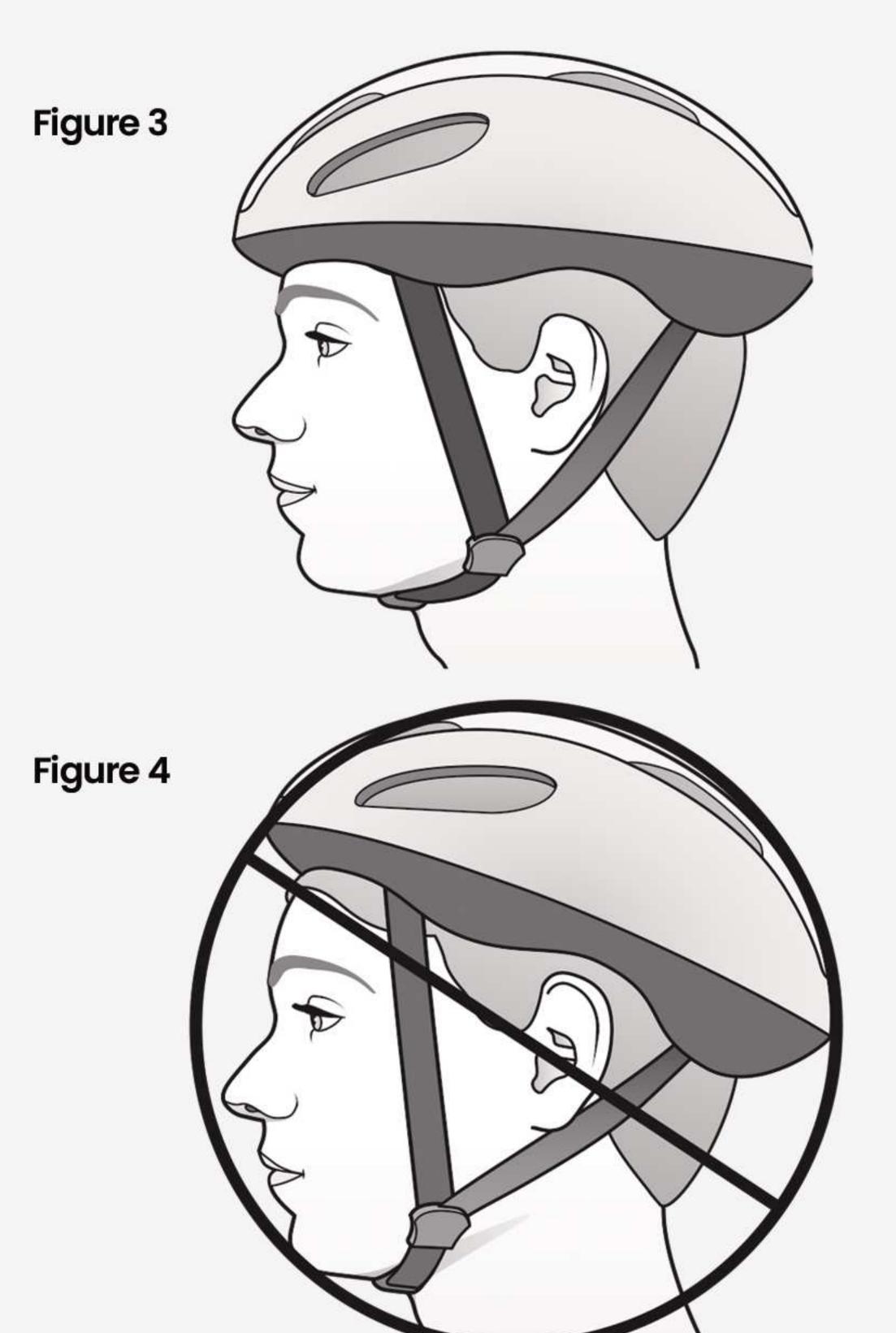
It is strongly advised that a properly fitting, ASTM or SNELL approved, bicycle safety helmet be worn at all times when riding your bicycle. In addition, if you are carrying a passenger in a child safety seat, they must also be wearing a helmet.

The correct helmet should: Figure 3

- Be comfortable
- Have good ventilation
- Fit correctly
- Cover forehead

Incorrect helmet position: Figure 4

Helmet does not cover the forehead



Reflectors

A WARNING!

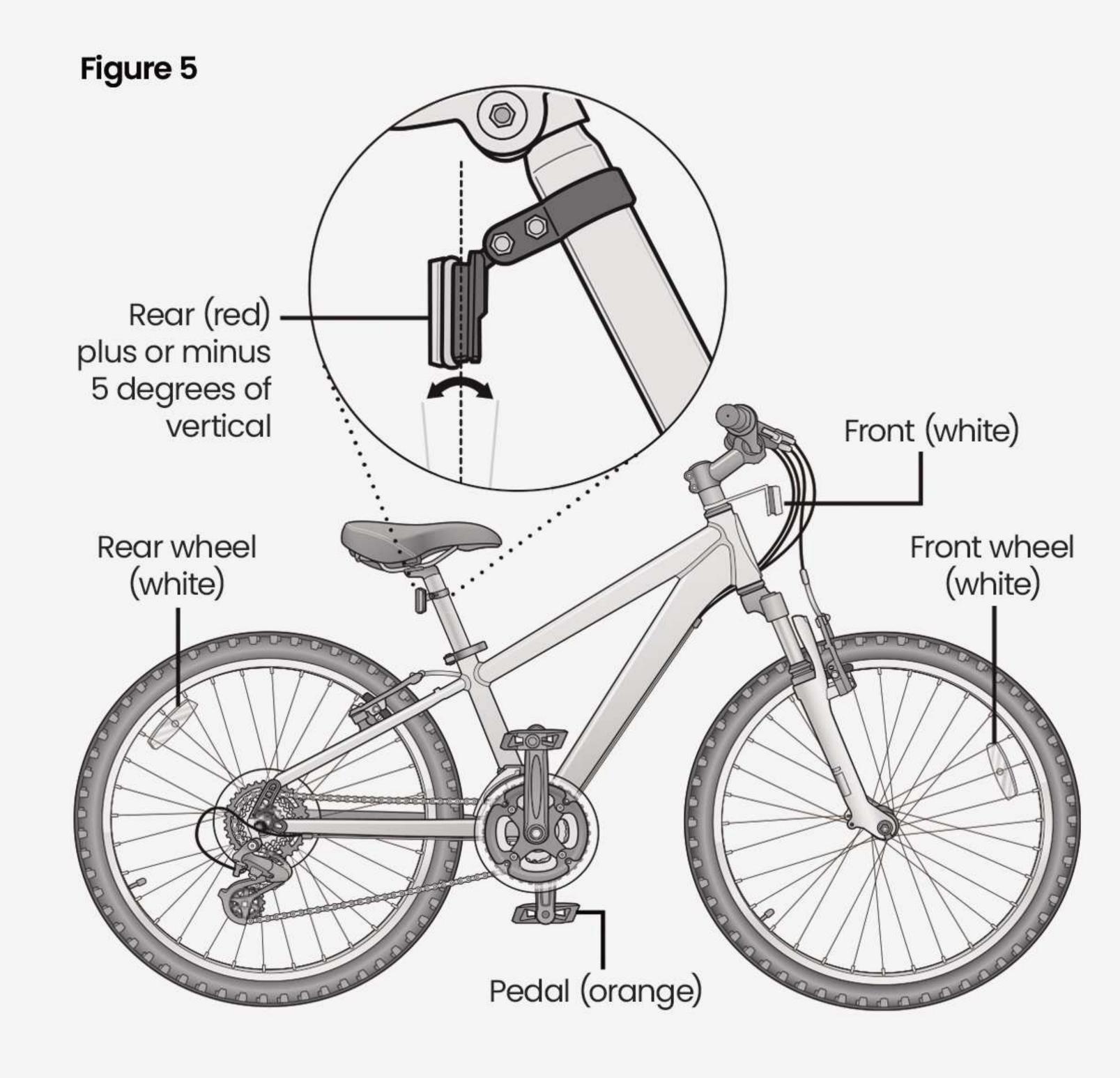
Missing, damaged, or dirty reflectors will affect the ability of others to see and recognize you as a moving bicyclist, increasing the risk of being hit, serious injury or death. Always check the reflectors are in place and make sure they are clean, straight, unbroken and securely mounted before riding the bicycle.

Important! Federal regulations require every bicycle over 16 inches to be equipped with front, rear, wheel, and pedal reflectors. Many states require specific safety devices. It is your responsibility to familiarize yourself with the laws of the state where you ride and to comply with all applicable laws, including properly equipping yourself and your bike as the law requires.

Bicycles under 16 inches are considered "sidewalk bicycles" and may not be fitted with reflectors. These bicycles should not be ridden on streets, at night or unsupervised by an adult.

Check and confirm the front and rear reflectors are in the correct position: **Figure 5**

- Front Reflector: Should aim forward (when viewed from above) and be mounted so it is within 5 degrees of vertical.
- Rear Reflector: Should aim straight back (when viewed from above) and be mounted so it is within 5 degrees of vertical.



Riding Safety

WARNING!

Riding the bicycle in unsafe conditions (i.e. at night), in an unsafe manner, or disregarding traffic laws may result in an unexpected movement, loss of control, and serious injury or death.

General Safety

- Familiarize yourself with all the bicycle's features before riding. Practice gear shifts, braking, and the use of toe clips and straps, if installed.
- Always ride defensively in a predictable, straight line. Never ride against traffic.
- Expect the unexpected (e.g., opening car doors or cars backing out of concealed driveways).
- Take extra care at intersections and when preparing to pass other vehicles.
- Maintain a comfortable stopping distance from all other riders, vehicles and objects. Safe braking distances and forces are subject to the prevailing weather conditions. Do not lock up the brakes. When braking, always apply the rear brake first, then the front. The front brake is more powerful and if it is not correctly applied, you may lose control and fall.
- Always use the correct hand signals to indicate turning or stopping.

- Obey the traffic laws (e.g., stopping at a red light or stop sign, giving way to pedestrians).
- Wear proper riding attire, reflective if possible, and avoid open toe shoes.
- Do not use items that may restrict your hearing and vision.
- Do not carry packages or passengers that will interfere with your visibility or control of the bicycle.

Road Conditions

- Be aware of road conditions. Concentrate on the path ahead. Avoid pot holes, gravel, wet road markings, oil, curbs, speed bumps, drain grates and other obstacles.
- Cross train tracks at a 90 degree angle or walk your bicycle

Wet Weather

- When riding in wet weather always wear reflective clothing and use safety lights to enhance visibility.
- Exercise extreme caution when riding in wet conditions.
- Ride at a slower speed. Turn corners gradually and avoid sudden braking.
- Brake earlier, it will take a longer distance to stop.
- Pot holes and slippery surfaces such as line markings and train tracks all become more hazardous when wet.

Night Riding

- Important! Riding a bicycle at night is not recommended. Check your local laws regarding night riding.
- Ensure bicycle is equipped with a full set of correctly positioned and clean reflectors.
- Use a white light on the front and a red light on the rear. Use lights with flashing capability for enhanced visibility.
- If using battery powered lights, make sure batteries are well charged.
- Wear reflective and light colored clothing. Wear reflective clothing and use safety lights for increased visibility.
- Ride at night only if necessary. Slow down and use familiar roads with street lighting.

Hill Technique

- Gear down before a climb and continue gearing down as required to maintain pedaling speed.
- If you reach the lowest gear and are struggling, stand up on your pedals. You will then obtain more power from each pedal revolution.
- On the descent, use the high gears to avoid rapid pedaling.
- Do not exceed a comfortable speed; maintain control and take additional care.
- Braking will require additional distance. Initiate braking slowly and earlier than usual.

Cornering Technique

- Brake slightly before cornering and prepare to lean your body into the corner.
- Maintain the inside pedal at the 12 o'clock position and slightly point the inside knee in the direction you are turning.
- Keep the other leg straight, do not pedal through fast or tight corners.
- Decrease your riding speed, avoid sudden braking and sharp

Safe Riding Rules for Children

- Many states require that children wear a helmet while cycling. Always wear a properly fitted helmet.
- Do not play in driveways or the road.
- Do not ride on busy streets.
- Do not ride at night.
- Obey all the traffic laws, especially stop signs and red lights.
- Be aware of other road vehicles behind and nearby.
- Before entering a street: Stop, look left, right, and left again for traffic. If there's no traffic, proceed into the roadway.
- If riding downhill, be extra careful. Slow down using the brakes and maintain control of the steering.
- Never take your hands off the handlebars, or your feet off the pedals when riding downhill.

Before You Ride Safety Checklist

Before every ride, it is important to carry out the following safety checks. Do not ride a bicycle that is not in proper working condition!

Accessories

- The reflectors are properly placed and not obscured.
- O All other fittings on the bike are properly and securely fastened, and functioning.
- O The rider is wearing a properly fitted helmet (protective gear if necessary) and that clothing and loose items are properly constrained.

Bearings

 All bearings are lubricated, run freely and display no excess movement, grinding or rattling.

Brakes

- The front and rear brakes work properly.
- O The brake pads are not overly worn and are correctly positioned in relation to the discs.
- O The brake control cables are lubricated, correctly adjusted and display no obvious wear.
- O The brake control levers are lubricated and tightly secured to the handlebar.

Chain

The chain is oiled, clean and runs smoothly.

Cranks and Pedals

- O The pedals are securely tightened to the crank arms.
- The crank arms are secured to the axle and are not bent.

Frame and Fork

- The frame and fork are not bent or broken.
- O The quick-release clamps are locked in place.

Steering

- The handlebar and post are correctly adjusted and tightened, and allow proper steering.
- The handlebars are set correctly in relation to the forks and the direction of travel.
- The handlebar binder bolt is tightened.

Wheels and Tires

- O The rims do not have dirt or grease on them.
- The wheels are properly attached to the bicycle and axle.
- O The tires are properly inflated within the recommended pressures displayed on the tires sidewall.
- O The tires have the proper amount of tread, no bulges or excessive wear.

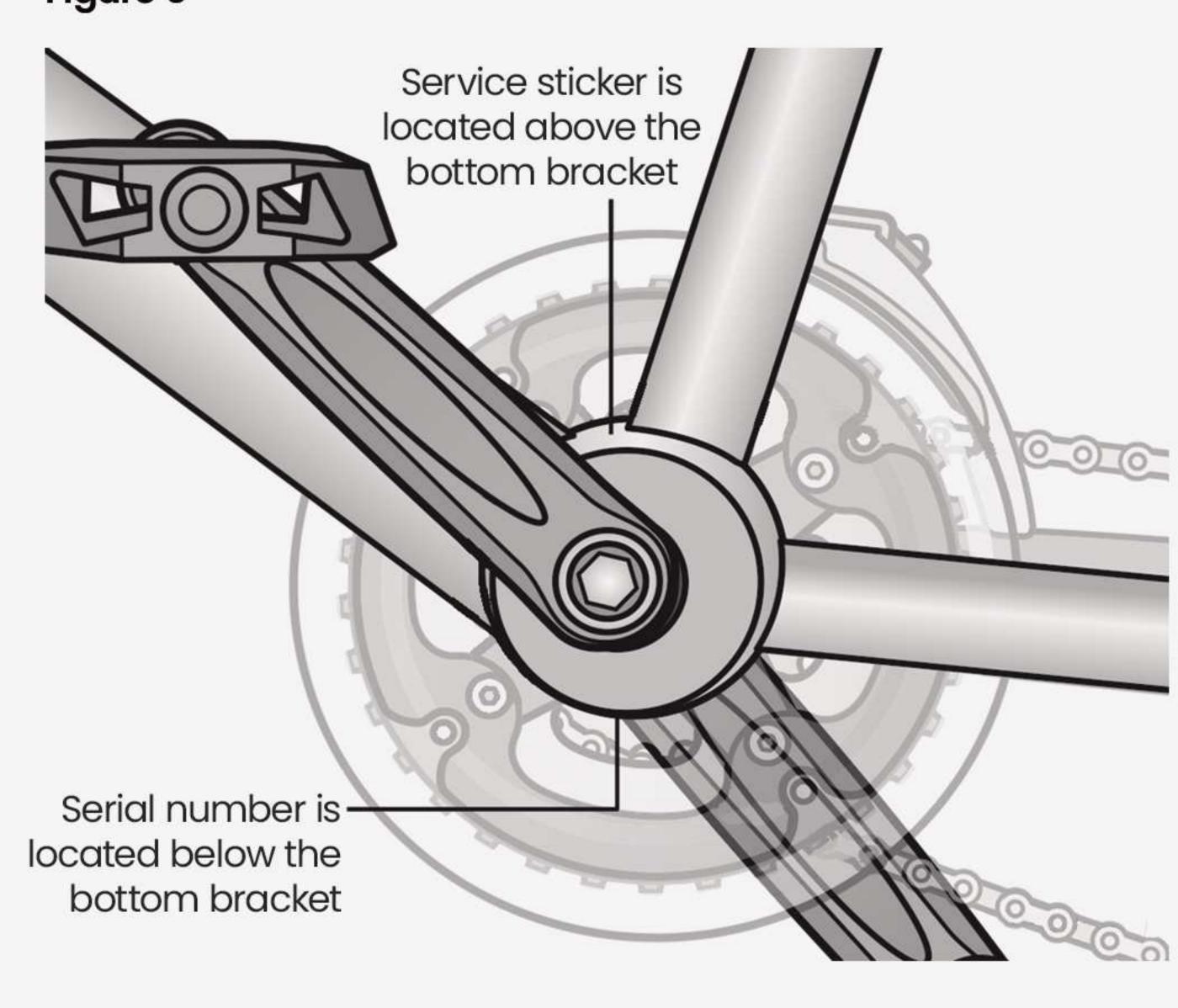
After your bicycle is assembled you will need to make adjustments. If you need replacement parts or have questions pertaining to the assembly of your bicycle, contact us with e-mail

mooncool@yeah.net

we will reply within 24 hours.

Note: You will need your model number and date code located on the service sticker near the bottom bracket area. Figure 6

Figure 6



Adjusting the Disc Brake

WARNING!

Disc brakes are sharp, keep fingers away from the brake caliper and rotor. If fingers contact the disc brake while the wheel is turning serious injury may occur.

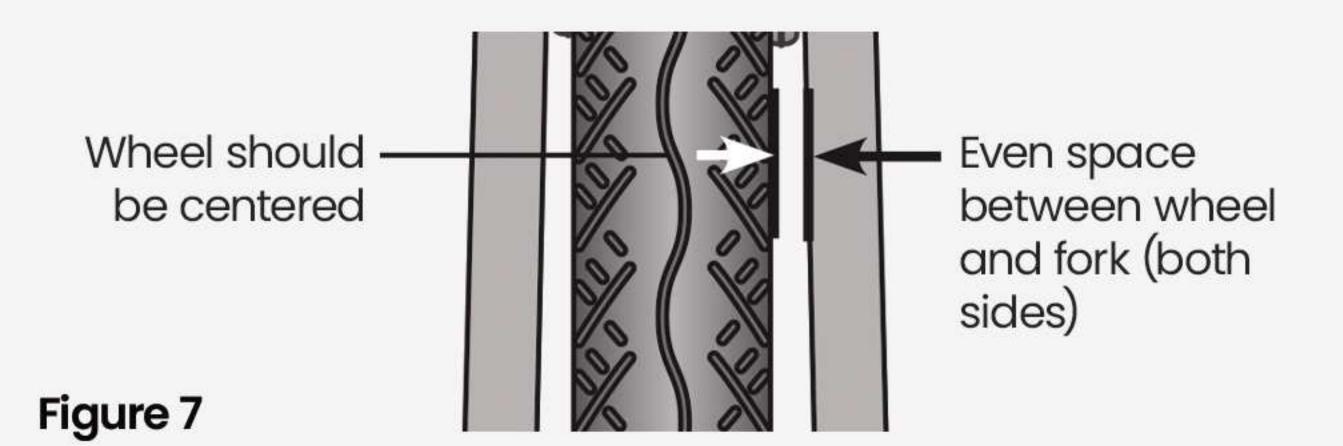
Important! Different types of disc brakes may require specific adjustments not covered in this section. If you are unsure of what needs to be done see a qualified bicycle mechanic.

Misalignment of the disc brake may be due to the following:

- The wheel is not centered.
- The caliper body is misaligned.
- The brake pads are not centered.

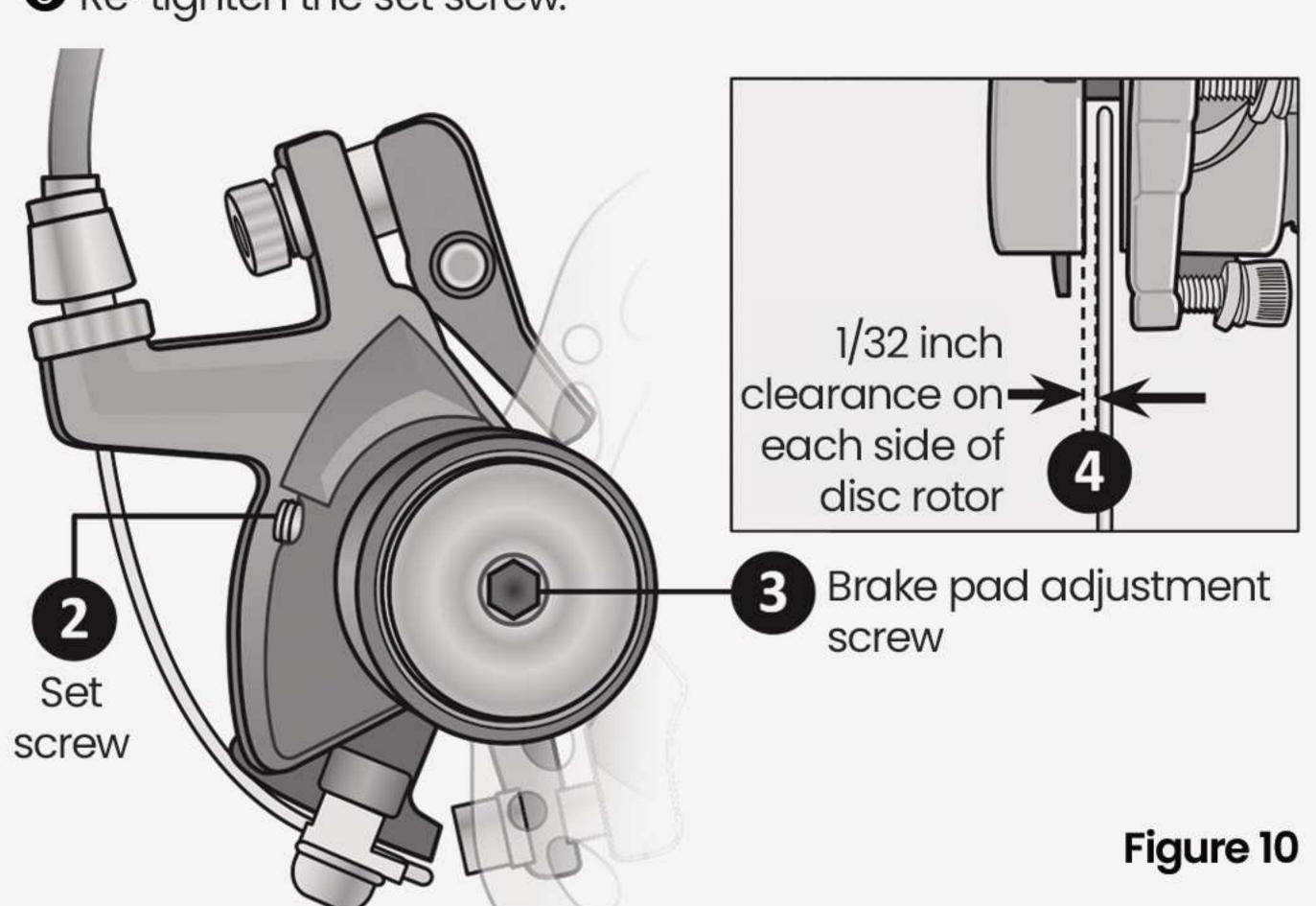
Center the Wheel

Rotate the wheel and look at the gap between the rim and fork. If the gap is uneven, loosen the axle nuts and adjust until the wheel and disc rotor are centered. Figure 7



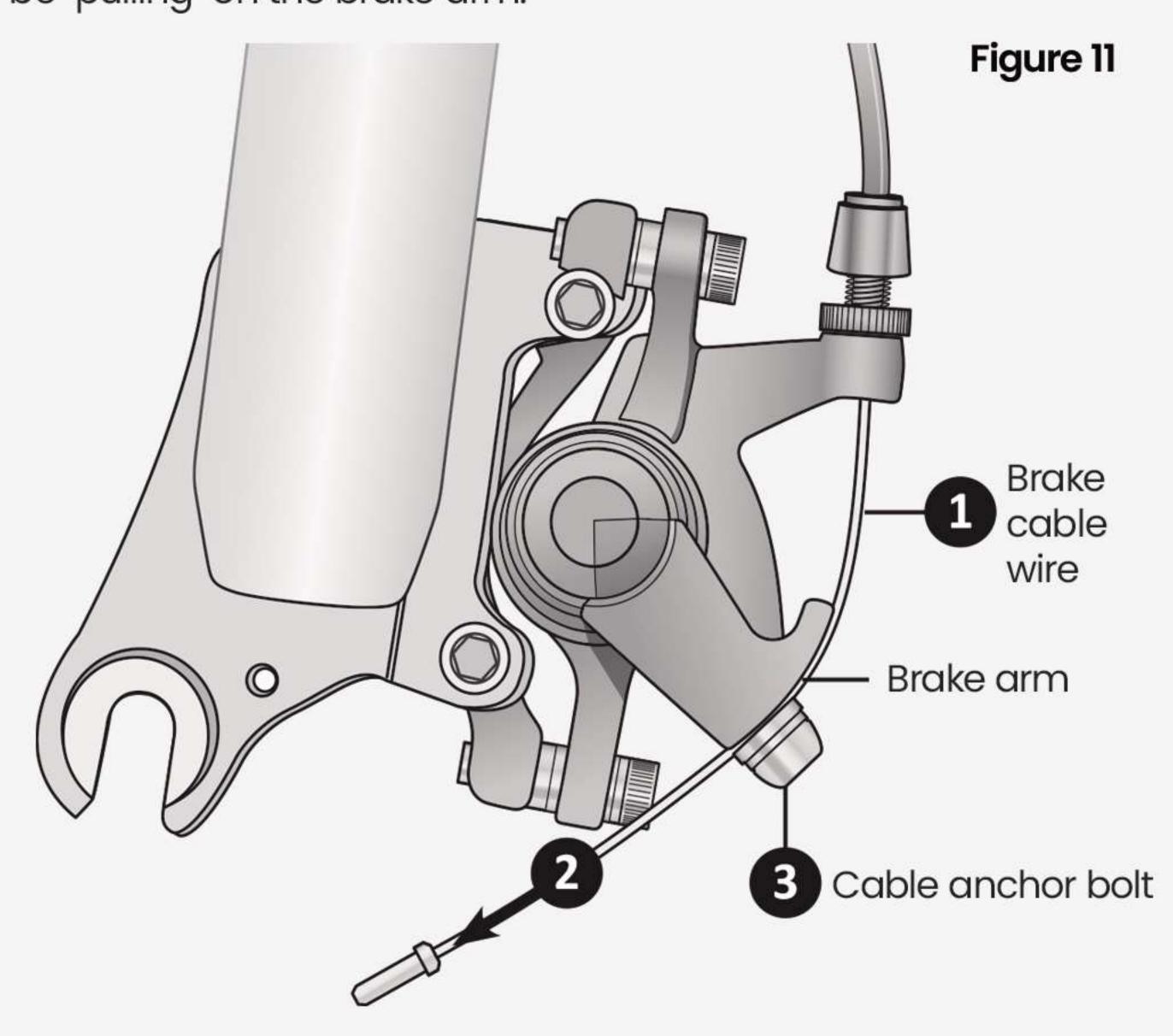
Center the Brake Pads

- 1 Insert a 1/32" spacer gage between the disc rotor and brake pad. **Figure 10**
- 2 Using a 2.5mm Allen wrench, loosen the set screw.
- 3 Using a 5mm Allen wrench, turn the brake pad adjustment screw to move the brake pad. Turning the pad clockwise moves it towards the disc rotor, counterclockwise moves the pad away from the disc rotor.
- 4 Adjust the pad until the gap between the disc rotor and the brake pads are even (1/32" per side).
- **5** Re-tighten the set screw.



Attaching the Brake Cable to the Brake Arm

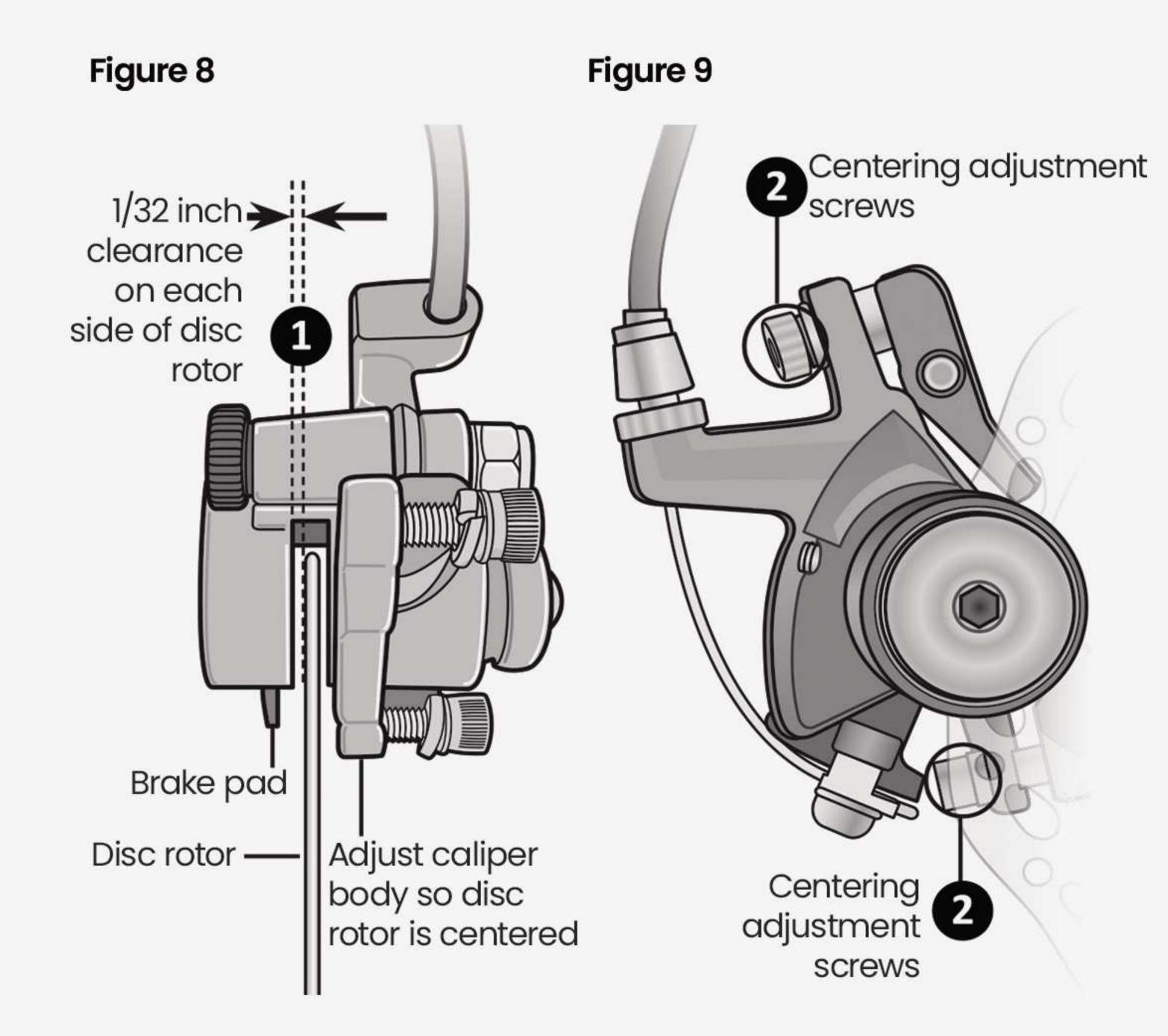
- 1 If the brake cable wire is not attached to the brake arm then loosen the cable anchor bolt until you can see a gap large enough for the brake cable wire. Figure 11
- 2 Pull on the brake cable wire and place it under the cable anchor bolt.
- 3 Tighten the cable anchor bolt. Note: The brake cable should not be "pulling" on the brake arm.



Realign the Caliper Body

1 Using a 5mm Allen wrench, loosen the two centering adjustment screws. Adjust the caliper body until the gap between the disc rotor and the brake pads in the caliper body is even (1/32" per side). **Figure 8**

2 Tighten the centering adjustment screws.



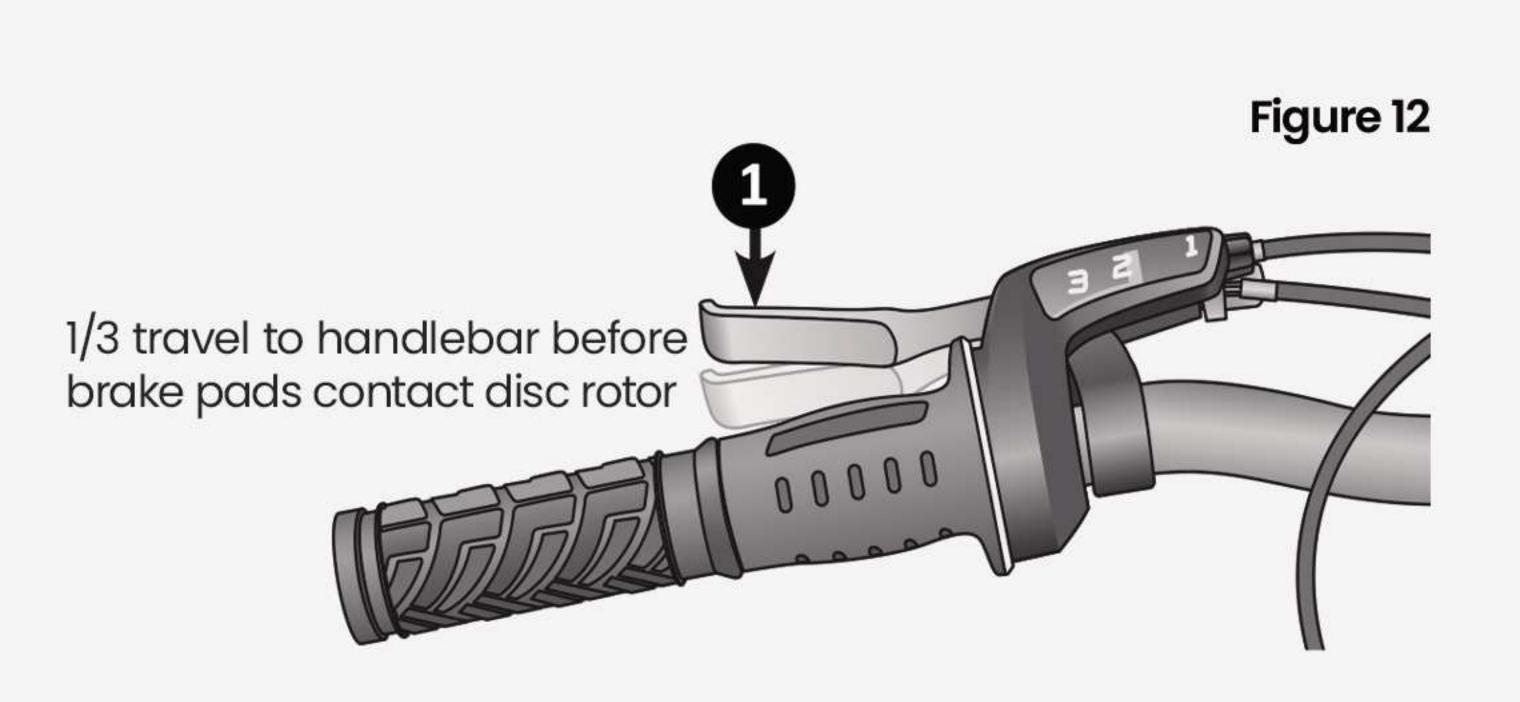
Adjusting the Cable Tension

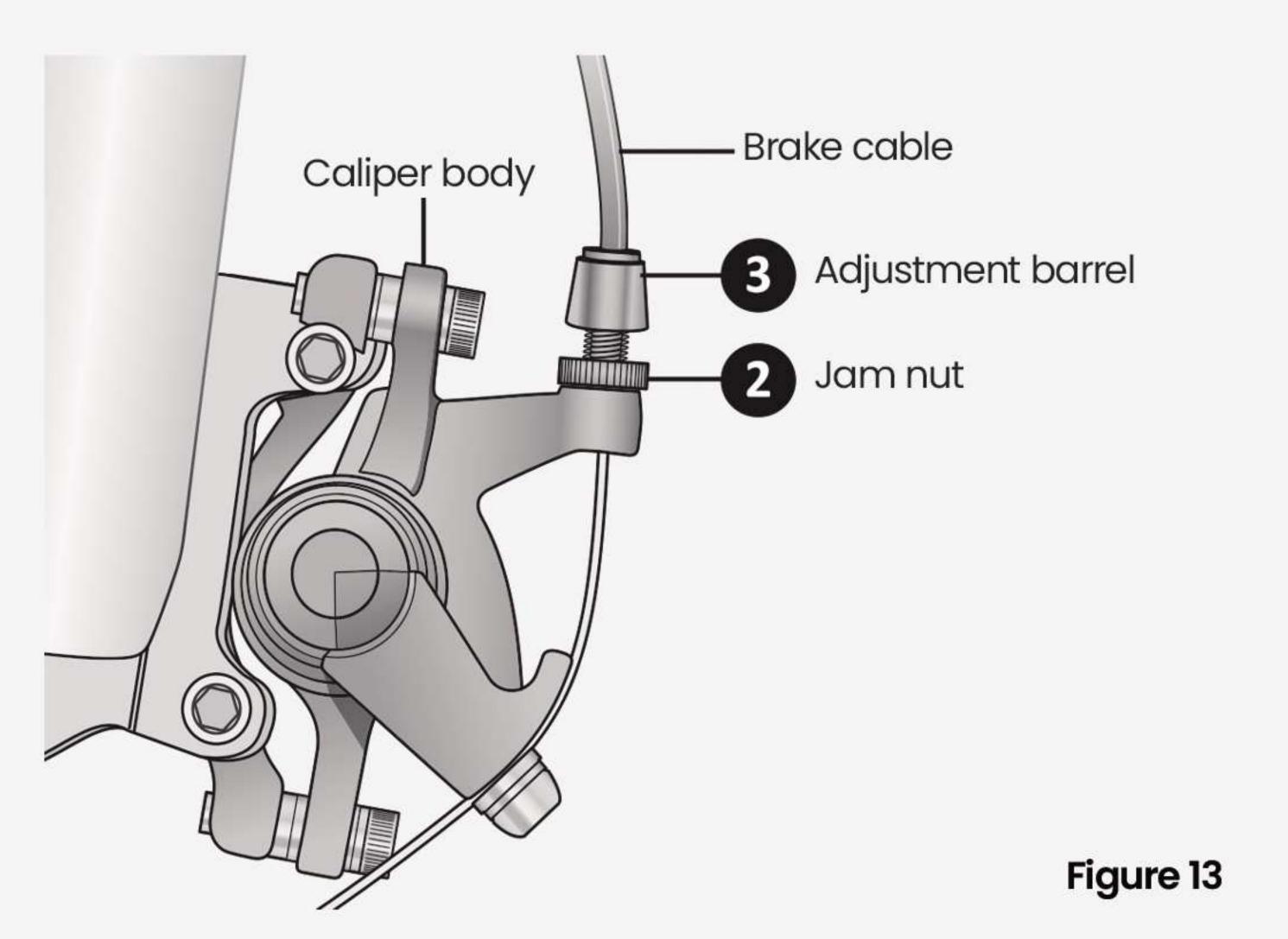
- 1 Check that the brake cable tension allows the brake lever about 1/3 of the travel before the brake pads contact the disc rotor. If the cable has stretched or slipped, re-adjust the brake cable tension. Figure 12
- 2 At the caliper body, or brake lever, slightly loosen the jam nut that is next to the adjustment barrel. Figure 13
- 3 Turn the adjustment barrel to adjust the cable tension. Turning clockwise will loosen the brake cable tension, counter-clockwise will tighten the brake cable tension.
- Re-check that the brake cable tension allows the brake lever about 1/3 of the travel before the brake pads contact the disc rotor. When you have the brake tension you want then tighten the jam nut.

Brake is correctly adjusted when:

- The brake pads do not drag on the disc rotor.
- Both brake pads move away from the disc rotor equally when the brake is released.
- When the brake is applied, the brake pads contact the disc rotor before the brake lever reaches about 1/3 of the way to the handlebar.

After brake adjustment, squeeze the brake lever as hard as you can several times and re-inspect if the wheel and brake pads are centered. If necessary, repeat brake adjustments.





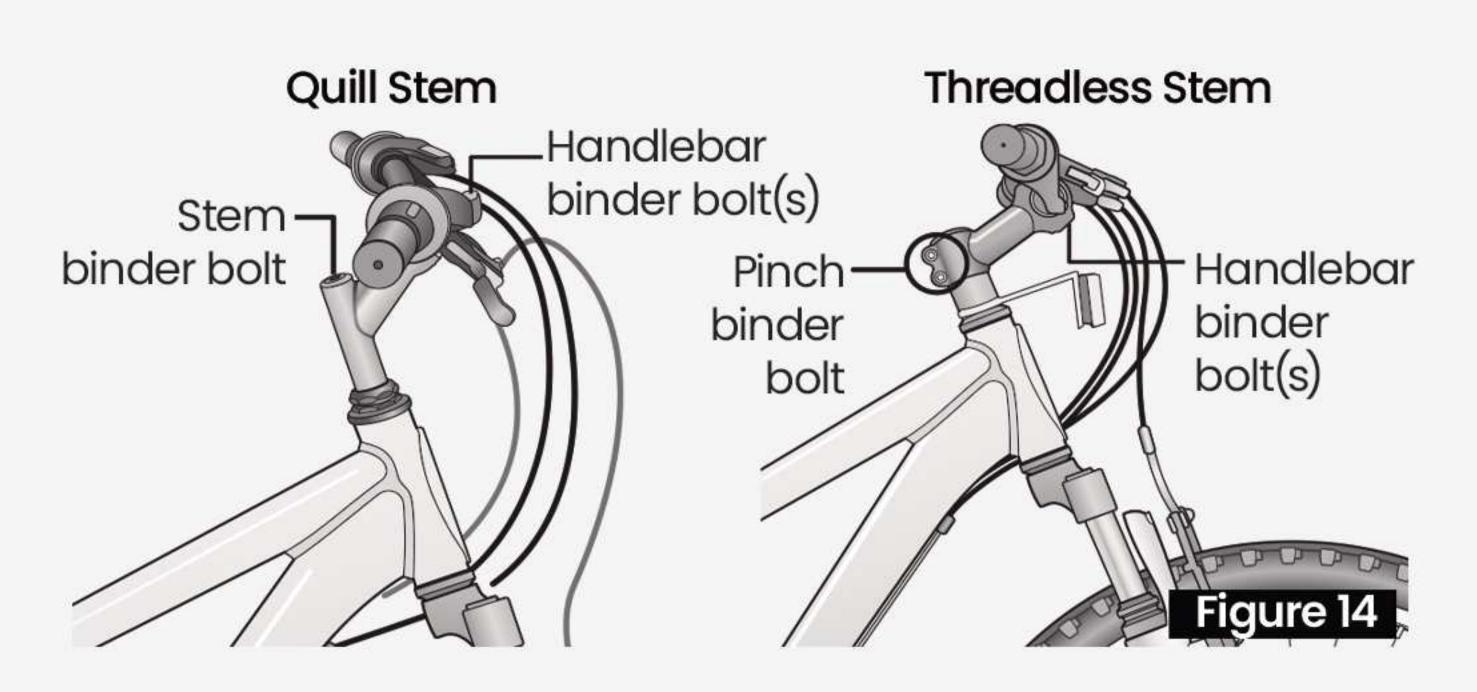
Adjusting the Handlebar

WARNING!

- Improper adjustment of the handlebar may result in damage to the stem post, steering tube and result in loss of control, serious injury or death. Ensure the minimum insertion marks on the stem post are not visible above the top of the headset.
- Failure to properly tighten handlebar components may result in loss of control, serious injury or death. Always check the handlebar cannot move and is secured to the frame before riding the bicycle.

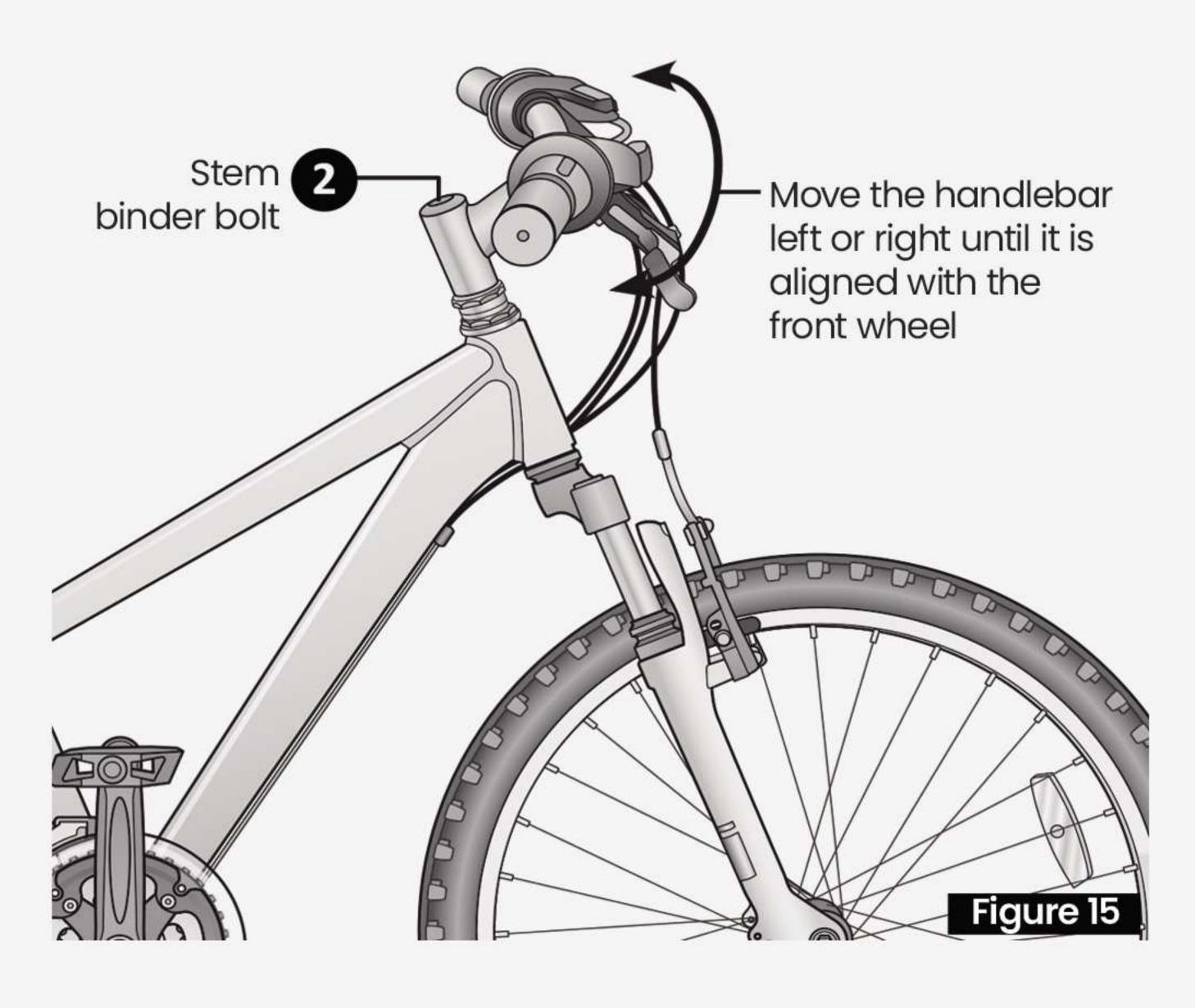
Adjusting the Handlebar Height

Instructions for adjusting the handlebar height depend on whether vour bicycle has a quill or clamp (threadless) stem.



Align the Handlebar (with quill stem)

- 1 Stand in front of the handlebar and hold the front wheel between your legs.
- 2 Using an Allen wrench, loosen the stem binder bolt and move the handlebar left or right until it is aligned with the front wheel. Figure 15
- 3 Tighten the stem binder bolt and check the handlebar is securely attached and cannot move.

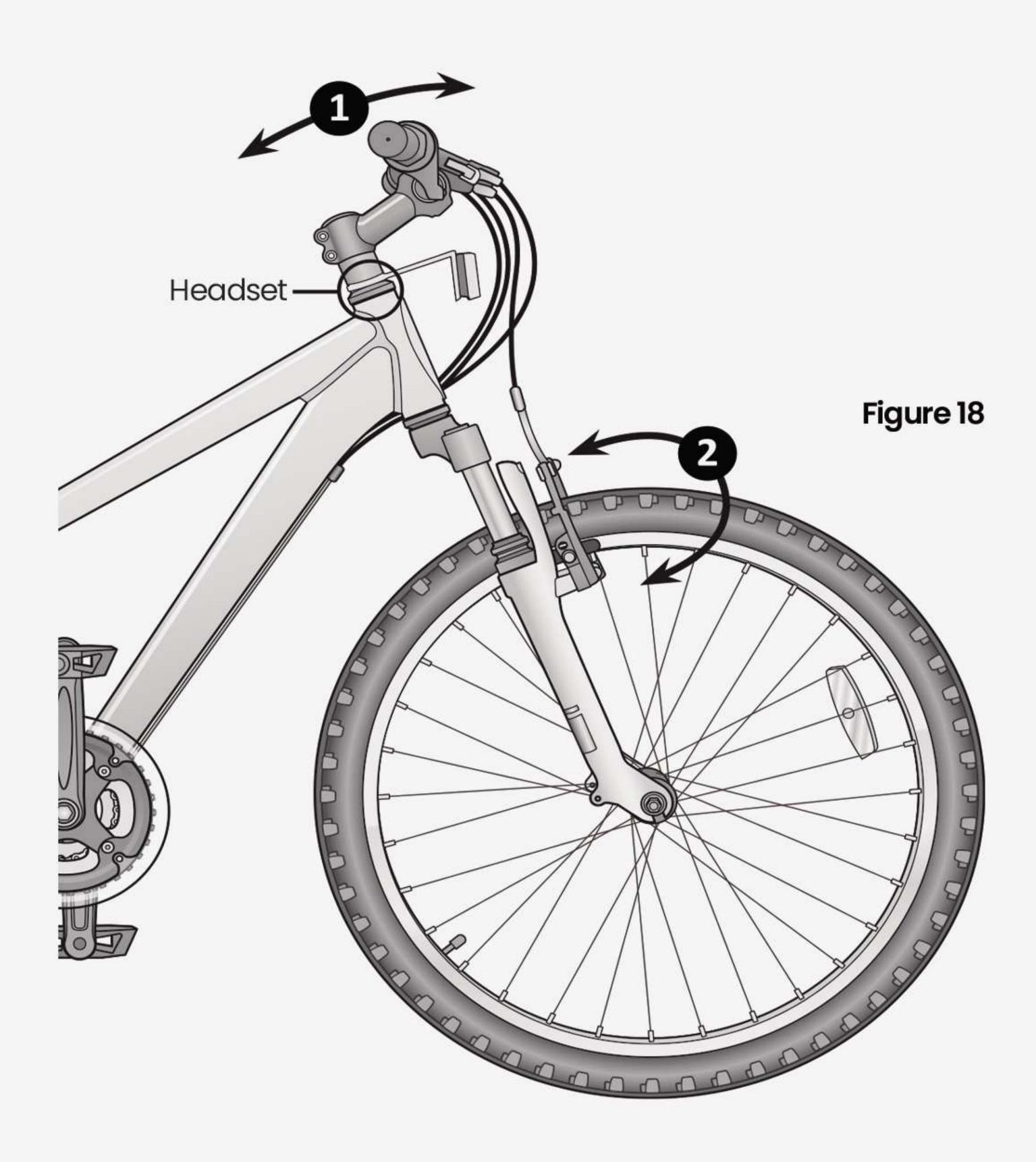


Adjusting a Threadless Headset

Threadless headsets are similar to threaded headsets, they use two sets of bearings and bearing cups. Unlike a threaded headset, a threadless headset does not have an upper threaded race or use a threaded steerer tube. Instead the steerer tube extends from the fork all the way through the head tube and above the headset and is held in place by the stem clamped on

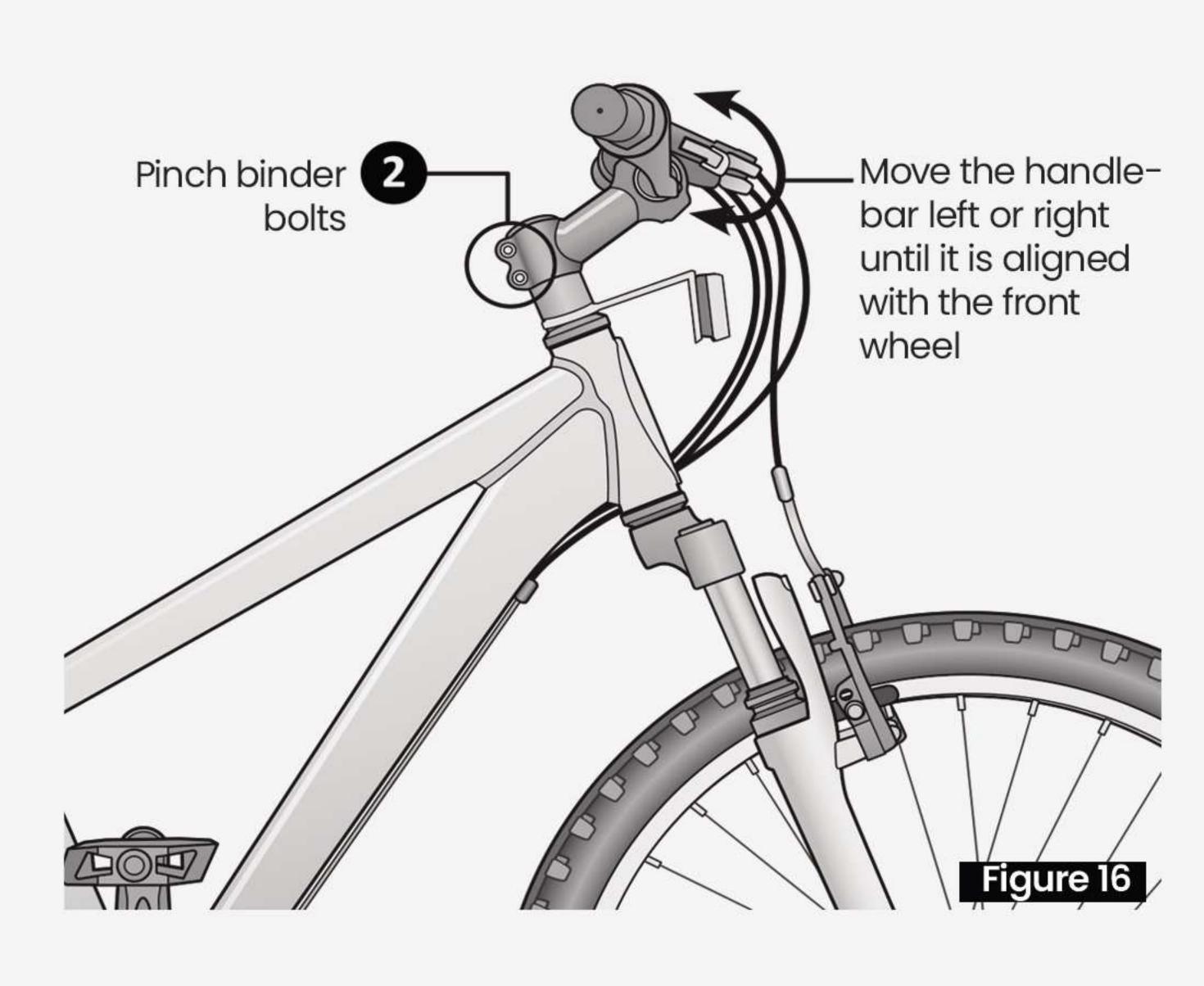
Conduct the following checks to determine if there is play in the headset:

- Shakiness: Apply the front brake and push the handlebars back and forth, front to back or if the bicycle is on a workstand and the front wheel removed, push and pull on the forks. If you feel a knocking sensation or "clunk" it means the headset is too loose. Important! Use care with suspension forks, because the legs may have play in sliders. Grab upper portion of fork. Figure
- 2 Stiffness: Lift the front of the frame so the front wheel is off the ground. The handlebar and wheel should flop to one side or another. If there is drag or binding the headset is too tight.



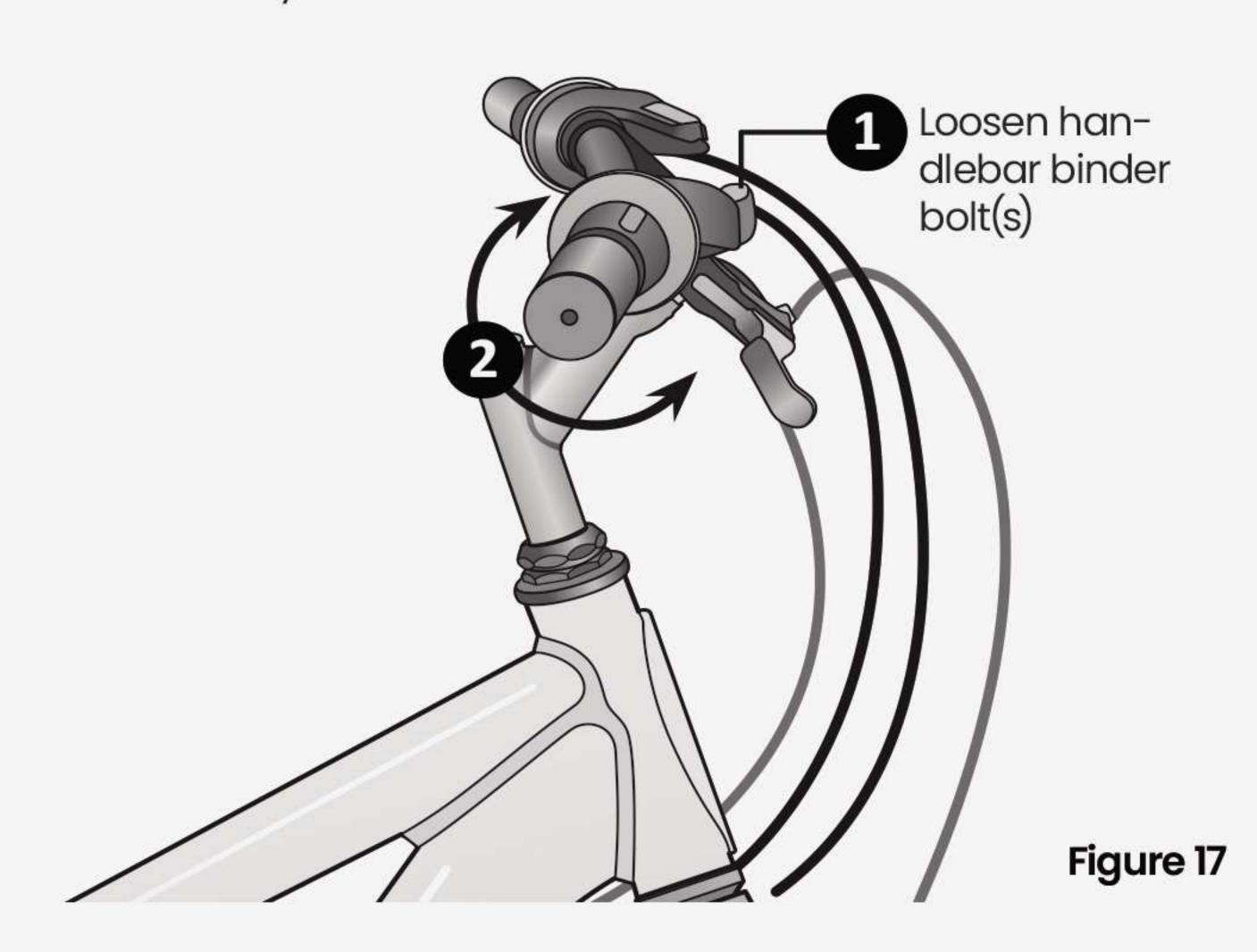
Align the Handlebar (with threadless stem)

- 1 Stand in front of the handlebar and hold the front wheel between your legs.
- 2 Using an Allen wrench, loosen the pinch binder bolts and move the handlebar left or right until it is aligned with the front wheel. **Figure 16**
- 3 Tighten the stem binder bolt and check the handlebar is securely attached and cannot move.



Adjust the Handlebar Angle (all stem types)

- Using an Allen wrench loosen the handlebar binder bolt(s). Figure 17
- 2 Rotate the handlebar into the desired position.
- 3 Check that the handlebar is centered to the frame and front wheel. Sit on the seat and check your reach to grips, shifters and brakes. Refer to Section 1, Fig. 1.2: Seat Height and Handlebar Reach for guidelines.
- Tighten the handlebar binder bolt(s) and check the handlebar is securely attached and cannot move.



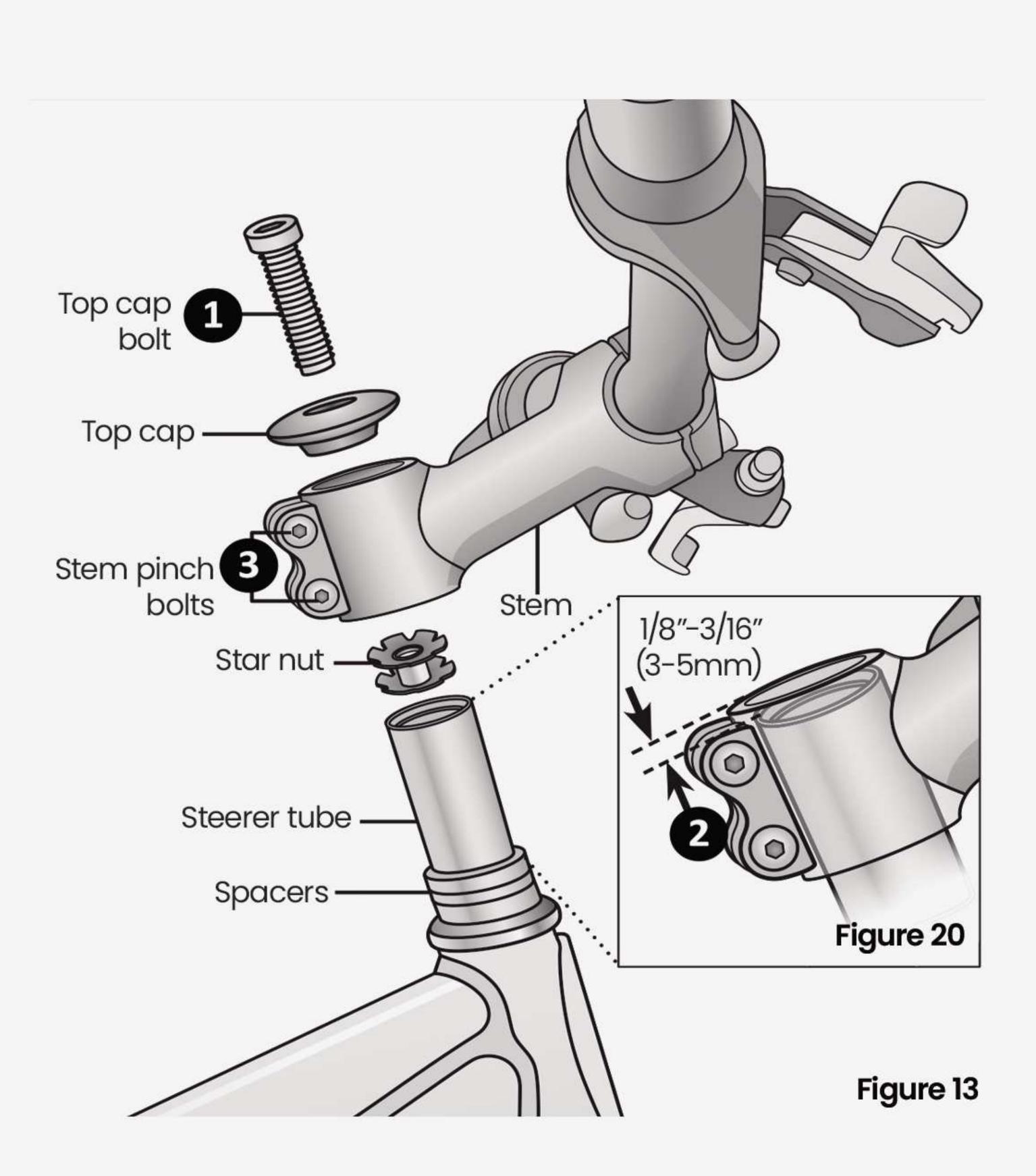
1 Loosen the top cap bolt and remove the top cap.

Important! Do not disassemble the headset or loosen any parts. Be sure the end of the fork is on the ground or being held with your free hand, because once you loosen the top cap the fork assembly may fall out of the frame. Figure 19

2 Check that the gap between the top of the steerer tube and top of the stem is between 3-5 mm (1/8" -3/16"). Figure 20

If the gap is not correct add or remove spacers until it is. The stem needs to press down on the spacers in order to adjust the bearings. If the gap is correct then re-install the top cap and tighten the top cap bolt until it is snug. Do not over tighten.

- 3 Slightly loosen the stem pinch bolts. The stem probably won't move but make sure the stem remains aligned with the fork and wheel.
- The Re-install and tighten the top cap down with a 1/4 to 1/2 turn of the top cap screw and test for shakiness in the headset. If there is still play in the headset then turn the top cap bolt another 1/4 to 1/2 turn. Repeat this process until the shakiness is gone.
- 6 Lift up the front wheel of the bicycle, if the wheel does not move freely left to right the top cap bolt is too tight. If this is the case turn the top cap bolt back some.
- 6 Repeat steps 3 and 4 until there is no play in the headset. If the play in the headset cannot be rectified with these adjustments see a qualified bicycle mechanic for these repairs.



WARNING!

Failure to follow all local and state regulations and laws pertaining to bicycle use as well as the safety warnings in this manual may result in serious injury or death. Always follow all local and state regulations and laws pertaining to bicycle use, follow the safety warnings in this manual and use common sense when riding the bicycle. Always conduct a pre-ride check of the bicycle condition before riding.

Brake Operation

WARNING!

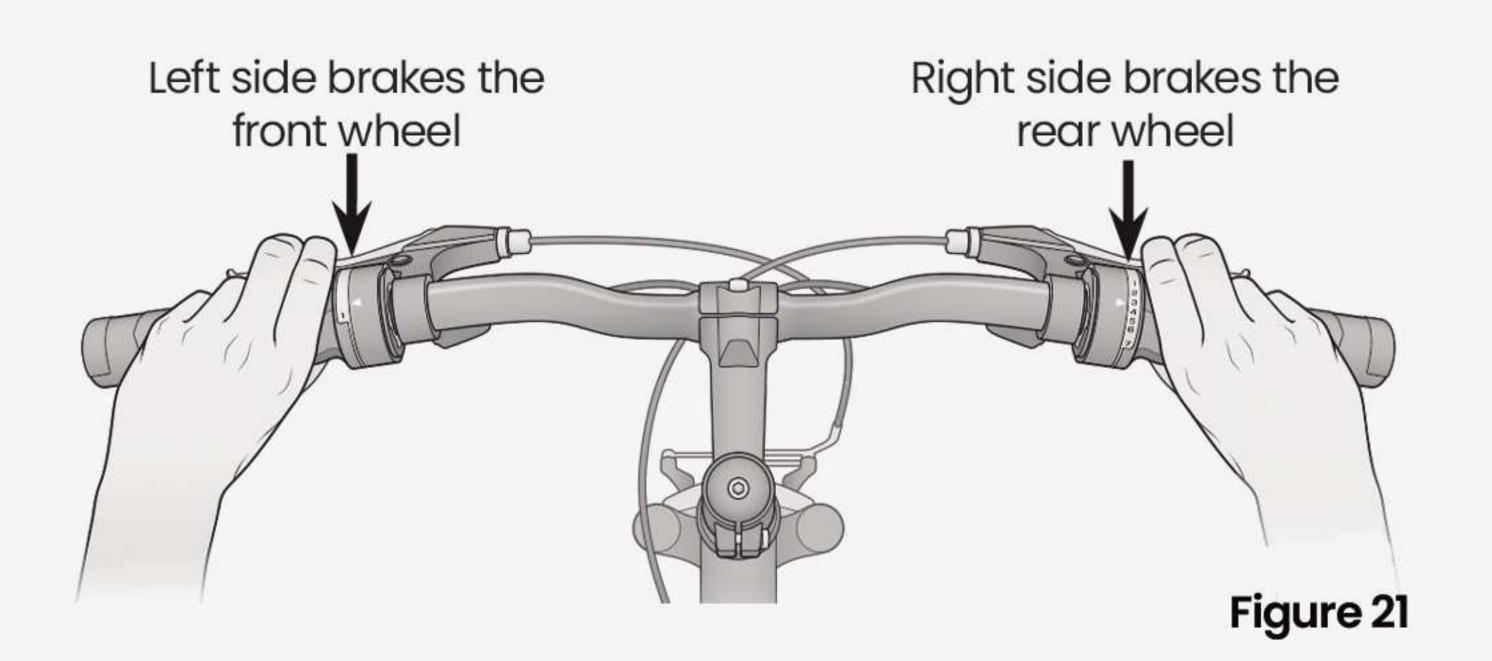
- If the front brake is applied too quickly or too hard, the front wheel can stop turning resulting in a front pitch over or cause the bicycle to lose steering function leading to a crash.
- Disc brake rotor's become hot during use and can burn the skin if contacted. Do not touch or come in contact with the disc rotor when it is hot. Allow it to cool before touching.

Hand operated brakes have a separate hand lever to operate front and rear brakes. Front hand brake levers are located on the left side of the handlebar, and rear hand brake levers are located on the right side of the handlebar. Figure 21

You may operate one brake at a time, or all together, however, be careful to pay close attention to front brakes locking up. To avoid this:

- Apply both brakes simultaneously, while shifting your body weight back slightly to compensate for braking force.
- As terrain changes, the rider must practice and learn how the bicycle will respond in a new terrain or weather change. The same bicycle will react differently if it is wet, or if there is gravel on the road etc.
- Always test the brakes and be sure you feel comfortable with the reaction. If the riding conditions are too steep (off road for example) and you are unsure, dismount the bicycle and walk past the questionable terrain before riding again.
- Remember that as you apply the brakes your weight will want to shift forward, and the wheels will want to stop.

Note: See Section 4: Adjusting the Brakes for information on brake adjustment.



Using the Rear Shifter

The rear shifter (right) will have an indicator that reads either low to high or a series of numbers from 1 and up. Low or "1" is the lowest gear. This is used for slower riding, hill climbing, or to allow for easier pedaling. It is recommended to start off in this gear and move through the gears as speed increases as needed, or comfortable.

Using the Front Shifter

Note: Not all models have a front shifter. The front (left) shifter will have an indicator that reads either low to high or a series of numbers from 1 and up. Low or "1" is the lowest gear. The front shifter acts much like the rear shifter, but the change between gears is greater. This means that one shift at the rear derailleur will be a subtle change in pedaling speed, but one shift at the front derailleur will be a large change in pedaling speed. Think of the front shifter as a range; low and high or low, medium, and high. Low is used for slower riding, hill climbing, or to allow for easier pedaling. It is recommended to start off in this gear and move through the gears as speed increases as needed, or comfortable.

To Use the Trigger-style Shifter

Rear shifter: Use your index finger to shift up to a higher gear, and your thumb to shift down to lower gear.

Left shifter: Use your index finger to shift down to a lower gear, and your thumb to shift up to higher gear. Figure 23

Trigger-style Shifter

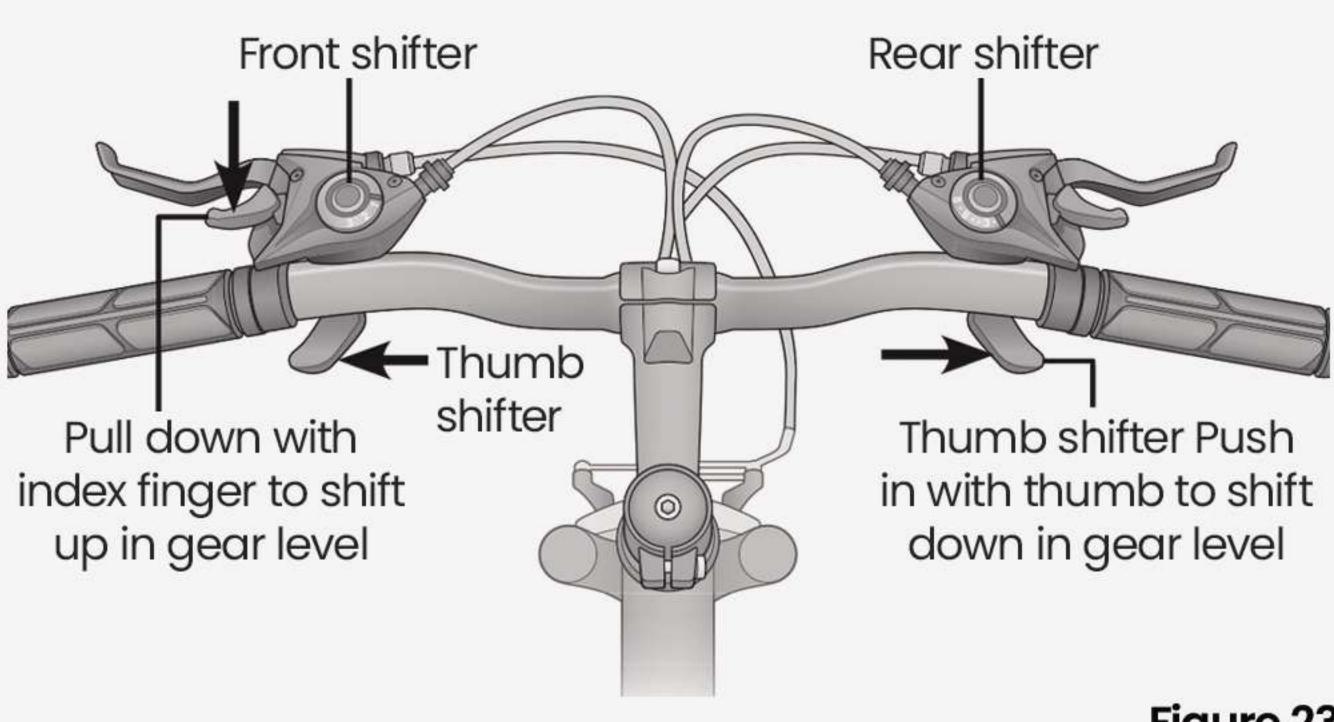


Figure 23

Gear Operation

A WARNING!

Improper shifting can result in the chain jamming, or becoming derailed resulting in loss of control, serious injury or death Always be sure the chain is fully engaged in the desired gear before pedaling hard. Avoid shifting while standing up on the pedals or under load.

Multi speed bicycles can have internal or derailleur gear systems.

Important! Best practices for proper shifting:

- Pedal the bicycle with little pressure on the pedals, and move the shifter one gear at a time, ensuring that the chain is fully engaged in that gear before applying more pressure on the pedals.
- For bicycles with 3 front chain rings; avoid "Cross Chaining", which is the position when the chain is in the smallest cog in the rear combined with the inner or smallest chain ring in the front, or the largest cog in the rear and the outer or largest chain ring in the front. These gear positions put the chain at the most extreme angle and can cause premature wear to the drivetrain. Bicycles with 3 front chain rings have enough gear "overlaps" that these gears are not needed. Figure 22
- It is OK to ride the whole time in only one gear if this is comfortable.
- Shift only while pedaling forward and seated. When shifting, lessen the pressure exerted on the pedals during the shift.

- Once you have successfully shifted gears, it is OK to start to pedal hard if desired.
- Pedaling hard while shifting can cause the chain to skip and not engage the appropriate gear.
- Backpedaling should be avoided on derailleur bikes because the chain can jam and cause the bike to become unstable.

See Section 4: Adjusting the Derailleur for further information on proper gear adjustment.

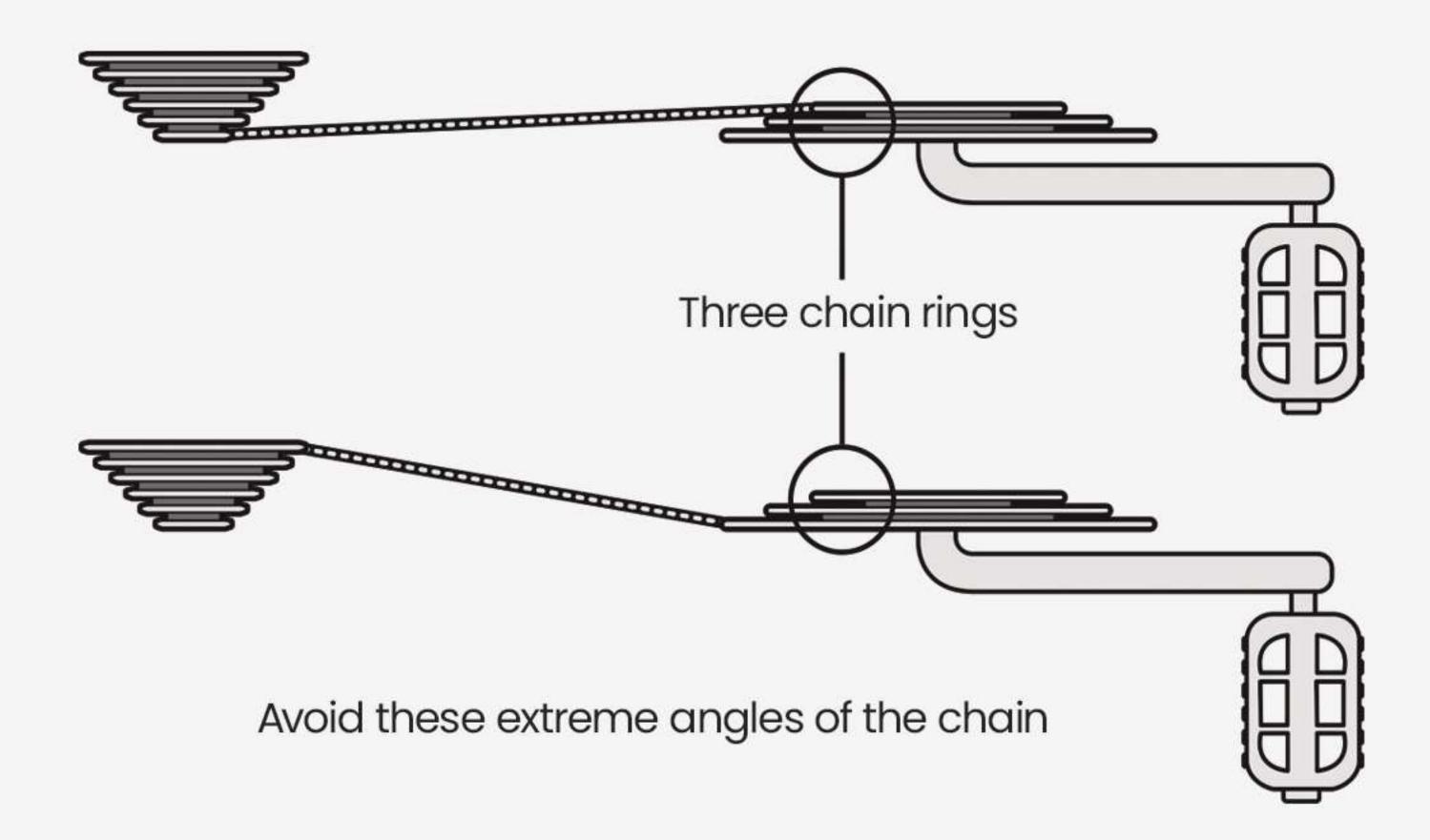
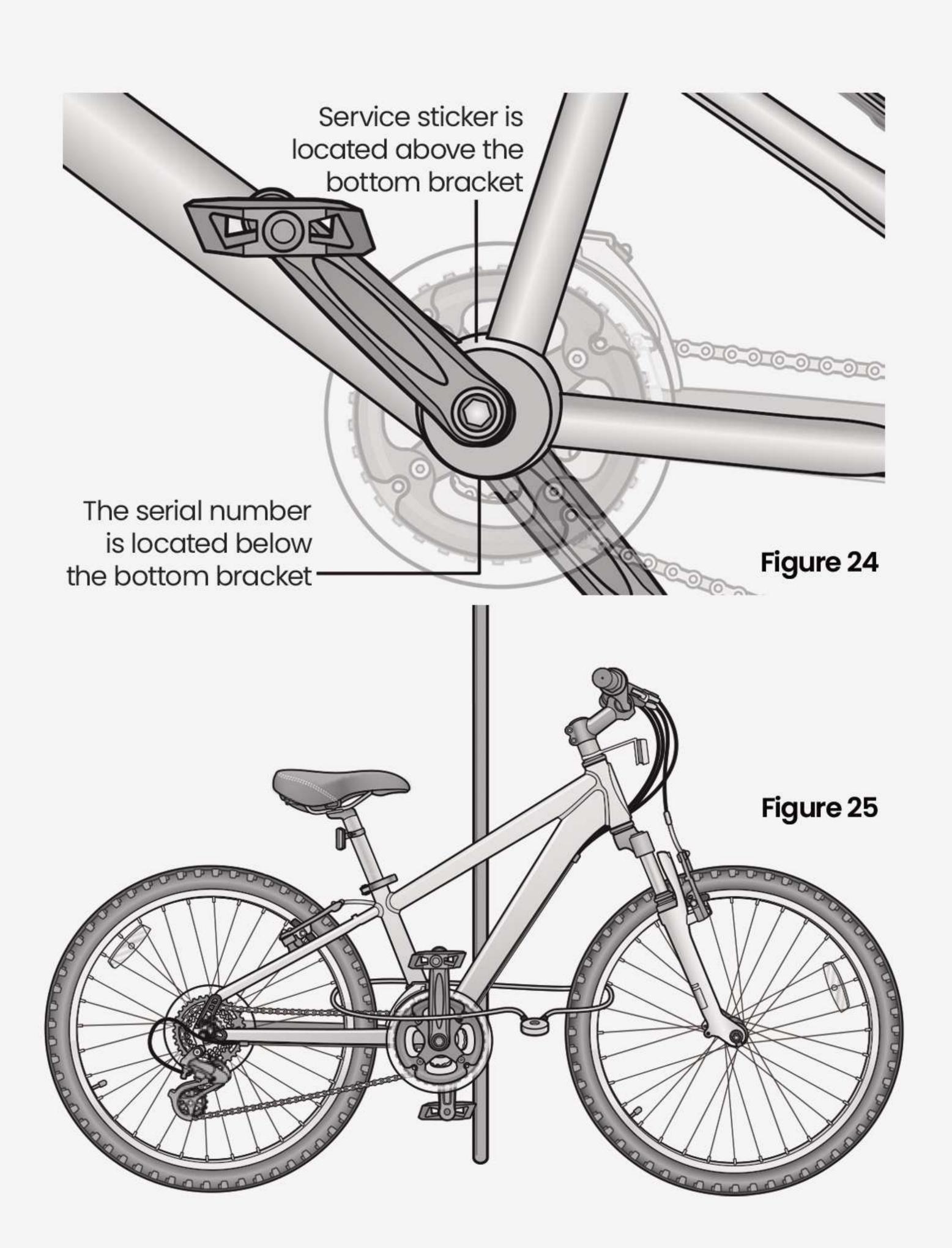


Figure 22

Security

You just bought a new bicycle! Don't lose it. It is advisable that the following steps be taken to prepare for and help prevent possible theft:

- Maintain a record of the bicycle's serial number, generally located on the frame underneath the bottom bracket. Figure 24
- Register the bicycle with the local police and/or bicycle regis-
- Invest in a high quality bicycle lock that will resist hacksaws and bolt cutters.
- Always lock your bicycle to an immovable object if it is left unattended. Keep in mind that individual parts of a bicycle may be stolen. Most commonly, if you lock just a wheel or jus the frame, other parts may be removed from the bicycle. Although it is impossible to lock all the parts, it is suggested to lock the major components if possible. Figure 25
- Use a lock that is long enough to lock the frame and both wheels if possible. Some models with quick-release front wheels allow the front wheel to be placed beside the frame so a smaller lock can be used to lock all 3 components.
- Be aware that a quick-release seat post can be stolen. It is recommended to remove the seat post and saddle and carry it with you if you believe that this is a risk.



Maintenance

Warning & Safety

WARNING!

- Failure to conduct maintenance on the bicycle may result in malfunction of a critical part and serious injury or death. Proper maintenance is critical to the performance and safe operation of the bicycle.
- The recommended intervals and need for lubrication and maintenance may vary depending on conditions the bicycle is exposed to. Always inspect the bicycle and conduct necessary maintenance before each use of the bicycle.

This section presents important information on maintenance and will assist you in determining the proper course of action to take if you do have a problem with the operation of the bicycle. If you have questions regarding maintenance please contact us with e-mail support@mooncool.com. **Do not** call the store where the bicycle was purchased.

Correct routine maintenance of your new bike will ensure:

- Smooth running
- Longer lasting components
- Safer riding
- Lower running costs

Basic Maintenance

The following procedures will help you maintain your bicycle for years of enjoyable riding.

- For painted frames, dust the surface and remove any loose dirt with a dry cloth. To clean, wipe with a damp cloth soaked in a mild detergent mixture. Dry with a cloth and polish with car or furniture wax. Use soap and water to clean plastic parts and rubber tires. Chrome plated bikes should be wiped over with a rust preventative fluid.
- Store your bicycle under shelter. Avoid leaving it in the rain or exposed to corrosive materials.
- Riding on the beach or in coastal areas exposes your bicycle to salt which is very corrosive. Wash your bicycle frequently and wipe or spray all unpainted parts with an anti-rust treatment. Make sure wheel rims are dry so braking performance is not affected. After rain, dry your bicycle and apply anti-rust treatment. If the hub and bottom bracket bearings of your bicycle have been submerged in water, they should be taken out and re-greased. This will prevent accelerated bearing deterioration.
- If paint has become scratched or chipped to the metal, use touch up paint to prevent rust. Clear nail polish can also be used as a preventative measure.
- Regularly clean and lubricate all moving parts, tighten components and make adjustments as required.

Lubrication Schedule

Component	Lubricant	Method	
Weekly			
Chains	Chain lube or light oil	Brush on or squirt	
Brake calipers	Oil	Three drops from oil can	
Brake levers	Oil	Two drops from oil can	
Freewheel	Oil	Two drops from oil can	
Derailleur Systems	Light oil or grease	All pivot points should be lubricated (more often in severely rainy or muddy conditions). Wipe off any excess oil.	
Brake cables	Lithium based grease	Remove cable from casing. Grease entire length. Wipe off excesslubrication from other surfaces.	
Brake lever and caliper pivot points	Light oil	Two to three drops from oil can	
Shifting cables	Thin layer of grease	Clean and grease	
Yearly			
Bottom bracket	Lithium based grease	Disassemble	
Pedals	Lithium based grease	Disassemble	
Wheel bearings	Lithium based grease	Disassemble	
Headset	Lithium based grease	Disassemble	
Seat stem	Lithium based grease	Disassemble	
Pedals: that can be disassembled		See bicycle mechanic for maintenance	

Note: The frequency of maintenance should increase with use in wet or dusty conditions. Do not over lubricate. Remove excess lubricant to prevent dirt build up. **Never** use a degreaser to lubricate your chains (WD-40).

Parts Maintenance

Inspect

Frequency: Inspect and maintain at least each use.

· · · · · · · · · · · · · · · · · · ·			
Inspect	Action	Maintenance	
Tire Inflation	Check tire pressure.	Inflate tire to the pressure indicated on the tire sidewall. See "Inflating a Tire Tube" for more detail if the tire is flat seel "Fixing a Flat Tire" for more detail.	
	Check the bead is properly seated while inflatingor refitting the tire.	Reduce air pressure in the tube and re-seat the bead.	
	Spin wheel and check rotation/alignment is smooth and even.	Loosen axle nut(s) and adjust until properly seated. If the hubbearings need repair see a bicycle mechanic for repair.	
Bead Seating	Check for broken or loose spokes.	See bicycle mechanic for repair.	
Tread	Inspect for signs of excessive wear, flat spots or cuts and damage.	Replace tire.	
Valves	Check that valve caps are fitted and free of dirt.	Clean dirt from the valve.	

Wheels

Frequency: Inspect and maintain at least each use.

Inspect	Action	Maintenance
Rims	Inspect for dirt and grease.	Use a clean rag or wash with soapy water, rinse, and air dry.
Wheels	Check the wheels are securely fastened to thebicycle and axle nuts are tight.	Adjust if necessary and tighten axle nuts.
	Spin wheel and check rotation/alignment is true	See bicycle mechanic for repair.
Spokes	Check for broken or loose spokes.	See bicycle mechanic for repair.
Hub Bearings	Lift each wheel and see if there is movement side to side.	See bicycle mechanic for repair.

Drivetrain (pedals, chains, chainwheel, crank set, freewheel)

Frequency: as noted.

Inspect	Action	Maintenance
Pedals	Every month, check each pedal is securely set and tighten into the crank arm.	If necessary, re-set and tighten.
	Before each ride, check each front and rear pedal reflectors areclean and in place.	Clean or replace.
Pedal Bearings	Every ride, check the pedal bearings are properly adjusted. Move the pedal up and down, left and right. If looseness or roughness is detected adjustment, lubrication or replacement is required.	See bicycle mechanic for repair.
Chains	Every week, check the chain is clean, properly lubricated, rust-free, and is not stretched, broken, or has stiff links.	Lubricate if necessary. Replace if rusted, stretched, or broken.
Crank Set	Evory month check the crank set (crank arms, chain rings, and bottom bracket axle and bearings) is correctly adjusted and tight.	See bicycle mechanic for repair.

Brakes

Frequency: Inspect and maintain before each use.

Inspect	Action	Maintenance	
Levers	Every month, check each pedal is securely set and tighten into the crank arm.	If necessary, re-set and tighten.	
Pads	Check pad position, gap and pressure.	See Section 4: Adjusting the Brakes	
Cables	Check the outer casing for kinks, stretched coils and damage. Check cables for kinks, rust, broken strands or frayed ends. Check the outer casing for kinks, stretched coils and damage.	Replace cable.	
	Check the housing is seated properly into each cable stop of the bicycle.	It is recommended that the cables and housing be replaced every riding season.	

Hub Bearings

Hub bearings require special thin wrenches called **cone** wrenches. If you do not own these tools, do not attempt hub bearing adjustments. Have a qualified bicycle mechanic perform the adjustment if you have any doubts.

- 1 Check to make sure neither nut is loose.
- 2 To adjust, remove wheel from bicycle and loosen the nut on one side of the hub while holding the bearing cone onl the same side with a cone wrench.
- 3 Rotate the adjusting cone as needed to eliminate free play.
- Re-tighten the nut while holding the adjusting cone in position.
- **6** Re-check that the wheel can turn freely without excessiveside play.

Inflating the Tire Tube

A WARNING!

- An unseated tire can rupture unexpectedly and cause serious injury or death. Be sure the tire is properly seated when inflating the tube.
- Over inflation or inflating the tube too quickly may result in the tire blowing off the rim and damaging the bicycle or causing injury to the rider. Always use a hand pump to inflate the tube. **Do not** use a gas station service pump to inflate the tube.

Follow these steps to inflate a tire:

- Remove the valve cap and add air.
- 2 Be sure the tire is evenly seated on the rim, both sides.
- 3 Spin the wheel and check for high and low areas.
- © Complete inflation to the recommended psi found on the sidewall of the tire.
- **5** Be sure the tire is evenly seated on the rim, both sides. If not, release some air and repeat steps three through six.
- 6 Check for dirt in the valve cap or stem. Clean dirt from cap or stem.
- To Securely replace the valve cap on the stem.

Repairing a Flat Tire

A WARNING!

An unseated tire can rupture unexpectedly and cause serious iniury or death. Be sure the tire is properly seated when inflating the tube.

Follow these steps to fix a flat tire:

- Match tube size and tire size (see tire sidewall for size).
- 2 Remove the wheel from the bicycle. Deflate the tire tube completely.
- 3 Squeeze the tire beads into the center of the rim.
- Opposite the valve, use a bicycle tire lever to pry the tire bead up and out of the rim. Repeat around the wheel until one bead is off the rim.
- 6 Remove tube. Release second tire bead.
- 6 Remove tire.
- Tarefully inspect inside of the rim and tire for the cause the
- 1/4 full and place inside tire.
- Insert the valve stem through valve stem hole in rim.
- ① Start at the valve stem and install the first bead onto therim. Repeat for the second bead.

- Slowly inflate the tire tube, checking the tire is seated properly and not pinched as the tire tube is inflated.
- 1 Inflate to recommended pressure (see tire sidewall).

Troubleshooting Guide

Problem	Possi	ble Causes	Reme	dy	
Gear shifts not working	Derailleur cables sticking/stretched/ damaged		Lubricate/tighten/replace cables		
properly	Front or rear derailleur no	t adiusted properly	 Adiust derailleurs 	Adiust derailleurs	
	Indexed shifting not adjust	ted properly	Adjust indexing	Adjust indexing	
Slipping chain	Excessively worn/chipped sprecket tooth	I chain wheel or freewheel	Replace chain wheel, spr	ockets and chain	
	sprocket teeth		Replace chain	Replace chain	
	Chain worn/stretched		Lubricate or replace link		
	Stiff link in chain Non compatible obtain	ain who of free overbook	Seek advice at a bicycle shop		
	Non compatible chain/ch	ain wheel freewheel			
Chain iumning off freewheel sprocket or	Chain wheel out of true		Re-true if possible, or replace		
chain whee	Chain wheel loose			Tighten mounting bolts	
	Chain wheel teeth bent or		Repair or replace chain w	vheel/set	
	 Rear or front derailleur sid justment 	le-to-side travel out of ad-	Adjust derailleur travel		
	Cross chaining and shifting	ng under load			
Constant clicking noises when pedaling	Stiff chain link		Lubricate chain/adjust ch		
g	Loose pedal axle/bearing		Adjust bearings/axle nut		
	Loose bottom bracket axle		Adjust bottom bracket		
	Bent bottom bracket or per	edal axle	 Replace bottom bracket 	axle or pedals	
	Loose crankset		Tighten crank bolts		
Grinding noise when pedaling	Pedal bearings too tight		Adjust bearings		
poddiiiig	Bottom bracket bearings too tight		Adjust bearings		
	Chain fouling derailleurs		Adjust chain line		
	Derailleur jockey wheels dirty/binding		Clean and lubricate jockey wheels		
Freewheel does not rotate	Freewheel internal pawl pins are jammed		 Lubricate. If problem persists, replace freewhee 		
Brakes not working ef-	Brake pads worn down		Replace brake pads		
fectively	Brake pads greasy, wet or dirty		Clean pads		
	Brake cables are binding/stretched/damaged		Clean/adjust/replace cables		
	Brake levers are binding		Adjust brake levers		
	Brakes out of adjustment		Center brakes		
When applying the brakes thev squeal/ squeak	Brake pads worn down	Brake pads/rim dirty or	Replace pads	Clean pads and rim	
	 Brake pads toe-in incor- rect 	wet	 Correct pads toe-in 	Tighten mounting bolts	
Knocking or shudderi-	Bulge in the rim or rim out	t of true	True wheel or take to a bi	ke shop for repair	
na when applying brakes	Brake mounting bolts loose		Tighten bolts		
	Brakes out of adjustment		Center brakes and/or adjust brake pads toe-in		
	Fork loose in head tube		Tighten headset		
Wobbling wheel	Axle broken	Headset binding	Replace axle	Adjust headset	
	Wheel out of true	• Hub bearings col-	True wheel	Replace bearings	
	Hub comes loose	lapsedQuick-release mech-	 Adjust hub bearings 	 Adjust quick-release mechanism 	
		anism loose			
Steering not accurate	Wheels not aligned in frame		Align wheels correctly		
	Headset loose or binding		Adjust/tighten headset		
	Front forks or frame bent		● Take bike to a bike shop for possible frame realignment		
	1 W	ASSECT OF THE PERSON OF THE PE	• Deplace inner tube	• Demove sharp shipst	
Frequent punctures	Inner tube old or faulty	 Tire not checked after previous puncture 	Replace inner tube	 Remove sharp object embedded in tire 	
Frequent punctures	 Inner tube old or faulty Tire tread/casing worn Tire unsuited to rim 	 Tire not checked after previous puncture Tire pressure too low 	 Replace inner tube Replace tire Replace with correct tire 		

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1 Year Llimited Warranty And Policy On Replacement Procedures Promotional Bicycles

Your promotional bicycle includes the following warranty which is in lieu of all other express warranties. This warranty is extended only to the initial consumer purchaser. No warranty registration is required.

Frame

Steel, aluminum and dual suspension frames are guaranteed against faulty materials and workmanship for 1 year as long as the initial consumer purchaser has the bicycle, subject to the Terms and Conditions of this Limited Warranty. If frame failure should occur due to faulty materials or workmanship during the guarantee period, the frame will be replaced. For frame replacement under this Limited Warranty, contact us, stating the nature of the failure, model number, date received and the name of the store from which the bike was received, at the address given on this page. Frame must be returned for inspection at customer's expense. Please note: the fork is not part of the frame. The length of the useful life cycle will vary depending on the type of bike, riding conditions and care the bicycle receives. Competition, jumping, downhill racing, trick riding, trial riding, riding in severe conditions or climates, riding with heavy loads or any other non-standard use can substantially shorten the useful product life cycle. Any one or a combination of these conditions may result in an unpredictable failure that is not covered by this warranty. All bicycles and frame sets should be periodically checked by an authorized dealer for indications of potential problems, inappropriate use or abuse. These are important safety checks and are very important to help prevent accidents, bodily injury to the rider and shortened useful product life cycle.

Parts

All other parts of the bicycle, except Normal Wear Parts, are warranted against defective materials and workmanship for 1 year as long as the initial consumer purchaser has the bicycle, subject to the Terms and Conditions of this Limited Warranty. If failure of any part should occur due to faulty materials or workmanship during the warranty period, the part will be replaced. All warranty claims must be submitted to the address in the front of the manual and must be shipped prepaid and accompanied by proof of purchase. Any other warranty claims not included in this statement are void. This especially includes installation, assembly, and disassembly costs. This warranty does not cover paint damage, rust, or any modifications made to the bicycle. Normal Wear Parts are defined as grips, tires, tubes, cables, brake shoes and saddle covering. These parts are war-ranted to be free from defects in material and workmanship as delivered with the product. Any claim for repair or replacement of Normal Wear Parts (grips, tubes, tires, cables, brake shoes and saddle covering) and missing parts must be made within thirty (30) days of the date of purchase.

Conditions Of Warranty

- 1. Your bicycle has been designed for general transportation and recreational use, but has not been designed to withstand abuse associated with stunting and jumping. This warranty ceases when you rent, sell, or give away the bicycle, ride with more than one person, or use the bicycle for stunting or jumping.
- 2. This warranty does not cover ordinary wear and tear or anything you break accidentally or deliberately.
- 3. This warranty does not cover normal wear and tear, improper assembly or maintenance, or installation of parts or accessories not originally intended or compatible with the bicycle as sold. The warranty does not apply to damage or failure due to accident, abuse, misuse, neglect, or theft. Claims involving these issues will not be honored.
- 4. It is the responsibility of the individual consumer purchaser to assure that all parts included in the factory-sealed carton are properly installed, all functional parts are initially adjusted properly, and subsequent normal maintenance services and adjustments necessary to keep the bicycle in good operating condition are properly made.
- 5. This warranty does not apply to damage due to improper installation of parts, installation of any kind of power plant or internal combustion engine, modification or alteration of the brakes, drive train, or frame in any way, or failure to properly maintain or adjust the bicycle.

NOTICE: Bicycle specifications subject to change without notice.