



BERLIN

USER MANUAL

SAFETY

When operating the Berlin please make sure you adhere to the following:

- Always wear a helmet when riding the Berlin.
- Always check your mirrors and blind spots when operating the vehicle.
- Turn on headlights when in need of additional visibility.
- Make sure that your battery power is sufficient before you go out to ride.
- Additional passengers should always wear a helmet.
- Obey all laws of the road.
- Periodically charge the unit when not in use for long periods of time
- If you bring your charger avoid shaking / rattling charger while riding.
- **Do not over charge the battery by leaving the charger in the charging port. Once the battery is fully charged remove the charger immediately.**
- **Do not try to operate the unit while charging.**
- **Do not let anyone under the age of 16 years old operate this vehicle.**
- **Do not make sharp / abrupt turns at high speeds to avoid tipping.**
- **Do not operate under the influence of any use of drugs or alcohol**
- **Do not completely submerge the unit in water**
- **Do not operate in harsh weather conditions.**

**For any questions or concerns please call
1-800-649-9320 or visit www.daymak.com**



ABOUT DAYMAK

Daymak is one of Canada's largest Alternative Vehicle providers. We design, engineer, manufacture, import and repair everything from recreational dirt bikes, go-karts and electric golf cars to alternative transportation solutions such as e-bikes electric scooters.

Our electric bicycles represent an energy-efficient and eco-friendly alternative for people who need to get around the city. They greatly increase the practicality of bicycle transportation in urban centres. Costing only a few cents to charge, an e-bike can make city life more convenient and much less expensive.

While there are many new Green technologies that are still in their infancy, electric bicycles have been developing over the last 40 years or more. E-bike technology has been dramatically refined since the introduction of the first custom-conversion bicycles. Today, electric bicycles are a supremely reliable and affordable means of transportation.

Daymak is constantly developing new eco-friendly alternative transportation strategies, led by its own Research and Development department in Toronto, Canada. We are always improving our products. Our innovative in-house engineering and quality testing provide customers with many new kinds of reliable, eco-friendly vehicles, designed to help change the lives of our customers and the world.

Daymak warranties, services, and stocks parts for everything it sells. We support our products. Please feel free to visit our website. You'll find the latest in cool transportation solutions, support for the products you've purchased and contact information.



INTRODUCTION

E-BIKES

Using an electric bicycle is a great way to ride around town conveniently and economically. E- Bikes represent a natural progression in the development of urban transportation. Using only small amounts of electricity, e-bikes have the potential to radically reduce the amount of pollution in our cities. They are also very quiet, so they do not add to the high levels of noise pollution which we often take for granted. They are easy, and usually free to park. They are unobtrusive and highly practical additions to the urban landscape.

E-bikes are also inexpensive. They (currently) require no registration, no insurance, no licence and do not incur parking charges. Compared to internal combustion engines, the engines in electric vehicles have fewer moving parts and require far less maintenance. Your Daymak e-bike is the result of Daymak’s years of experience, the highly trained technical skills of our staff, and careful ongoing design work by our engineers. We hope you enjoy using this product and welcome any feedback that you may have.

NEW LAWS

Most provinces in Canada, most states in the U.S.A, the United Kingdom and many European countries have new laws that permit cyclists to use electric motors to assist the regular operation of bicycles. Please check with your provincial or state government to learn about your local laws.

LIABILITY

Daymak does not assume any liability for damages, loss of profits, or claims from third parties due to improper use of this product. Daymak does not assume any liability for damages due to problems with the product resulting from service by a third party that is not certified by Daymak.

The information in this guide may be subject to change without notice. For the latest information available, please contact your local Daymak dealer or visit our website. We have taken all possible measures to ensure the accuracy and completeness of the information in this guide. However, if you do find anything missing, incomplete or wrong, do not hesitate to contact us.



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PART DIAGRAMS

DIAGRAM 1: BERLIN

This diagram illustrates the various parts of your bicycle. Please note that many of these parts are not user-serviceable and should be repaired only by trained professionals. This is especially true of the electrical systems and the mechanical components.



- | | | |
|----------------|----------------------|-----------------|
| 1. Mirrors | 6. Foot Pegs | 11. Seat Lock |
| 2. Brakes | 7. Pedals | 12. Seat |
| 3. Display | 8. Center Kick Stand | 13. Charge Port |
| 4. Head lights | 9. Motor | 14. Throttle |
| 5. Tires | 10. Fender | 15. Ignition |



RIDING INSTRUCTIONS

This guide assumes that you already know how to ride a standard bicycle. Before you try to ride an electric bicycle, you should be very familiar with controlling and balancing a normal bicycle.

Caution

If you do not have cycling experience, an e-bike is too dangerous to ride. Do not begin learning to ride a bicycle using an e-bike.

IMPORTANT NOTES

- Ebikes are Fast! E-bikes are capable of traveling at higher speeds than many bicycle riders are accustomed to. Use caution at all times, especially when travelling in mixed traffic. Always take into account driving and traveling conditions.
- Obey the Law. Be sure to follow all provincial and city traffic laws. This includes obeying stop signs, checking carefully when turning, and riding defensively. An e-bike is a motorized vehicle, even though it is classed as a bicycle. You must follow the law.
- Stay Sober. Never ride your bicycle while intoxicated. An e-bike is capable of traveling faster than a normal bicycle, and you should always be in control of it.
- Share the Road. Be careful in mixed traffic. Let vehicles that are faster than you
- Overtake you and give ample room for vehicles travelling slower.



ITEMS TO CARRY WITH THE ELECTRIC BIKE

It is a good idea to carry the following items with you at all times when you ride your e-bike.

- The charger, to charge the bike in case the battery power runs out.
- 30 Amp Fuse, spares for the batteries, in case the fuses blow (if applicable).
- A lock, to secure your e-bike when you park it.
- A helmet, as required by safety laws.

INSPECTING YOUR ELECTRIC BIKE

Always inspect your e-bike before you ride it, to make sure its safety features are operating properly. Many accidents can be avoided with routine inspections. Once you are comfortable with your e-bike, you will be able to detect small changes in the way it feels. If anything changes between uses, make sure to have it properly examined. Also, be sure to listen for changes in the sounds your e-bike makes over time. Any mechanical or power issues may have effects on the sounds the bicycle makes.

HOLDING THE HANDLEBARS

As with a normal bicycle, place your fingers over the brake levers, using the palms of your hand and your thumbs to wrap around and under the handlegrips. Doing this allows you to activate the brakes easily, by squeezing your hand, in case you have to stop quickly. This is the safe way to control your electric bicycle.

TURNING YOUR E-BIKE ON AND OFF

To turn on your e-bike, insert the key into the “ignition”, located just below the dash board, and turn the key to the right. When your e-bike is activated, the power indicator will light and the battery charge indicator will jump, showing you how much power your e-bike has. To turn off the e-bike, simply turn the key to the left, and remove the key.



Warning

When you activate the e-bike, the electrical system becomes live. Do not try to affect changes to the E-Bike (such as removing the battery or repairing electrical components) while the E-Bike is activated. Turn the E-Bike off and remove the key before you attempt to access any of the electrical components. Also, the battery carries a significant electric charge and can injure people if not treated properly and with respect.

ACCELERATING AND DECELERATING

The throttle is found on the right-side hand grip on the handlebars. Turn rotate the grip counterclockwise (towards from you) to accelerate. To decelerate, release the grip (turn it away from you). Don't over-rotate the accelerator, as this could damage the battery and electrical components.

Warning

Do not activate the accelerator until you are seated on the bicycle and are ready to accelerate. The e-bike can easily escape from your control, possibly injuring you or others, and the e-bike may be damaged by being dropped.

STOPPING

Your e-bike has two sets of brakes, at the front and at the rear. The levers attached to the handlebars, on the left and right, activate the brakes. Pull the levers toward you to activate the brakes.

You can use both brakes to come to a stop more quickly, or you can use one of the brakes to come to a gentle stop, depending on your riding needs at the moment. When the brakes are activated, the power to the engine is automatically turned off, until you release the brakes. This allows you to stop safely.

SAFETY TIPS

- When you are traveling in wet weather, water may cause your brakes to function less efficiently because it reduces friction between the brake pads and the wheels.
- Take care to slow down and give yourself more room to stop or slow if necessary.
- It is a good idea to have your brakes and brake pads checked regularly. The brake pads will eventually wear down through friction, and after significant use will have to be replaced.
- Engage the rear brakes first before the front brakes to avoid flipping the unit.



SIGNALLING

THE HORN

The e-bike has a horn. The horn button is on the left handlebar. Simply press it to activate the horn.

TURNING SIGNAL LIGHTS

Your e-bike has turn signal lights. The turn signal activator is on the left handlebar. Push it left or right to activate it to indicate that you are turning in the appropriate direction.

LIGHTS

The headlight and tail light are useful features when you are riding at night or in dark areas. They radically improve your safety in mixed traffic. The lights on your e-bike consume some electricity. Keeping them on may reduce the maximum distance you can travel on one charge by about 5 %.

PEDALING

This e-bike is designed to be a motor-assisted bicycle. You can use the motor by itself, but ideally, you can work with the motor by pedaling. This increases the distance you can travel on your e-bike, because it assists the motor and reduces the amount of electricity you draw from the battery.

RIDING IN WET WEATHER

Your e-bike is designed to function in wet conditions, such as when it is raining. However, because the motor is on the rear wheel, it is easy to slip when moving at high speeds. If it is very wet, be sure to avoid high speeds. When you are traveling in wet weather, water may cause your brakes to function less effectively because it reduces friction between the brake pads and the wheels. Take care to slow down and give yourself more room to stop or slow if necessary.

THE MOTOR AND WATER

Your e-bike is not designed to be immersed in water. Always ensure that the water level does not go above the middle of the tire, to prevent water from getting inside the motor. Water in the motor can cause short-circuits and may damage the electrical systems in your e-bike.



RIDING IN COLD WEATHER

Your e-bike is designed to operate year-round. However, in very cold conditions or when there is a lot of snow or slush on the ground, it is possible for the motor in the e-bike to get wet or for the brakes to function less effectively, just as it can happen in wet weather. Below 10 degrees Celsius, the battery will not work as well as it would in warmer temperatures. While Lithium-Ion batteries perform better than Lead-Acid batteries in temperature extremes, both will experience reduced performance in cold temperatures.

Also, riding the e-bike in cold temperatures may require you to replace the battery sooner rather than later.

MAXIMUM LOAD

Do not exceed the maximum load capabilities of your e-bike. You can find the exact loading capacity listed in the technical specifications in this guide.

If you exceed the maximum load, the performance of the bike will suffer.

Exceeding the maximum load of your e-bike could cause damage to the shocks, to the mechanism and, ultimately, even to the frame. It could also cause your motor to work too aggressively, and may cause it to burn out.

DISCONNECTING THE CIRCUIT BREAKER

When the circuit breaker is disconnected, all power from the battery to the e-bike is blocked. This is useful if you are going to store your e-bike or if it is damaged and you wish to bring it to be serviced.

Note: The circuit breaker must be on for the alarm system to work. Do not leave the circuit breaker off in an unsafe location if you are worried about theft.

LONG-TERM STORAGE OF YOUR E-BIKE

If you are storing your bike for a long period, disconnect the circuit breaker. This is a safer way to store the electric bicycle, as it prevents accidental activation of the e-bike and makes it impossible to activate it even with the key.

Please see the section titled “The Battery” for instructions on battery maintenance while your e-bike is being stored.



THE BATTERY

This section details what you need to know about the battery that powers your e-bike. Always remember to treat your e-bike's electrical systems with respect.

BATTERY POWER

The dashboard has a battery charge indicator. When the e-bike is activated, the gauge will jump and indicate the currently available battery power. If the power has dropped significantly, you should charge your e-bike.

DISTANCE AND POWER

Your battery has the capacity to carry you anywhere from 35+ km before it must be recharged. The ability of your battery to power your bicycle depends on many variables. These variables include the weight of the rider, the prevailing wind resistance, the rider's driving habits, the presence of steep hills and inclines, and other issues such as proper air pressure in the tires.

SAVING POWER

If you are traveling long distances, you can save a lot of electricity by using better driving habits:

- **Coasting:** When going downhill or over long, flat road surfaces, try using your e-bike's momentum and allow it to coast, without drawing power from the motor.
- **Stopping and Starting:** Try to avoid stop and go movements. The motor draws more power when starting from a full stop.
- **Weight:** Remove unnecessary weight from the bike. This reduces the amount of power the motor must draw.
- **Air Pressure:** Make sure your tires have the proper air pressure. Proper pressure reduces drag on the tires and radically increases the efficiency of any vehicle.
- **Head and Tail Lights:** Turn off the lights to conserve power, if it is safe to do so. The lights will reduce the distance you can travel by about 5%.
- **Peddaling:** When accelerating from a full stop, you might want to try pedaling to help acceleration.



UNDERSTANDING YOUR VOLTAGE

Electric scooters primary power is displayed on your unit as a voltage. This number in short shows how powerful your unit is, and as it dips down when the unit will no longer be able to perform. Depending on your unit’s voltage and battery type (Lithium vs Lead Acid) will effect the range of voltage between what is fully charged and when it exceeds the low voltage threshold.

LOW VOLTAGE THRESHOLD

Your unit will try to protect the battery by preventing the motor from drawing power below the Low Voltage Threshold. By doing this it will significantly increase the life expectancy of your unit. If you find that your motor starts cutting off at a certain speed or not engaging at all it may be because your voltage is dropping past the threshold point and needs to be charged.

VOLTAGE CHART

VOLTAGE	LEAD ACID		LITHIUM ION	
	FULL CHARGE	LOW VOLTAGE	FULL CHARGE	LOW VOLTAGE
48V	53V	42V	54.6V / 58.8V 20S 21S	37V / 40V 20S 21S
60V	67V	53V	67.2 / 71.4V 16S 17S	45V / 48V 16S 21S
72V	80V	63V	84V / 88.2V 20S 21S	56V / 59V 20S 21S
84V	94V	74V	100.8V 24S	68V 24S

LITHIUM FULL/LOW VOLTAGE READING

Depending on the way your lithium battery’s composition will impact what the low voltage and full charge reading should be. Underneath each reading on the above chart shows a number and a “S” this represents how many series are in your battery pack. To know the exact series of your battery contact your local Daymak dealer.



CHARGING YOUR E-BIKE

Charging your e-bike is a simple process. You require the following:

- The charger that came with your e-bike.
- A 110V household electrical outlet.

Charger Warning

Only use the chargers that were supplied with your e-bike. Using chargers that do not have specifications identical to those which came with the e-bike could irreparably damage your e-bike's battery and electrical systems, and may cause injury.

To charge your e-bike, follow these steps:

1. Turn off the e-bike and remove the key from the "ignition."
2. Plug the female end of the charger cable into the charging slot on the e-bike.
3. Plug the male end of the charger power cable into your wall socket. This should be a 110v household electricity supply. You can also use a portable generator, if necessary, but make sure it provides 110V current.
4. Allow the e-bike's battery to charge for the appropriate amount of time (6-12 hours).
5. Disconnect the charger when the LED light on the charger is green. The batteries have been fully charged.

If your charger's LED status light does not change from red to green over an extended period of time, for perhaps more than 14 hours, and the battery is very hot, the battery or charger may need replacing. Stop charging and bring both to your Daymak dealer immediately. Do not charge the battery.



CHARGING THE BERLIN

The Berlin comes with either a lead acid or lithium Ion battery pack. To charge the Berlin directly in the unit look for the charge port on the center colum of where you sit of the bike. It will be covered with a flap that you must lift up and then plug the female end into that port.



Once the bike is charging the charger will glow red. When the unit is fully charged the charger will glow green and then your bike is ready to go.

Warning

Do not leave the Berlin charging for long periods of time after it is fully charged. Once the bike is charged unplug it ASAP.

ACCESSING YOUR CIRCUIT BREAKER

To prevent surges, we have installed a circuit breaker. If you are unable to get power to your bike more than likely your circuit breaker has been triggered and needs to be switched to the on position.

To do this:

Look underneath the seat by accessing the seat lock.
(See Seat lock section for more info)



BATTERY CARE

Follow these suggestions to maintain your battery's optimal performance. If you do not follow these suggestions, your battery may lose its ability to maintain a charge and might have to be replaced sooner than would otherwise be necessary.

- **Charge it:** Charge your battery immediately after riding it.
- **Full Charge:** Do not allow the battery to run down completely and lie in storage without a charge. This significantly reduces the battery's lifespan and may cause damage.
- **Keep it Charged:** When being stored, charge the battery occasionally to make sure its power supply does not run down. Charging it once every 21 days should be sufficient.
- **Storage Conditions:** Store the battery on a flat, cool, dry surface. Do not allow the battery temperature to drop below 10 degrees Celsius for extended periods of time.

Warning

DO NOT place your Lead-Acid battery on concrete. Concrete drains the battery's power and will neutralize the lead-acid. Placing the battery on concrete for any length of time will likely result in the battery being drained of power and possibly losing its ability to store electricity.

COLD WEATHER AND YOUR BATTERY

Below 10 degrees Celsius, the battery will not work as well as it would in warmer temperatures. While Lithium-Ion batteries perform better than Lead-Acid batteries in temperature extremes, both will experience reduced performance in cold temperatures.

Also, repeatedly riding the e-bike in cold temperatures may cause your battery to have to be replaced sooner.

REPLACEMENT AND DISPOSAL

After approximately 300 charges, a lead-acid battery will need to be replaced. A lithium-ion battery will last approximately 1000 charges. When the battery has to be replaced, you will notice that your battery cannot carry as much of a charge as it could initially.

Contact your local Daymak dealer to purchase a new battery.

When replacing your battery, dispose of it at a proper municipal battery recycling facility. If none is available, please contact your local Daymak dealer.



OPERATION

RIGHT HANDLE BAR

1. Lights - The far right position is all lights off. The Middle Position is just running brake lights and far left position is all lights on.
2. Flasher - Press this to flash your headlights on and off quickly.
3. Speed Switch - Turn this to easily monitor your speed. Speed 1 - Slowest speed / Longest Range Speed 3 - Fastest Speed / Shortest Range
4. Throttle - Turn this towards you to engage the motor to go!



LEFT HANDLE BAR

1. High Beam / Low Beam - Press up to angle your lights high and press down to angle the lights down.
2. Turn Signals - Press this to the left to indicate turning to the left. Press this into the middle once the turn is complete.
3. Horn - Press this to honk the horn



SEAT LOCK

The Berlin comes with storage underneath the seat, where you can put your charger or other goods. To do this, find the lock on the side of the Berlin near the seat and put the key in to unlock it.



BATTERY LATCH

The yellow lever (2) is the battery latch compartment which unlocks the floor panel to access the batteries. These batteries are only to be removed by a trained Daymak professional.



KEYS

The Berlin comes with two sets of keys and two remotes. There are four buttons on the remote:

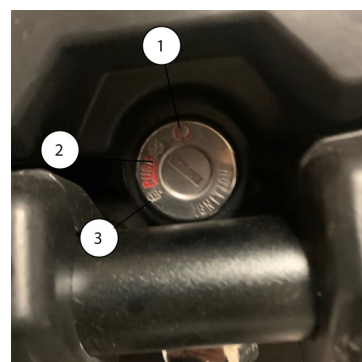
1. Set Alarm - This button will set the alarm. After pressing it wait for 5 seconds. Afterwards if someone moves the bike the alarm will sound.
2. Remove alarm - This will disengage the alarm. Use this before riding your bike. **Also disengages remote start*.
3. Remote Start - Press this twice to start the bike without using the keys. Press the remove alarm button (2) to disengage the remote start.



IGNITION

To turn on the Berlin you must engage the ignition by putting in the key and setting it to one of the 3 positions.

1. ON - This will turn on the unit
2. OFF - This will turn off the unit
3. Steering Lock - This will engage the steering lock (see below)



The Round part of the key must be facing up as seen below to be inserted into the key hole.

STEERING LOCK

To engage the steering lock: Turn the handlebars so that it is pointing to the left and then push the key in a bit further and turn the key counter clockwise. This feature will prevent the wheel from straightening out to deter theft. Reverse this process to disengage the steering lock.



DISPLAY

The Berlin display shows all the metrics you need when riding.

1. Speedometer - Shows how fast you are currently travelling
2. Voltage / Odometer / Trip Meter - Initially shows the voltage of the bike. Then Shows how far you have travelled in total, and then shows how far you've travelled since this unit has been turned on.
3. Battery Meter - Shows how much power you have left. All four bars means full power and one red bar means you need to be returning home.
4. Turn Signal Indicator - Shows if your turn signal is on or off.



The battery meter most accurately shows the power left when at cruising speed. Not when idle, starting, or climbing a steep incline.

CENTER KICKSTAND

The Berlin has a center kickstand that acts as a secure way to keep the unit up when not in use. To put it on the center kickstand. Put your foot on the foot pad and step down on it while pulling up from the rear of the unit.

To take it off the center kickstand put your foot in front of the kickstand and push the unit forward.



PEDALS

The Berlin comes with pedals in case you run out of power you can pedal the machine.

These pedals are foldable and can be pushed in and then folded up when not in use. These can also be snapped down to re-engage them.



BRAKES

On either handle bar you will find a brake lever as pictured on the right. Pull this lever towards the unit to engage them.

The left brake lever engages the rear brakes and should always be used first.

The right brake lever engages the front brakes and should be only use in conjunction with the rear brakes when needing to make an abrupt stop.

Note: Pressing the brakes will disengage the motor and must be released before the motor will engage again.



TRUNK

The Berlin comes with a rear storage trunk that you can safely lock your belongings in. To access it first remove the security clips on either side of the trunk, then insert the trunk key and turn it to open the case.



TECHNICAL DATA

This section provides you with the technical specifications for your e-bike.

THE MOTOR AND WHEEL ASSEMBLY

The Berlin has a 500 Watt magnetic DC brushless motor on the rear wheel hub. This type of motor has excellent low-end torque and high efficiency when working within its range. Note that while the motor is very quiet, it does produce some noise. Also attached to the rear hub are speed reduction gear and the speed free clutch.

THE FREEWHEEL

The wheels have freewheels, so the e-bike's drive train is not fixedly geared. This means that when coasting or traveling downhill, you can turn off the engine and your e-bike will continue to move without slowing. This feature will allow you to achieve faster speeds when coasting, moving downhill or moving with the wind. It will also allow you to conserve electrical power, because you will be able to let the motor rest while moving.

THE CONTROLLER

Daymak pioneered the development of intelligent component control in e-bikes. The Daymak Drive technology developed by Daymak is the brain of your e-bike. It allows your e-bike to achieve faster acceleration, to climb steeper hills, and to save energy.

The electronic controller is located under the seat assembly. This controller efficiently regulates the speed and electronic functions of the bicycle. It allows for stepless speed adjustment, shuts off the motor when the brakes are activated, has low voltage protection and has fuses to prevent excess current from damaging the e-bike's systems. This can all be regulated by Bluetooth app.

THE BRAKES

BRAKES

The brakes on your e-bike are disc-brakes, like those found on gas scooters and motorcycles. They generally provide for very fine stopping and control. This is a very tested and well-designed technology, but even so, the brakes will require servicing from time to time, and may have to be adjusted for tension.

Unlike normal friction-grip bicycle brakes, which clamp down from the outside, the drum brakes clamp from the inside. When the brakes are activated, tension increases and the clamps engage. This is a very effective and reliable way to stop a vehicle.



VEHICLE IDENTIFICATION NUMBER (VIN)

Your unit comes with a Vehicle Identification Number. You should write this down and keep it somewhere safe in case of theft of your unit. This is also required for registering your warranty on the warranty section of Daymak.com. To find the VIN on your Berlin look on the center steering column. You will find a plastic cover marked VIN. Using a flat screwdriver or similar item pry the plastic off to reveal the VIN.



MAINTENANCE AND TROUBLESHOOTING

This section outlines problems you may have and solutions you may be able to use.

Many of the parts in this product are not user-serviceable and should be repaired by trained professionals. This is especially true of the electrical systems and the mechanical components. Alteration of these components voids the warranty.

TIRE PRESSURE

Maintain the air pressure in your tires at the appropriate level. If the air pressure is too low, your e-bike's performance will suffer and it will become damaged more easily.

Cold weather and lower temperatures will cause the air pressure in your tires to drop, and warmer weather will cause it to increase, even if there are no leaks in the tire tube. To replace the air in your tires, follow this procedure:

1. Identify the required pressure by examining the text along the side of the tire rim. This text should indicate the recommended pressure for your tire.
2. Locate the air valve on the inner surface of the tire rim.
3. Remove the valve cap and place in a secure location.
4. Place the nozzle end of an air pump (hand-power or mechanical) over the valve.
5. Pump up the air in the tire, being careful not to let the pressure go above the level prescribed on the side of the tire wall.
6. Remove the pump nozzle from the air valve without allowing much air to escape from the tire.
7. Replace the valve cap on the air valve.

Maintaining the proper air pressure will allow you to travel much further on a single charge, because the motor will not have to work as hard to move the e-bike.



REPLACING FLAT TIRES

Replacing flat tire tubes is a more complicated and labour-intensive process with e-bikes than it is with regular bicycles. It requires proper tools, more skill and more patience. The front wheel is easier to service when changing a flat tire than the rear wheel, as the rear wheel is connected to the hub motor and other mechanical parts.

Unless you are very familiar with the mechanical components of the rear motor, attempting to change a flat rear tire may cause serious problems. Please contact your Daymak dealer for specific instructions on how to remove your wheel and tires safely, and how to replace the tubes. It may be easier – and safer - to have the tubes replaced by your Daymak dealer.

THE MOTOR

Do not service the motor yourself. Bring the e-bike to your Daymak dealer for service. The motor in your e-bike is a highly complex and fine-tuned mechanism. Repairing it requires significant expertise. **We suggest maintenance every 100 running hours or so.**

THE CHAIN

Ensure that the chain on your e-bike is well-oiled and lubricated. It is an important part of your e-bike. As with any bicycle, it needs to be maintained if it is to function.

SHOCK ABSORBERS AND COMFORT

If your riding experience feels bumpier than usual, and you suspect that your shock absorbers are experiencing difficulties, check the air pressure in your tires. If the air pressure is too low, this may be the reason you feel less comfortable. It may have nothing to do with your shock absorbers. **If the problem persists, take your e-bike to your Daymak dealer for servicing.**

BRINGING IN YOUR E-BIKE FOR SERVICE

Do not attempt to service the electronic or mechanical parts of your e-bike unless you are absolutely sure of what you are doing and have a solid understanding of electrical and mechanical equipment. If your e-bike is not performing properly, disconnect the circuit breaker and bring the e-bike to your local Daymak dealer. **Do not store the e-bike without disconnecting the circuit breaker.**

Liability

Daymak will not be held responsible for damage or injuries resulting from errors resulting from improperly serviced parts.



EBIKE MAINTENANCE

CLEANING

Cleaning is extremely important this will ensure your e-bike will serve you for a long time. In the long run, it will save you money and a lot of time waiting for the bike to be repaired. You should clean your ebike weekly.

Do not use aggressive power jets or water sprays when washing the ebike and keep water off the battery as much as you can. Clean gently but thoroughly and make sure that all the outer casing of the electric parts are dry and clean.

Remove any dirt, debris, sand, mud, grit, grime that got caught on the bike and dry it off.

While cleaning, it is a good opportunity to look closely for a worn, loose, cracked, rust, teared or damaged parts. Buckled paint can also be a hint for some parts that need closer inspection.

LUBRICATING

It is also recommended to lubricate the chain, levers, derailleur, cables, etc. A clean, lubricated e-bike tends to be faster, smoother and quieter. It's like having a little extra push for free.

Apply the lubricant to the different parts and let it sit a few minutes and then wipe off the excess lubricant with a rag. After a while, clean the different parts with a degreaser to remove any excess dirt that has been collected.

WEATHER

Don't leave the bike out in the rain or snow.

Store it somewhere dry and out of direct sunlight. Overheating the batteries, for example, can cause problems.

Do not open up casings, chargers, etc as you are unlikely to be able to reseal them effectively afterward, making them more susceptible to water damage and other extreme weather conditions.

Batteries should be removed from the ebike if not used and charged once a month regardless of usage.



SCHEDULE

The frequency of maintenance depends on how much you ride and under which conditions. Recreational riders needs far less maintenance then off-road riders. The harder you ride, the more you have to take care of your bike if you want it to last. There are various time intervals for proper maintenance. Quick maintenance should be done before & after every ride.

Time after purchase	Action Suggested
Everytime before you ride The 60 second check	Check tire p ressure, check brakes t hat they w ork, check lights, c heck bolts (make s ure everything i s tight), c heck battery gauge. D o not r ide the ebike unless everything is functional and proper.
30 days (every month)	Completely clean the bike, including the dust on the motor and under t he s eat. Check for any abnormal wear and tear or alignment problems.
90 days (every 3 months)	Inspect frame and fork for paint cracks or bulges that may indicate f rame o r part damage; p ay p articular attention to all frame joints. Check wear and tear on tires. Check range of battery.
180 days (every 6 months)	Inspect all components of t he ebike. Check that connections are nice and tight. Look inside where you controller is and clean in detail. Check that all plugs. Go over every bolt and nut in your ebike.
360 days (every 12 months)	Bring ebike f or c omplete t une-up. Varying on t he ebike t he ebike s hop s hould complete a b attery discharge, t ires s hould be c hanged depending on wear and tear. All connections should be checked for rust and l ooseness. A ll c omponents should be checked including charger, ignition and gauges.



SPECIFICATIONS

Name	Berlin
Motor	500W
Voltage	60V
Amp Hour	20AH
Watt Hours	1200WH
Battery Life	300 - 400 cycles
Battery	Lead Acid
Removable Battery	Only During Replacement
Charger	60V 2.5A 110V
Charge Time	6 - 8 Hours
Lights	LED
Max Load	330 lbs.
Assembled Weight	250 lbs.
Assembled Length	70"
Assembled Width	30"
Assembled Height	46"
Seat Height	78 lbs.
Seat Width	13"
Seat Length	24"
Boxed Weight	N/A
Boxed Length	N/A
Boxed Width	N/A
Box Height	N/A
Range	Up to 35 km
Speed	32 km/h
Climbing Incline	20 degrees
Front Wheel	90 / 90 - 12
Rear Wheel	3.5-10
Gauges	Battery / Speedometer / Odometer
Ground Clearance	8"
Wheel Base	52
Battery Weight	Only During Replacement
Rear Brakes	Hydraulic Disc



Name	Berlin
Front Brakes	Hydraulic Disc
Ignition	Key Ignition / Remote Start
Front Shocks	5" of Travel
Rear Shocks	Dual Gas Coil
Controller	Standard
Pedal Assist	N/A
Speed Levels	3 Speeds
Throttle	Full Twist
Cruise Control	N/A
Display	Back Lit LED
Frame Size	N/A
Rear / Basket Storage	Yes
Under Seat Storage	Yes
Rear / Basket Storage Volume	2880 cubic inch
Under Seat / Glove Storage	1
MP3	1386 cubic inch
Occupancy	2
Alarm	Yes
Steering Lock	Yes
Center Kickstand	Yes
Foldable	No
Folded Dimenison	N/A



THANK YOU FOR CHOOSING DAYMAK

