

TERRAIN

Electric Bike User Manual



HAVE A QUESTION? NEED HELP?

Contact us on Facebook for a quick reply.



westhillbikes.com

Warranty

Westhill bikes are covered by a limited 3-year warranty. Aside from general cycle maintenance, any work to the motor should be carried out by a Westhill technician or authorised dealer.

1. Warranty periods

The statutory warranty valid at the time of delivery applies to:

Frame: 3 years

Motor: 2 years

Battery, Charger & Controller: 2 years

Spokes

Brake pads

Chains and toothed belts

Chain wheels, sprockets, bottom brackets and jockey wheels

Sliding bearings

Lamps for lighting system

Handlebar tape/handle grips

Hydraulic oils and lubricants

Gear-shift cables and brake cables

Paint finishes

Batteries (depletion of capacity to 60% is acceptable within first two years)

2. Warranty conditions

2.1 Requirements

There is a defect in materials or workmanship or an error of information.

The cause of the change in the product is neither natural nor related to its functions, wear and tear or ageing.

The damage was not caused by use of the bike for other than the intended purpose.

2.2 Warranty exclusions

Damage caused by improper use or force majeure.

All parts subject to function-related wear and tear, unless this is the result of a defect in the manufacturing process or material.

Damage which results from improper or insufficient care and repairs, alterations or the replacement of parts by persons other than trained professionals.

Accidental damage or other external effects, provided these are not the result of defective products or information.

Repairs resulting from the use of second-hand parts or damage caused by this use.

Damage resulting from competitive use.

Special fittings, accessories or non-standard components, especially technical modifications.

Observing the required service intervals is also a condition of any warranty claims you may make.

2.3 The following are considered wear parts under the statutory warranty:

Tyres

Rims in combination with rim brakes

(1) Definitions

In this warranty the following terms shall have the following meanings: Westhill Bikes shall mean FW3 Limited; Westhill Product shall mean the FW3 Ltd; Product Warranty Period shall mean a period commencing on the original date of purchase as new.

(2) Circumstances outside our control

FW3 Ltd shall not be liable for any failure in service as a result of FW3 Ltd, or FW3 Ltd agents employees or contractors being delayed, prevented or hindered in the performance of its obligations by reason of any circumstances beyond its reasonable control. Such circumstances include, but are not limited to fire, flood, Act of God, and civil disorder.

(3) Disclaimers

FW3 Ltd shall not be liable for any indirect, incidental, special or consequential damages losses or expenses (including without limitation lost profits, loss of use or loss of data, goodwill, reputation or lost business) arising directly or indirectly, from the purchase use or sale of the Product, whether or not FW3 Ltd was advised or aware of the possibility of such damages, losses or expenses. It is the customer's responsibility to make lawful use of the products FW3 Ltd supplies.



Westhill Bikes Warranty Register Now Through Facebook

The easiest way to register your new bike is through Facebook. Simply visit our page **www.fb.com/westhillbikes** or scan the QR code below with your mobile phone and message us with this information:

Your Name:

Your Email Address:

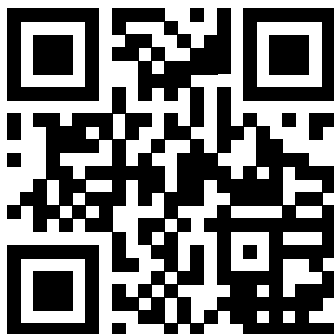
Your Postal Address:

Bike Model & Colour:

Purchase Date:

Where You Purchased From:

Be sure to register right away so your bike is covered!



Don't have Facebook? Email the above details to enquiries@westhillbikes.com to activate your Warranty.

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Attention

- Do not operate this electric bike without fully reading and understanding its operation and limitations.
- Before riding each time ensure that all parts are in good order. If you have any questions or concerns, please contact us via Facebook chat or by email.
- Ensure you observe traffic rules and regulations when using this electric bike.
- Passengers cannot be carried.
- When riding in rain, snow or slippery conditions reduce your speed and increase the distance between yourself and other vehicles.
- We advise against performing maintenance operations that involve removing parts or components. If this is necessary, please contact us for guidance.
- Do not ride through deep puddles. Water could enter the hub motor, causing short circuits and irreparable damage.
- Do not allow individuals who are unfamiliar with the features and functions of this e-bike to operate it without proper instruction.
- Do not modify the e-bike by yourself.

1. Check Before Use

- Is the tyre pressure [3.4 - 5.1 bar] correct?
- Are the breaks working correctly?
- Are the batteries sufficiently charged?
- Is the handlebar attachment and saddle post correctly inserted and tightened?
- Are the wheel hub mounting nuts correctly tightened?
- Is the bell working correctly?

2. Product Information

2.1 Product Performance

This e-bike is fitted with a high quality brushless motor, intelligent operating system, high quality lithium battery, freewheel, power display unit and electric cut off when braking.

2.2 Product Specifications

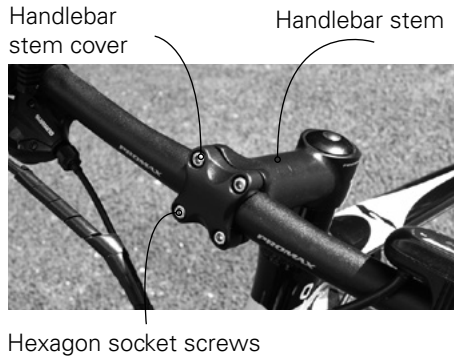
Bike Specifications	Model	Terrain	Motor Specifications	Type	Brushless
	Dimensions	1800 x 650 x 1070 mm		Rated Power	250 w
	Wheel Diameter	660 mm		Un-Load RPM	245 ± 10 rpm
	Wheelbase	1120 mm		Rated Voltage	36 v
	Rated Load	110kg / 17st		Max Torque	45 N.m
	Max Rider Weight	110kg / 17st		Speed Range	0~25 Km/h
	Range Per Charge	40-100 miles	Controller	Under Voltage Value	31.5 ± 0.5 v
	Weight	23 kg		Over Current Value	15±0.5 A
Battery Spec	Type	Lithium-ion	Charger	Current	AC110 v-240 v 50-60 hZ
	Capacity	10 Ah		Output	DC41.7 v
	Rated Voltage	36 v	Packing	1450 x 270 x 770 mm	

Note: Maximum travel distance on a fully charged battery is measured at a condition of 20°C, no wind, flat road, total bike weight 75Kg, and 25km/h speed. This will vary according to load, road conditions, wind direction, temperature, braking and restarts, tyre pressure and prompt battery charging. To obtain the maximum travel distance, we suggest you check all factors within your control, including overloading, driving style, tyre pressure and timely battery charging.

3. Assembly & Adjustments

3.1 Assembling And Adjusting The Handlebar

- Place the handlebar onto the handlebar stem, place on the cover, and fix with the four screws provided. The tighten torque should not be less than 18 Nm.



- To align the handlebars, face your bike and hold the front wheel between your legs. Turn the handlebars so that they are perpendicular to the front wheel.



- Tighten the screw that fixes the handlebar attachment to the frame. The tightening torque should be no less than 18 Nm.



3.2 Adjusting The Saddle

- The saddle post must be inserted to at least the circular safety mark engraved on the tube (shown below).
- An ideal saddle height is when the knee is at a soft bend when you are sat on the saddle with your foot on the pedal at it's lowest point. Adjust the saddle to this height.
- The saddle should be parallel to the ground for maximum comfort
- The tightening torque for the saddle mounting screw and saddle post mounting screw should not be less than 18 Nm.



3.3 Adjusting The Wheels

- Tighten the screws to make sure the front and back wheels are fixed to the front fork and frame.
- Recommended tightening torques are as follows:
 - Front wheel hub: 18 Nm
 - Rear wheel hub: 30 Nm

3.4 Adjusting And Maintaining The Brakes

- Make sure the rotors are true. Spin the wheel and, sighting against the pads, watch for wobbles. If the rotor clears the pads and calliper, the bend probably isn't worth straightening. If you spot a warp, try to straighten it by clamping a clean adjustable wrench along the rotor and bending toward true. Make sure everything that touches the rotor is clean. You don't want any grease there to reduce the grip.
- If your brakes squeal, something is probably loose. Check all bolts holding the rotor on, as well as the calliper bolts and adapter bolts (if your bike is fitted with one).
- If everything's snug, the rotor and pads should be cleaned.
- If one lever pulls back farther than the other, try to equal out the travel by dialing the lever limit screws in or out. If that doesn't work, it's time for a shop to bleed your hydraulic fluid.
- Inspect hydraulic system for leaks. Check the levers, callipers and all along the housing. Take a leaky system to a professional or contact us.

3.5 Gears

3.5.1 Gear Display

Gear display



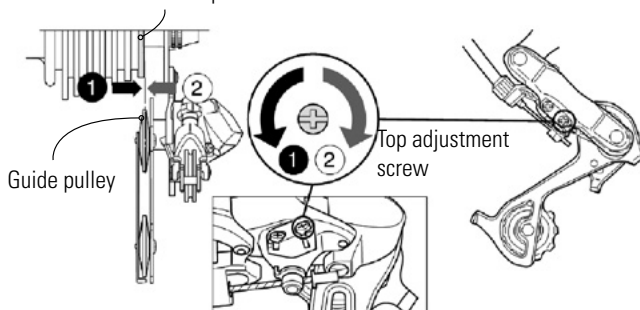
Lower gears

Higher gears

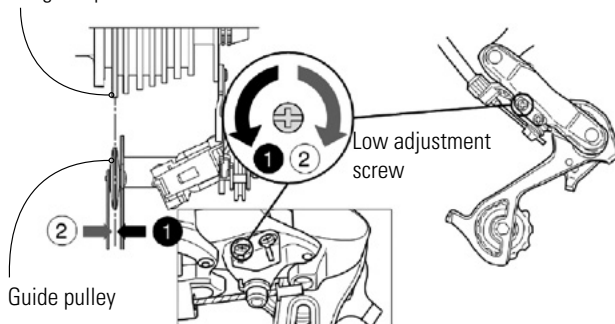
3.5.2 Adjusting The Rear Derailleur

- Adjust the lower bolt to make the guide wheel move to the free-wheel; align the centre of the guide wheel and the outer line of the smallest sprocket.
- Turning the front chain-wheel, operate the gear lever to shift to the lowest gear, then tighten the derailleur cable and fix it by the derailleur cable nut.
- Turn the low adjustment screw so that the guide pulley moves to a position directly below the largest sprocket.
- Tighten the adjust nut when the rear gear is lower than the gear shift shows; loosen the adjust nut when the rear gear is upper than the gear shift shows. It is OK when the gear changes correctly and smoothly.

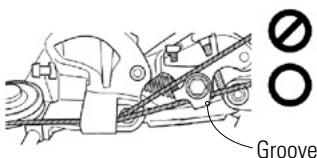
Outer line of smallest sprocket



Largest sprocket



Note: Be sure that the cable is securely in the groove.



4 The Battery

4.1 Input The Battery

- ⚠ Make sure the battery terminals are dry before inserting the battery.
- Lift up the saddle using the lever underneath.

Seat lever

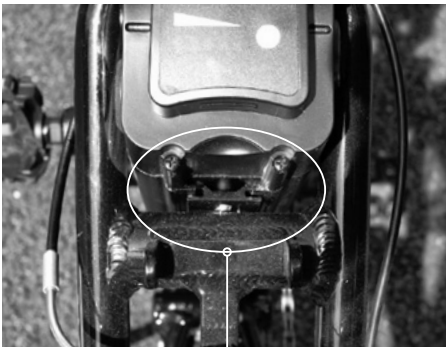


Battery guide board



Battery terminals

- Slide in the battery, ensuring that the battery guide board slots into the grooves of the battery.
- Lock the battery into place using the lock at the base of the battery, turning the key clockwise.



Battery slotting into the battery guide



4.2 Charging The Battery

- Connect the battery to the charger; ensure the output terminal of the charger and the input terminal of the battery are firmly connected.
- Plug the charger into the wall outlet. The LED on the battery charger will illuminate RED when charging. The LED will change to GREEN when the battery is fully charged.
- When the battery is fully charged, disconnect the charger from the wall outlet before disconnecting the charger from the battery.
- Charge the battery for 12 hours for the first 3 times you use it.
- Be sure to use the charger supplied together with the battery, use of other chargers will invalidate the warranty.

4.3 Battery And Charger Maintenance

- If the battery needs to be stored for an extended period, it should be kept at around 50% state of charge (or charge the battery for 2-3 hours if totally flat) and should be placed in a dry and ventilated area. The battery should be charged 2-3 hours every two months.
- The battery and charger should be kept in a clean, dry and ventilated area, avoid contact with corrosive substances and keep away from excessive heat and open flames.
- Storage conditions for the battery: temperature -20~35°C, relative humidity: 5~65%RH
- The charger should be disconnected from the battery when be kept in storage.

4.4 Battery And Charger Precautions

4.4.1 Battery

- Never short circuit and discharge or charge terminals of the battery.
- Keep the battery away from fire & excessive heat. Never put the battery into fire.
- To avoid damage to the battery, never subject it to intense physical shock, severe vibration or impact.
- Protect the battery from water and moisture. Protect the discharge and charge terminals of the battery from rain or water logging.
- Operating temperature range when charge: 0~45°C
- Operating temperature range when discharged: -20~45°C
- Humidity whilst battery is in a working state: ≤80% RH
- Keep the battery away from children.
- When the battery is not in use for an extended period of time, remove the battery

from the bike for storage.

- If you have any questions about this battery or its usage, please contact us through Facebook or email.
- Never disassemble the battery.

4.4.2 Charger

- Charge the battery after you buy this e-bike or the power is low.
- Make sure the charger is at least 1M away from computers, TV's, fridge, washing machine and other electric appliances while charging.
- Use only the charger supplied with this e-bike.
- Only use the charger in a clean and dry place, free from smoke, dust and moisture.
- When the battery is fully charged, disconnect the plug from the wall first and then disconnect the battery.
- Charge out of the reach of children.
- Never disassemble or refit the charger.
- Never put anything on the charger.
- Do not disconnect the battery output while charging.
- Do not switch on the e-bike while charging.

5 How To Use The Bike Controls

⚠ Start slowly and speed up gradually.

⚠ The power will automatically cut out if the e-bike overloads and automatically cut back in after a short period if the e-bike is ridden normally.

⚠ Try to avoid knocking and bumping the screen and control panel.

⚠ Avoid direct contact with water.

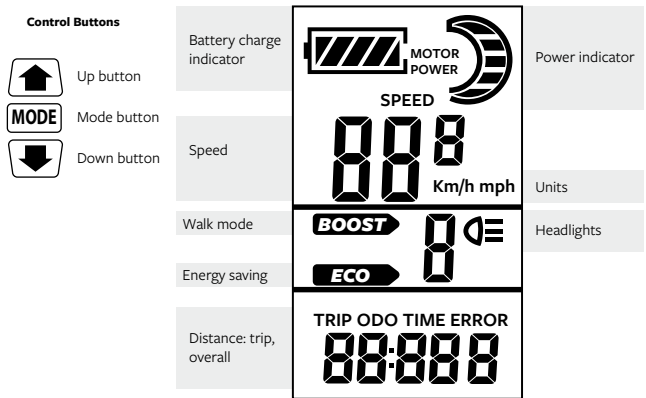
⚠ If your control panel does malfunction please let us know straight away.

5.1 Control Screen Installation

Attach the display screen to the bike handlebars. This display is designed to straddle the centre stem of the handlebar. Tighten using the screws underneath.



5.2 Control Panel - At A Glance



5.3 Turning On/Off

Turn the battery on by placing the key in the lock and turning clockwise. Then turn on the bike by pressing and holding the mode **MODE** button. You should see the screen power up when turned on. Press and hold the mode **MODE** button to turn the bike and display off.

Tip: Charge your bike for at least 12 hours before you ride it for the first time and the next two times you charge it.



Tip: if the screen does not turn on check the electrical connections are not loose and that the battery has charge.

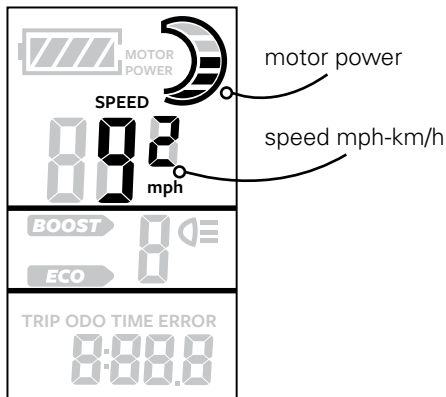
5.4 Battery Charge Indicator

In the top left of the display screen there is a battery charge indicator. When there is only one flashing bar in the battery this means that the charge is very low and should be recharged immediately.




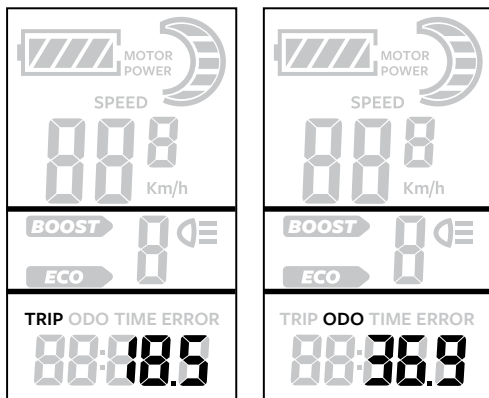
5.5 Increasing/Decreasing Speed

To increase speed press the up button . To decrease speed press the down button . The lowest speed is 0, the highest speed is 5. The stating speed will always be at 1. Start slowly and speed up gradually. Make sure your speed is appropriate to the riding conditions (weather, road surface, traffic/pedestrians etc).





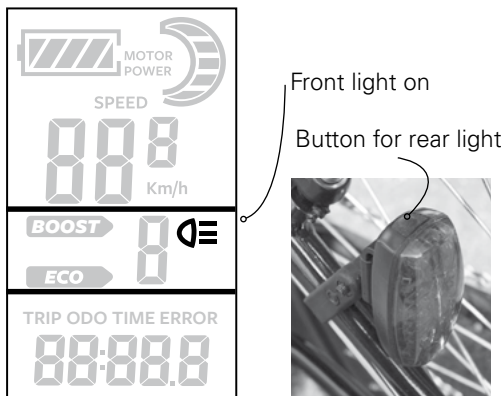
5.6 Showing The Mileage

Press the mode button  to cycle through the mileage indicator in the following order: Single trip miles (TRIP) Total miles (ODO).





5.7 Turning On/Off the Headlights & Screen Backlight

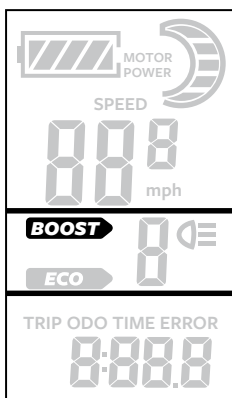
The headlight and screen backlight turn on using the same buttons, to make sure you can see the screen at night! To turn on the headlight and screen backlight press both up and mode  + **MODE** at the same time for three seconds. To turn off press and hold up and mode  + **MODE** at the same time for three seconds. The rear light is operated by a button mounted onto the rear light.



5.8 Walk Mode

Stand at the side of the bike with both hands on the handlebars and make sure the way in front of you is clear. Press and hold the down button  to enable cruise mode for the ebike. This will power the bike at a steady 6 km/h allowing you to walk alongside the bike without needing to push. Release the down button  when you want the bike to stop.

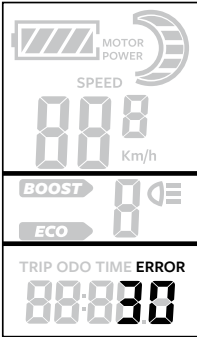
⚠ DO NOT use walk mode when riding the bike.



5.9 Error Codes

If there is an error in the electrical function of the bike an error message will be displayed on the control screen along with an error code. See the table below for error code definitions:

⚠ The bike will not run if there is an error code. Please contact us immediately



Error Code	Definition
21	Current abnormality
22	Throttle abnormality
23	Missing phase on motor
24	Motor hall signal abnormality
25	Brake power-off sensor abnormality
30	Controller/instrument communication abnormality

5.10 Changing The Settings

After power up press both up and down buttons + for 2.5 seconds to enter the settings menu. Press the mode button **MODE** briefly to scroll through the settings:

Wheel Size: press up or down to select the correct wheel size.

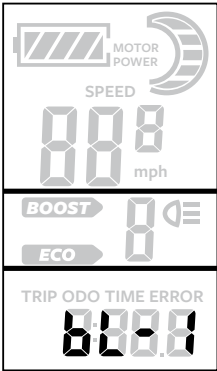
This ensures speed and mileage are accurate. Default wheel size 47 – 622. Press the mode button **MODE** to confirm and select the next setting.

Backlight Brightness: Press the up button to increase the brightness of the backlights and the down arrow to decrease the brightness. 3 is the maximum and 1 is the minimum.

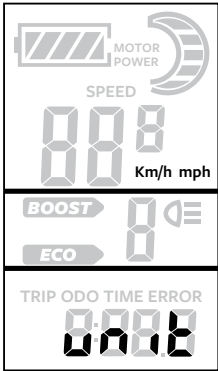
Default brightness is set to level 1. Press the mode button **MODE** to confirm and move to next setting.

Change Between Imperial & Metric System: Press up or down to switch between mph and km/h. Press the mode button **MODE** to select and move to the next setting.

To exit the setting menu press & hold the mode button **MODE** for three seconds.



Blacklight Brightness 1-3



Unit Select

5.11 Caution Whilst Parked

- If leaving the bike unaccompanied for any period of time turn off and lock the battery box, taking the key with you.

6 Bicycle Inspection And Care

6.1 Regular Cleaning

- Remove the battery box from the e-bike before carrying out regular cleaning.
- Wipe any dirty painted or plastic parts with a soft, damp cloth and a neutral cleaning solution. Carefully dry the parts with a soft, dry cloth to finish.
- **DO NOT** use water to clean the e-bike, as the electrical and electronic systems may get wet, resulting in personal injury or malfunction of the bicycle.
- **DO NOT** grease or use a greasy cloth to wipe down the electrical connectors, brake pads, wheels, tyres or plastic parts..
- **DO NOT** use a pressure washer as this can force water into the electrical components.

6.2 Regular Maintenance (Every 1-2 Months)

Always carry out the following checks:

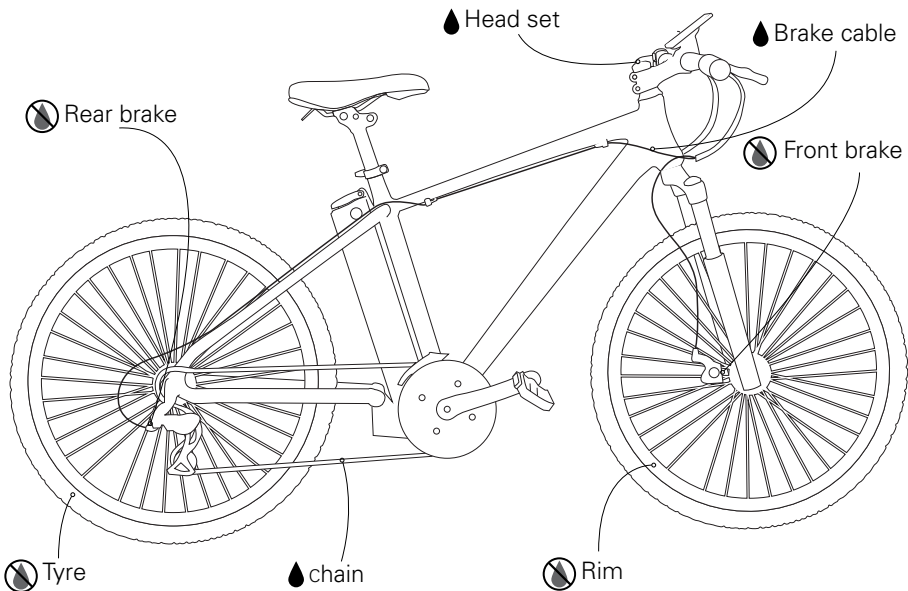
- Check handlebar attachment and saddle post are correctly inserted & tightened.
- Check the wheel hub mounting nuts are correctly tightened.
- Check the wheel rims are not cracked and that no spokes are loose or broken.
- Check the tyres are not worn or cut.
- Check the tyres are correctly inflated.
- Check the battery contacts on the frame are not dirty or oxidized.
- Check the battery is sufficiently charged.
- Check the front and rear lights are working correctly.
- Check the front and rear brakes brake effectively.
- Check cables are sufficiently greased, & that the brake pads are in good condition.
- Check frame welds are in good condition and are free from corrosion or oxidation

6.3 Lubricating The E-Bike

To maintain your e-bike in proper working order, be sure to carry out regular lubrication, as indicated in the following illustration:

- Use specific transmission lubricants for the chain, freewheel and gears every 1–2 months, or if the drive line is dry.
- Do not lubricate or grease the speed controller, brake pads or wheel rims

Parts that can be lubricated	Parts that should not be lubricated
Head set	Rear brake
Break cable	Front break
Chain	Rims
	Tyres



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THIS MANUAL SHOULD BE CONSIDERED A PERMANENT PART OF THE
ELECTRIC BICYCLE AND SHOULD REMAIN WITH IT IF RESOLD



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