



Electric Bicycle Owner's Manual

eBliss Global

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Electric Bicycle Owner's Manual eBliss Edition, 2026

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eBliss electric bicycles are designed to meet applicable safety standards, including EN ISO 4210, 16 CFR 1512, and EN 15194, where required.



WARNING: This product can expose you to chemicals including lead, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

IMPORTANT:

This manual contains important safety, performance and service information. Read it before you take the first ride on your new electric bicycle (eBike), and keep it for reference.

Certain safety information applies throughout the manual and may appear in more than one section for emphasis. Do not skip sections, even if you are familiar with bicycles.

HOW TO USE THIS MANUAL






This manual is organized to help you ride safely, understand your eBike's operation, and know when to stop riding and seek service.

- Sections marked **WARNING** describe situations that can result in serious injury, death, or property damage if not followed.
- Sections marked **CAUTION** describe situations that may result in damage to your eBike or its components.
- Instructions and notes explain proper use, adjustment, and care.
- Certain components or accessories (such as helmets or lights) may include their own safety or operating information. Review and retain any documentation provided with those products.
- If you have questions about installation, compatibility, or safe operation, consult your authorized eBliss retailer.
- Revisit maintenance and service sections periodically, especially before seasonal changes or long rides.
- For information regarding initial assembly, required tools, and setup prior to first use, see Appendix E: "Initial Assembly and Setup"

NOTE: This manual is not intended as a comprehensive use, service, repair or maintenance manual. Please see your authorized retailer for all service, repairs or maintenance. Your authorized retailer may also be able to refer you to classes, clinics or books on bicycle use, service, repair or maintenance.

GENERAL WARNING

Like any sport, bicycling involves risk of injury and damage. By choosing to ride an eBike, you assume responsibility for that risk, so you need to know and practice the rules of safe and responsible riding and proper use and maintenance. Proper use and maintenance of your eBike reduces risk of injury. This Manual contains many “Warnings” and “Cautions” concerning the consequences of failure to maintain or inspect your eBike and of failure to follow safe cycling practices.

- The combination of the safety alert symbol  and the word **WARNING** indicates a potentially hazardous situation which, if not avoided, could result in serious injury or death.
- The combination of the fire hazard alert symbol  and the word **WARNING** indicates a potentially hazardous situation which, if not avoided, could cause a sudden and severe fire, which could result in serious injury or death.
- The combination of the trip hazard alert symbol  and the word **WARNING** indicates a potentially hazardous situation which, if not avoided, could result in serious injury or death.
- The combination of the safety alert symbol  and the word **CAUTION** indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury, or is an alert against unsafe practices.
- The combination of the hot surface alert symbol  and the word **CAUTION** indicates a potentially hazardous situation which, if not avoided, could result in burns.

- The word **CAUTION** used without the safety alert symbol indicates a situation which, if not avoided, could result in serious damage to the eBike or the voiding of your warranty.

Many of the Warnings and Cautions say, “You may lose control and fall”.

Because any fall can result in serious injury or even death, we do not always repeat the warning of possible injury or death.

Because it is impossible to anticipate every situation or condition that can occur while riding, this Manual makes no representation about the safe use of the eBike under all conditions. There are risks associated with the use of any eBike which cannot be predicted or avoided, and which are the sole responsibility of the rider.

This Owner’s Manual includes both core safety guidance and reference information intended to support safe operation, maintenance, and long-term use of your eBike.

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1. INTRODUCTION

IMPORTANT: We strongly urge you to read this Manual in its entirety before your first ride. This Manual provides instructions and safety information for eBliss electric bicycles intended for properly trained riders 16 years of age and older. An eBike is a bicycle or tricycle that may be powered by the rider AND a drive system, which includes an electric motor, battery, controls, sensors, connective wiring and typically one or more displays.

In the United States, eBikes have drive systems of less than 750 watts and a top assisted speed of not more than 28 mph/45 km/h. In other markets, eBike (or pedelec) drive systems may be limited to 250 watts and pedal-assisted speed of no more than 15 mph/25 km/h. ***Please note that not all eBikes have all of the features described in this Manual. Ask your authorized retailer to point out the features of your eBike.***

An eBike has many of the mechanical features of an unpowered bicycle, with the addition of an electrical drive system. This manual addresses both the mechanical and electrical aspects of eBikes, and the user needs to understand both aspects of their eBike to use it safely.



WARNING: Ownership, operation, charging and maintenance of an eBike involve certain risks and hazards, which can be minimized by following safe practices addressed in this Manual. Your knowledge of and adherence to those practices are essential to your safety, the safety of others, and the protection of property, including your eBike.



Carefully read the information in this Manual and the model-specific manuals included with your eBike, in order to learn how to properly operate and maintain your eBike, as well as avoid damage to your eBike. Proper and safe operation of your eBike is your responsibility.

2. SAFETY MUST ALWAYS BE FIRST



WARNING: Read all instructions and warnings in this Manual before operating or charging your eBike. Failure to read and follow the instructions and warnings in this Manual may result in electric shock, fire, or a crash resulting in serious personal injury or death.



WARNING: It is not recommended to ride an eBike if the rider is too young to do so safely, or has any mental or physical impairments (seizures or any impairments related to cognitive or physical, vision, hearing or speaking) or other limitations that may prevent the safe operation of the eBike. Parents and guardians should carefully review Page 20, Section 4: “eBikes and Children: Attention Parents” of this Manual before allowing any minor child to operate an eBike. If unsure, consult your physician.



WARNING: Never loan your eBike to another person or let another person operate your eBike unless they are familiar with the instructions and warnings in this Manual competent to operate an eBike. Allowing a person to operate an eBike who lacks the knowledge or ability to safely do so may result in electric shock, fire or a crash, resulting in serious personal injury or death.

A. Riding Safety

Riding an electric bicycle can be a safe and enjoyable way to travel and explore. As with any bicycle activity, safe riding depends on good judgment, awareness, and proper equipment. eBikes accelerate faster, are heavier, and can reach higher speeds than non-assisted bicycles, which can affect handling and stopping distance. Ride within your abilities, ride predictably, and follow all applicable traffic laws.

For detailed guidance, including mechanical safety checks, riding in traffic, night riding, wet-weather riding, off-road safety, and prohibited riding behaviors, see Page 68, Section 7: “Safely Operating Your eBike.”

How Is an eBike Different from a Bicycle?

The addition of a motor and electric drive system changes how an eBike accelerates, handles, and stops. eBikes are generally heavier than conventional bicycles, may accelerate more quickly, and may reach higher assisted speeds. Depending on the drive system, the motor may provide propulsion with minimal or no pedal force. These differences create additional risks and require greater attention, judgment, and braking distance. Riders must read this Manual in its entirety and review the features of their specific eBike with an authorized retailer before operating the eBike.

Following are the major differences between an eBike and a regular bicycle:

- **General Battery Safety and Fire Risks:** eBikes are equipped with an electric drive system, battery and charger, which pose a risk of electrical and fire hazards. Please refer to Page 18, Section 3: “General Lithium-Ion Battery Safety” and Page 39, Section 6: “eBike Battery Safety” for additional information.

- **Children and Age Requirements:** Use of eBikes by children and youth may present additional risks. Age restrictions for operating or being a passenger on an eBike vary depending on the type of eBike and on the country or region where the eBike is located. Operation may be limited by the age of the rider, and local jurisdictions may have other requirements for eBike operation such as the use of helmets. Please review Page 20, Section 4: “eBikes and Children: Attention Parents” for additional information.
- **Features, Functions and Restrictions on Use:** The addition of an electric drive system means eBikes are different from regular bicycles, and you need to familiarize yourself with these differences. eBikes are also regulated differently depending on their speed and power settings, and may have restrictions regarding where each type of eBike can be ridden. These regulations and restrictions vary depending on your country or region. You must inform yourself of all applicable laws, requirements and restrictions. Please refer to Page 28, Section 5: “eBike Features and Functions,” and Page 32, Section 5(C): “How Are eBikes Classified and Regulated,” and Page 37, Section 5(E): “Where Can I Ride My eBike?” for additional information on eBike laws and where you can ride your eBike.
- **Charging your eBike:** Using proper charging practices and taking care of your eBike and its battery will maximize performance and lifespan. Carefully read and follow all charging instructions in this Manual, and refer to Page 39, Section 6: “eBike Battery Safety” for additional information.

•Safely Operating your eBike: eBikes are heavier, accelerate faster, can achieve higher speeds more quickly and maintain those speeds for longer periods of time compared to regular bicycles. These features can dramatically affect the handling, braking and cornering of your eBike, which means you must exercise more caution around other people and when cornering, accelerating and slowing down. It is recommended that you get to know the functionality and intricacies of accelerating and decelerating your eBike in an area away from people and cars/traffic. For more information refer to Page 68, Section 7: “Safely Operating Your eBike”

Normal Operating Characteristics:

During use, you may notice behaviors or sensations that differ from a traditional bicycle. These may include motor noise, drivetrain engagement, changes in assistance level, or variations in response based on speed, terrain, rider input, or battery state of charge. These characteristics are typically normal and are part of the operation of an integrated electric drive system.

Riders new to eBikes may require a short familiarization period to understand how these characteristics feel under different riding conditions. If you notice any sudden changes in performance, unusual noises that persist, warning indicators, or any condition that affects safe operation, stop riding and consult your authorized retailer.



WARNING: When to Stop Riding and Seek Service

Stop riding immediately if you experience any condition that affects your ability to safely control the eBike, including but not limited to sudden loss of power, unintended acceleration, braking irregularities, steering instability, visible damage to components, persistent warning indicators or messages that do not clear after restarting the system, or abnormal heat, smoke, or odor from the battery or drive system. Continuing to ride under these conditions may increase the risk of loss of control, fire, or component failure. Do not attempt to diagnose or repair electrical or structural issues yourself. Transport the eBike to an authorized retailer for inspection and service before riding again.




WARNING: User Service Limitations


eBikes incorporate high-voltage electrical systems, electronic controls, and structural components that require specialized tools, training, and procedures to service safely. Except where explicitly instructed in this manual, users should not attempt to adjust, modify, disassemble, or repair electrical, mechanical, or structural components. Improper service or unauthorized modification can compromise safety, damage components, and result in serious injury, death, or property damage.


- **Riding with Passengers, Cargo and Trailers:** Many eBikes are designed to carry cargo or passengers. Riding with the additional weight from cargo or passengers requires practice and particular attention to your surroundings when riding. Please refer to Page 106, Section 8: “Best Practices for Riding and Carrying Passengers and Cargo” for additional information.

Drive Systems: The drive system on your eBike is a sophisticated electronic system that requires special care and maintenance. Any service to the drive system should be performed by a qualified technician. Please refer to Page 117, Section 9: “Drive Systems” for additional information.

3. GENERAL LITHIUM-ION BATTERY SAFETY

 **WARNING:** Before charging or using your eBike, you must carefully read, understand and follow all information contained in Page 39, Section 6: “eBike Battery Safety” of this Manual about safety, handling, charging, transportation, storing and disposing of your eBike battery. It is recommended that you periodically review this information to ensure you are following all recommendations for safe use of this product. Failure to read, understand and follow all battery safety warnings and instructions can cause a fire, leading to serious personal injury, death or property damage.

 **WARNING:** Lithium-Ion batteries are powerful and store a tremendous amount of energy. While they are generally designed with safety features to protect the battery and the user, they must be handled with special care. When damaged, improperly charged or misused, Lithium-Ion batteries are susceptible to an uncontrollable energy release resulting in a sudden and severe fire. A Lithium-Ion battery fire generally cannot be put out until the energy contained therein is exhausted. Therefore, proper use, charging, discharging, care, maintenance, storage and transportation are all critical to the long-term use of the battery and the safety of the user and others.

 **WARNING:** Do not leave a battery unattended while charging, especially overnight. Once the charge cycle is complete, immediately disconnect the charger plug from the battery. Do not leave the battery connected to the charger for an extended period of time after it has reached full charge. If a battery fails while left to charge unattended, the failure can get progressively worse, and can result in fire or explosion resulting in serious personal injury, death, or property damage.



WARNING: NEVER open a Lithium-Ion battery pack or modify the wiring or any electrical components of any product powered by a Lithium-Ion battery. Opening the battery or modifying the wiring or components can result in electric shock and can cause a fire leading to serious personal injury, death, or property damage.

General Safety Guidelines for All Lithium-Ion Batteries:

- ALWAYS: Purchase and use devices and batteries certified by an accredited testing laboratory.
- ALWAYS: Follow the charging and storage instructions provided in this Manual.
- ALWAYS: Use the correct battery, charger and cord.
- ALWAYS: Plug directly into an electrical outlet for charging.
- ALWAYS: Keep batteries and devices at room temperature.
- ALWAYS: Store and charge batteries away from anything flammable.
- ALWAYS: Keep batteries away from heat sources.
- ALWAYS: Use proper methods for recycling old or damaged batteries.

- NEVER: Use aftermarket or generic batteries or chargers.
- NEVER: Plug into a power strip or overload an outlet.
- NEVER: Overcharge or leave a battery charging overnight.
- NEVER: Charge a battery or device on or close to any flammable material.
- NEVER: Leave an eBike or battery unattended while charging.
- NEVER: Block your primary way in or out of a room or space.
- NEVER: Place batteries in a trash or recycling bin.

4. EBIKES AND CHILDREN: ATTENTION PARENTS

eBliss Global supports safe riding education for all riders, and especially for youth and new riders. Electric bicycles are heavier, accelerate faster, and can reach higher speeds than traditional bicycles. Parents and guardians are responsible for determining whether a child has the physical, mental, and emotional capacity to ride safely, and for ensuring the rider follows all local laws and regulations.


A. How Old Should a Child Be to Operate an eBike?


This Manual covers eBikes that may be used by both adults and older youth. eBliss Global cannot determine whether a particular child has the physical, mental, and emotional ability to safely operate an eBike. That determination is the responsibility of the parent or guardian. While eBikes have a lot in common with regular bicycles, eBikes also have a motor and battery, which means eBikes weigh significantly more and can achieve significantly higher speeds, with much faster acceleration. A significant amount of strength and skill is required to safely control an eBike. As a parent, you should read this Manual, as well as review its warnings and the eBike's functions and operating procedures with your child before letting your child ride the eBike.


While it is up to a parent or guardian to make the determination of whether their child can safely operate an eBike, you should be aware of these general guidelines. According to the United States Consumer Product Safety Commission (CPSC), motorized bicycles require cognitive skills and motor skills that usually develop after age 12. The CPSC's Age Determination Guidelines are available on their website at www.cpsc.gov.

Any youth or child riding an eBike must have the necessary physical, mental and emotional capacity to ride the eBike, as well as adequate bicycle riding experience and reaction time. They must also adhere to local laws, know how to manage different/changing road conditions, how to navigate traffic, and how to react quickly to unexpected situations.

NOTE: Local laws may vary regarding how old a child must be and what type of eBike they can operate. It is up to the parents and child to conform to local laws.


 **WARNING:** An eBike must be properly sized for the rider. Riding an eBike that is too large or too small can reduce control, stability, and the rider's ability to safely start, stop, or maneuver. This applies to all riders, including children. The ability to mount an eBike, including a step-through model (see fig 13a, Page 121 "A. Standover Height"), does not mean it is properly sized for safe operation. A bicycle that is improperly sized for any rider may lead to loss of control and a fall, resulting in serious personal injury or death.

 **WARNING:** eBliss electric bicycles are designed for riders 16 years of age and older, unless otherwise specifically stated for a particular model. Not all eBikes are suitable for children. Parents and guardians are solely responsible for determining whether a child is physically, mentally, and emotionally capable of safely operating an eBike, including understanding and following all warnings and instructions in this Manual. Allowing a child who lacks the capability to safely operate an eBike to do so may lead to a crash resulting in serious personal injury or death.

 **WARNING:** Some states and local jurisdictions impose age restrictions and additional requirements for transporting passengers on an eBike. A passenger must meet the minimum age and physical requirements established by applicable law and by eBliss for the specific model. A child who does not meet these requirements must not be transported unless secured in an approved and properly installed child carrier designed for use on bicycles. Transporting a child who does not meet the age or physical requirements, or who is not secured in an approved child carrier, can result in serious personal injury or death.

Read all relevant passenger-related information provided with your eBike, and consult with your authorized retailer for any additional information. Assessing the passenger's ability and safety is the parent's responsibility. If you're unsure, consult with your physician.


NOTE: For additional information regarding transporting passengers, please refer to Page 106, Section 8: "Best Practices for Riding and Carrying Passengers and Cargo".


 **WARNING:** A person must have the physical and mental ability to manage an eBike in traffic, when facing varying road conditions or when in unexpected situations. They must also respect the laws of the road as they apply to bicycles. Failure to follow this warning could result in a crash leading to serious personal injury or death.

As a parent or guardian, you are responsible for the activities and safety of your minor child, including making sure that:

- Your child wears a well-fitting and approved helmet at all times while operating or riding on the eBike
- The eBike is properly sized and fitted to your child
- The eBike is in good repair and safe operating condition


- You and your child have learned and understand the safe operation of the eBike as described in this Manual
- You and your child have learned, understand and obey not only the applicable local motor vehicle, eBike and traffic laws, but also the common-sense rules of safe and responsible bicycling

 **WARNING:** Make sure that your child always wears an approved bicycle helmet when riding. Also make sure that your child understands that a bicycle helmet is for riding only, and must be removed when not riding. A helmet must not be worn while playing, in play areas, on playground equipment, while climbing trees or at any time while not riding. Failure to follow this warning could result in serious personal injury or death.

 **WARNING:** Whether a child can safely operate an eBike also depends on where the eBike is being operated and the conditions present. Steep hills, wet or poor quality roads or trails, motor vehicle traffic, inclement weather, carrying passengers or cargo or other conditions may suddenly present risks that a child may lack the ability to respond to. The risks of operating an eBike on public roads are different from operating an eBike on natural-surface trails. Please read this Manual for more information on these risks and how to avoid them. Failure to follow this warning could lead to a crash resulting in serious personal injury or death.

B. Supplemental Guidance for Parents, Youth and New Riders

The following information is provided by eBliss Global as supplemental educational guidance. It is intended to reinforce safe riding practices for youth and new riders and to support parents and guardians in teaching responsible bicycle and electric bicycle operation. This guidance applies to all riders, regardless of age.

 **WARNING:** eBliss electric bicycles are designed for riders 16 years of age and older. All riders, regardless of age, must learn, understand, and follow the rules of the road, operate bicycles and electric bicycles responsibly, and comply with all applicable local laws and regulations. Failure to use proper caution and care may result in serious personal injury or death.

Teaching Safe Riding Practices

In addition to the safety information provided throughout this Manual, including sections covering basic operation, safe riding practices, off-road riding, wet-weather riding, night riding, bicycling in traffic, and prohibited extreme, stunt, or competition riding, youth and new riders should be taught the following rules and lessons. These principles are expected to be understood and followed by all adult riders and should be reinforced regularly for children and new riders before unsupervised riding. Parents and guardians are encouraged to take the time to familiarize themselves with these rules, practice them with youth and new riders, and reinforce them consistently.

1. Basic Rules

- No playing in the road or street
- No riding on busy streets
- No riding at dawn, dusk, or night
- Stop at all stop signs
- Ride with traffic, not against it

2. Common Riding Situations and Lessons

The lessons below address common real-world situations that minors and inexperienced riders may encounter. Review each scenario and ensure the lesson objective is clearly understood before allowing independent riding.

a. Driveway Ride-Out

A crash that occurs when a rider enters the street from a driveway and is struck by a motor vehicle is known as a driveway ride-out.

Guidance:

Recognize the risks associated with all driveways. If visibility is obstructed by landscaping or structures, improve sight lines where possible. If permitted by local ordinance, parking a vehicle in front of the driveway may discourage riding directly into the street. Most importantly, teach driveway safety by practicing the following steps with the rider:

1. Stop before entering the street
2. Look left, right, and left again for traffic
3. Proceed only when the roadway is clear

Additional Safety Principle: Never Assume You Are Seen

Teach children and new riders to never assume that the driver of a motor vehicle can see them. Even if the rider can see the vehicle, that does not mean the driver sees the rider. Riders must slow down, look carefully in all directions, and proceed only when they are certain it is safe to do so. When possible, riders should attempt to make eye contact with drivers before entering a roadway. Extra caution should always be used at intersections, driveways, and in parking lots where vehicles may cross the rider's path. Failure to use extreme caution around motor vehicles can result in a collision causing serious personal injury or death.

b. Running a Stop Sign

Car-bicycle crashes frequently occur when a cyclist fails to stop at a stop sign. Riders may know they should stop but believe it is safe to proceed or may be distracted.

Guidance:

Reinforce that failing to stop, even occasionally, significantly increases crash risk. Practice proper stop sign behavior near home:

1. Stop completely at all stop signs
2. Look in all directions for traffic
3. Watch for oncoming vehicles making left turns
4. Watch for vehicles approaching from behind making right turns
5. Wait for cross traffic to clear
6. Proceed only when safe

Parents and guardians should model correct behavior. Rolling through stop signs undermines this lesson and increases risk for everyone.

c. Turning Without Warning

Another common crash scenario involves cyclists making unexpected turns without looking behind or signaling.

Guidance:

Until a rider has sufficient experience and training, avoid riding across busy streets. For residential riding, teach riders to always look behind and signal before turning. Practice riding in a straight line while briefly looking over the shoulder without swerving. This skill should be practiced in a safe, traffic-free area.

d. Riding at Dawn, Dusk, or Night

(See also Page 88, Section F. "Lighting and Night Riding")

Many serious car–bicycle crashes occur in low-light conditions, often involving vehicles overtaking a cyclist from behind.

Guidance:

Riding at dawn, dusk, or at night significantly increases risk for all riders due to reduced visibility and limited reaction time for both cyclists and motorists. Children and new riders should not ride during these conditions. Even experienced riders must use extreme caution, proper lighting, reflective equipment, and heightened awareness when riding in low-light environments. If a rider is unexpectedly delayed and visibility becomes poor, they should stop riding and contact a parent or guardian for assistance. Carrying a mobile phone and placing emergency contact information on the bicycle can provide additional safety.

e. Following the Leader

Riding in groups can increase risk if one rider makes an unsafe decision and others follow without assessing conditions independently.

Guidance:

Teach riders to make independent decisions based on traffic and road conditions. Each rider must stop at stop signs, look behind before turning, and assess safety individually. Encourage critical thinking rather than imitation when riding with others.

Summary

Safe riding skills take time, repetition, and supervision to develop. Begin instruction early, reinforce lessons frequently, and model responsible behavior. With patience and consistent guidance, youth and new riders can develop safer riding habits and improved hazard awareness.

5. EBIKE FEATURES AND FUNCTIONS

eBliss electric bicycles incorporate integrated electric drive systems that may vary by model and configuration. Drive systems can differ in motor type and location, battery design and capacity, power output, maximum assisted speed, display configuration, and charging and storage procedures.

Because features, specifications, and regulatory classifications may vary by model and by region, it is important that you familiarize yourself with the specific configuration and intended use of your eBike before riding.

This Manual provides general safety, operating, and maintenance guidance applicable to all eBliss eBikes. Certain models may include additional features or requirements not described in detail here.

For information about display operation, system settings, component compatibility, weight limits, service intervals, and regional regulatory requirements, refer to this Manual. If you have any questions or are unsure about proper operation or compatibility, consult your authorized eBliss retailer before riding.

For questions about eBike functions, local laws and regulations, parts compatibility, service intervals, or rider, cargo, and passenger weight limits, contact your authorized eBliss retailer or eBliss Global.

A. Electric Drive Systems

eBikes differ from regular bikes with the addition of sophisticated components, engineered specifically for use on eBikes. These components include:

- **Display Monitor (Command Center / Human-Machine Interface):** Your eBike is equipped with a handlebar-mounted Display Monitor that provides essential ride information and basic interaction with the electric drive system. In this Manual, the terms Display Monitor, Command Center, and Human-Machine Interface (HMI) all refer to the same component. The Display Monitor/ Command Center shows information such as speed, battery charge level, assist level, and system status, and includes buttons used to power the system on and select pedal-assist levels.
- **Controls:** Buttons located on the Command Center, handlebar, battery and/or frame that allow the rider to choose the level of motor assistance while pedaling (see fig.1).
- **Battery:** A sophisticated, high-performance, large-capacity Lithium-Ion battery, designed to safely contain a significant amount of energy and efficiently release it to the motor in order to supplement the rider's power output for long distances.
- **Motor:** Provides power assistance to the rider when the pedals are engaged. Certain types of eBike are also equipped with a throttle to engage the power.
- **Sensors:** Detect forces being applied to the pedals or rotation of the pedals, provide information to the system to control power output.

Fig. 1 - Command Center



- **Wiring system:** Connects the drive system components. The addition of an integrated drive system means your eBike is different from a regular bicycle. These differences mean you must follow all instructions in your manuals, and you should not treat your eBike the same as a regular bicycle. This Manual will address how to handle and properly use an eBike equipped with these unique components.


B. Display and Control Systems


The Command Center is the primary user interface for your eBike and is used to control power output and access key operating functions (fig. 1, page 29). Your eBike is equipped with a Command Center and control system that allows the rider to turn the system on and off, select pedal assist levels, and view essential riding and system information.


Pedal Assist System, or PAS, refers to the selectable levels of motor assistance that support the rider while pedaling. Lower PAS levels provide less motor assistance and generally result in slower acceleration and extended battery range. Higher PAS levels provide greater motor assistance, faster acceleration, and increased power output, which can significantly affect handling and stopping distance. Riders should begin in a lower PAS setting until they are familiar with the eBike's power characteristics.

Pedal assist levels are adjusted using the buttons on the Command Center. Most systems allow the rider to increase or decrease assistance using designated "+" and "-" controls while the system is powered on. Riders should adjust PAS levels only when stopped and in a safe location. Become familiar with how to change PAS levels before riding in traffic.

The Command Center plays an important role in safe operation. Riders must become familiar with basic display functions before riding and should only adjust settings when stopped and it is safe to do so. Riders are responsible for ensuring that PAS settings and riding behavior comply with all applicable local laws and regulations governing electric bicycles, including speed limits, classification requirements, and usage restrictions.

 **WARNING:** eBike speeds can be substantial. Always select a PAS level appropriate for riding conditions, terrain, traffic, and your skill level. Higher PAS levels increase acceleration and may reduce reaction time and increase stopping distance. Failure to operate the eBike responsibly and in accordance with local laws and regulations may result in serious personal injury or death. **WARNING:** Do not attempt to adjust the Command Center, change PAS levels, or navigate display menus while riding. Diverting attention from the roadway may result in loss of control or a crash. Command Center features, menus, and settings may vary by configuration. If you are unsure about display functions or PAS operation, consult your authorized eBliss retailer before riding.

 **WARNING:** eBike speeds can be substantial. Always select a PAS level appropriate for riding conditions, terrain, traffic, and your skill level. Failure to operate the eBike responsibly and in accordance with local laws and regulations may result in serious personal injury or death.

 **WARNING:** Do not attempt to adjust the Command Center, change PAS levels, or navigate display menus while riding. Diverting attention from the roadway may result in loss of control or a crash.

Riders are responsible for ensuring that PAS settings and riding behavior comply with all applicable local laws and regulations governing electric bicycles, including speed limits, classification requirements, and usage restrictions.

Display Monitor features, menus, settings, and behavior may vary by model or configuration. Detailed setup, advanced adjustments, and model-specific instructions are provided in separate Command Center documentation supplied with your eBike, or by your authorized retailer.

C. How Are eBikes Classified and Regulated

NOTE: The speed settings for your eBike may be set according to the country or region where the eBike is sold. Follow all national, regional and local regulations related to your eBike. Following are some examples for how eBikes are defined by country:

United States: Most states have defined three eBike classes and regulate them within the state's motor vehicle code. This gives riders similar rights and duties to that of regular bicycles. However, a few states regulate eBikes in the same way as mopeds or a motor vehicle such as a car or motorcycle. Be sure to familiarize yourself with the laws relevant to your eBike in your country and region, or ask your authorized retailer about these local laws.

- **Class 1:** Bicycle equipped with a motor that provides assistance only when the rider is pedaling, and that ceases to provide assistance when the electric bicycle reaches 20 mph.

- **Class 2:** Bicycle equipped with a throttle-actuated motor that ceases to provide assistance when the electric bicycle reaches 20 mph.
- **Class 3:** Bicycle equipped with a motor that provides assistance only when the rider is pedaling, and that ceases to provide assistance when the electric bicycle reaches 28 mph.

eBike classification is determined by the configuration of the drive system and the maximum assisted speed as manufactured. Altering these characteristics may change the legal classification of the eBike and subject the operator to different regulatory requirements.

eBike specifications can also include wattage (how much work a motor can do), torque (how much force the motor can apply) and battery watt hours (how long the battery will last or the typical range of the eBike).

eBike classification may affect where an eBike can be operated and whether additional operational requirements apply. Refer to Section E: “Where Can I Ride My eBike?” for information regarding location-based restrictions and related requirements.

Although many states follow a similar three-class structure, specific requirements such as labeling, helmet use, minimum rider age or equipment standards may vary by jurisdiction.

Europe: Under European regulations, an eBike drive system only provides power when the pedals are engaged. This type of eBike is typically referred to as an EPAC (Electronically Power Assisted Cycle), EAPC (Electrically Assisted Pedal Cycle), or Pedelec (Pedal Electric Cycle). Europe also recognizes a category of higher power and speed eBikes known as the “Speed Pedelec” or “S-Pedelec.” These eBikes also provide power only when the rider is pedaling but may have motor power up to 4000 watts and a top speed of up to 28 mph (45 km/h). European regulations for Speed Pedelecs may require that certain components be replaced only with identical or officially approved replacement components in order to maintain regulatory compliance. Speed Pedelecs are sometimes classified as motor vehicles, depending on local laws. This means that in those locations some or all of the following may be required:

- A rear-view mirror
- A license plate
- Liability insurance, operating license or EU-type approval with insurance markings attached
- A minimum tire tread depth of 1 mm
- Tires replaced when worn with an identical (or approved) tire

When using a Speed Pedelec, the rider must be familiar with the local laws for riding on:

- Cycling paths
- Road lanes marked for moped access
- Cycling paths that allow mopeds
- Off-road trails
- Lanes that are closed to mopeds, motor vehicles or motorcycles
- Public roads, as well as on private property with permission by owner
- Pedestrian areas where regular bikes are allowed
- Parking in areas for regular bikes

As eBike regulations are constantly being updated, it is your responsibility to stay up-to-date on the latest regulations (helmet use, age restrictions, requirements for license and insurance), as well as any restrictions for where you can ride your eBike (roads, paths, parks or other facilities).



WARNING: Do not modify or alter your eBike, or install additional equipment with the intention of increasing the performance and/or top speed of the eBike. Modifying an eBike to increase its performance or speed may be unlawful and can result in component failure or a loss of control, leading to a crash resulting in serious personal injury or death.

NOTE: A modified eBike may no longer be regulated as an eBike, placing the operator at risk of personal liability and criminal prosecution in the event of a crash. Any alterations can negatively affect the lifespan of the eBike and its components, and can result in damage to the drive system. It can also void the warranty of the eBike.

D. How Does an eBike Provide Power?

Pedal-assist is the power provided by the drive system to the rear wheel. For Class 1 and Class 3 eBikes and Pedelecs, the drive system is designed so the power provided by the motor is dependent on pedal force being applied by the rider. The amount of power provided by the motor is determined by how hard or easy the rider is pedaling (the harder the rider pedals the more power the motor provides) in combination with the power-assist mode chosen by the rider, up to the maximum speed determined by the classification of the eBike and the regulations put in place by the country where the eBike is sold. For Class 2 eBikes, the pedal force and/or the throttle may determine the amount of power supplied by the drive motor to the rear wheel.

NOTE: This Manual is only for eBikes that are manufactured as complete eBikes and designed to apply power through the rear wheel, with either a “mid-drive” motor (fig. 2) or motor contained in the rear hub (fig. 3). This Manual does not cover other types of eBikes, including front-wheel drive, conversion kits, or “add-on” electric motors of any kind.

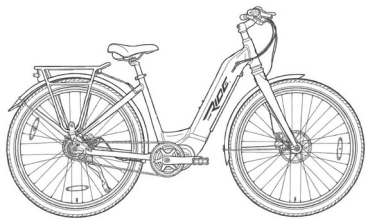


Fig. 2 - Mid-Drive Motor

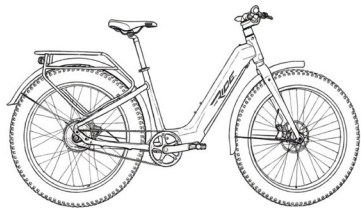


Fig. 3 - Rear Hub Motor

E. Where Can I Ride My eBike?

The Three-Class Approach:

In the United States, state and local governments have the authority to determine where eBikes can be operated, including restricting their use. Always check the rules and regulations that apply to your eBike classification where you live and/or ride. In most states, eBikes are regulated using a three-class approach. Refer to Section C: “How Are eBikes Classified and Regulated” for class definitions.

- Class 1 eBikes are generally permitted in the same locations as traditional bicycles, unless otherwise restricted by local law.
- Class 2 eBikes may be subject to additional operating restrictions depending on local regulations.
- Class 3 eBikes may have greater operating limitations, and access to certain bike paths, lanes or protected facilities may be restricted or prohibited.

Access to parks, trails and other public lands may be regulated by agencies other than traffic authorities.

NOTE: In Canada, Europe and other countries, national, regional and local laws determine which types of eBikes are allowed and where they may be operated. Regulations may change. You are responsible for complying with applicable laws.

Off-Road Respect

Additionally, off-road trail access is sometimes restricted to use only on trails that allow for motorized vehicle use. Off-road eBikes, often referred to as eMTBs, may not be permitted for use on your local trails, or only Class 1 eBikes may be allowed. As local land use rules change frequently, be sure to consult with your local land manager. Obey the local laws regulating where and how you can ride off-road, and respect private property. You may be sharing the trail with others, including hikers, trail runners, equestrians, and other cyclists. Respect their rights. Stay on the designated trail. Don't contribute to erosion by riding in mud or with unnecessary sliding or skidding. Don't disturb the ecosystem by cutting your own trail or shortcut through vegetation or streams. It is your responsibility to minimize your impact on the environment. Leave things as you found them; and always take out everything you brought in.

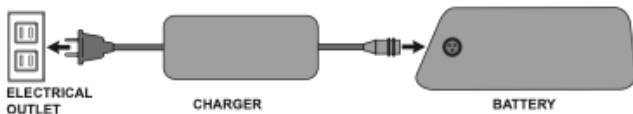
6. EBIKE BATTERY SAFETY


A. General Battery Knowledge and Safety


! **WARNING:** Carefully read this section and Page 18, Section 3: “General Lithium-Ion Battery Safety” before using your eBike or charging the battery. Improper use, storage or charging of the battery can cause thermal runaway leading to a sudden and severe fire resulting in property damage, serious personal injury or death.


! **WARNING:** Only use Original Equipment (OE) batteries and chargers (see fig. 4) that are approved by eBliss Global for use with your specific eBike model and confirmed compatible with each other. Use of an unapproved, incompatible, refurbished, or counterfeit battery or charger can result in serious damage to the battery and/or drive system components and may cause a sudden and severe fire or explosion resulting in serious bodily injury or death.


Fig. 4 - Charger and Battery



 **WARNING:** Do not leave a battery unattended while charging, especially overnight. Once the charge cycle is complete, immediately disconnect the charger plug from the battery. Do not leave the battery connected to the charger for an extended period of time after it has reached full charge. If a battery fails while left to charge unattended, the failure can get progressively worse, and can result in fire or explosion resulting in serious personal injury, death, or property damage.

 **WARNING:** Keep the battery and charger away from children and animals. Unless supervised or instructed on proper/responsible use, children or people who lack the necessary experience or understanding to operate the battery and charger safely should not be left unattended with the battery and charger. There is a significant risk of personal injury and/or damage.

 **WARNING:** Replace the battery only with an Original Equipment (OE) battery approved for use with your eBike. Refurbished, reconditioned, or unauthorized batteries may lack required safety features and can result in fire, serious personal injury, death, or property damage.

 **WARNING:** Do not dispose of an eBike battery or any other Lithium-Ion battery in your regular household trash or a public trash receptacle. It may be illegal to do so. Batteries that enter the regular waste stream can be damaged, leading to a fire resulting in serious personal injury, death, property damage and environmental contamination.

Dispose of all batteries and chargers that have reached the end of their service life in an environmentally responsible manner, in accordance with regulations in effect in your country, state, or region. For additional information about proper disposal or recycling, contact your authorized eBliss retailer or eBliss Global directly. In the United States, Call2Recycle partners with manufacturers and retailers to offer a national battery recycling program.

1. What is an eBike battery?

An eBike battery consists of a series of Lithium-Ion cells designed to contain electric energy. The charge and release of energy in the cells is managed and controlled by internal circuitry. The cells and circuitry are contained in a housing or shell, also known as a battery pack, which is designed to protect the cells and internal circuitry and interface with a mounting mechanism on your eBike. EBike batteries store a tremendous amount of energy for their small size and light weight. While batteries are generally designed with safety features to protect the battery and its user and failure is therefore unlikely, it's not impossible so they must be handled with special care.

When damaged or improperly used, Lithium-Ion batteries are susceptible to an uncontrollable energy release. This means there is a risk of a sudden and severe fire, and a Lithium-Ion battery fire generally cannot be put out until the energy contained therein is exhausted. Therefore, proper use, charge/discharge, care, maintenance, storage and transportation are critical to the long-term use of the battery and the safety of the user.

2. Battery Lifespan and Replacement Expectations

- eBike batteries are consumable components that gradually lose energy capacity over time and with use. Battery lifespan is influenced by many factors, including riding habits, charging practices, storage conditions, operating temperatures, and overall usage patterns. A reduction in range or performance over time is normal and does not indicate a defect or safety issue.
- Eventually, all Lithium-Ion batteries will require replacement to maintain expected performance. Battery replacement is a normal part of long-term ownership and is not considered routine maintenance. Replacement timing and cost will vary depending on the specific battery model, usage conditions, and availability. Replacement batteries must be Original Equipment (OE) batteries approved by eBliss Global for use with your specific eBike model to ensure proper compatibility, safety, and performance.
- When a battery no longer provides adequate performance or reaches the end of its service life, contact your authorized eBliss retailer or eBliss Global directly for information on approved replacement options and proper recycling or disposal.

3. Sleep Mode (Battery Protection Feature)

To help protect the battery and electrical system, the battery will automatically enter a low-power “sleep mode” if it is not used for 72 hours. This will result in the Command Center module not activating and the “e” part of your eBike not working.

If the battery is in sleep mode, it can be reactivated in either of the following ways:

- Connect the battery to the charger briefly to wake the battery from sleep mode. In most cases, 30 seconds to one minute is sufficient to reactivate the battery. This temporary connection is intended only to wake the battery and does not constitute a full charging cycle. Disconnect the charger once the battery indicator lights respond, unless you intend to begin normal charging.
- Or remove the battery from the eBike, then press and hold the battery power button until the indicator light turns green. Reinstall the battery before riding.

Reactivating the battery using either method helps protect both the battery and the eBike.




WARNING: Batteries and chargers are designed to be safe and reliable when used as instructed. Failure to read and follow these instructions and to use your battery and charger as specified in this Manual and official eBliss documentation can result in thermal runaway, leading to a sudden and severe fire and serious personal injury or death, as well as significant property damage. Please follow the guidelines below to minimize the risk of battery pack failure:


- **Only** use the battery supplied with your eBike, or an Original Equipment (OE) replacement battery approved by eBliss Global for your specific eBike model.
- **Only** use the charger supplied with your battery, or a charger that is confirmed compatible and approved by eBliss Global for use with your specific battery model. Do not use other chargers or power supplies to charge your battery pack.


- **Do not** leave the battery unattended while charging, especially overnight. Once the battery is fully charged, disconnect the charger from the battery.
- **Do not** charge or store the battery in direct sunlight or in an environment outside the operating and charging temperature ranges specified in this Manual for your eBike battery.
- **Do not** expose the battery to excessive heat from a flame or other heat source, or extended exposure to the sun.
- **Do not** expose the battery internals to water by submersion or strong water spray.
- **Do not** subject the battery to excessive weight from objects placed on the battery.
- **Do not** subject the battery to severe impact or shock from being dropped or struck by another heavy object.
- **Do not** subject the battery to excessive vibration.
- **Do not** use or attempt to charge a battery that has been dropped, damaged, or submersed in water.
- **Do not** open or deform the battery housing and/or perform any modifications or service to the battery. There are no user-serviceable components in the battery pack. Opening a Lithium-Ion battery may result in a hazardous condition that could lead to an explosion and/or fire, and will void the warranty.
- **Do not** short-circuit the battery terminals through contact with metal objects (e.g., nails, keys or screws).
- **Do not** touch severely corroded battery terminals.
- **Do not** apply solder to the terminals.


The following is a list of signs of battery damage, which can result in electric shock, short-circuit, fire and/or explosion:

- External battery casing damage (chips, cracks)
- Battery casing deformation (bulging)
- Battery casing or terminal discoloration
- Signs of corrosive (rust) damage from water entering the battery
- Plug connector damage or deformation
- Sounds, odors, smoke and/or flames emanating from the battery
- Battery fluid leak


 **WARNING:** A battery should not exhibit any heat, flames, noises, odors, smoke, swelling, leaks, discoloration, deformation or other abnormalities. If a battery exhibits any of these symptoms and is failing catastrophically, evacuate all people from the area immediately and summon fire authorities (in the United States, call 911). Only if it is possible to do so safely and quickly should you attempt to move the battery outdoors and away from people or flammable materials.

 **WARNING:** If the battery is leaking, do not touch this liquid. Battery liquid can cause irritation or burns. If there is contact with battery liquid, rinse immediately with water. If the contact is with the eyes, seek medical attention immediately after rinsing.

 **WARNING:** If the battery is emitting smoke or fumes, immediately move away to a safe, well-ventilated area. Do not attempt to move or handle the battery unless it can be done safely and without risk of injury. Fumes may irritate the respiratory system. If anyone is exposed to smoke or fumes and experiences dizziness, difficulty breathing, irritation, or other symptoms, seek medical attention immediately.

 **WARNING:** If your battery experiences a fault or error during use, charging, or discharging, immediately stop using or charging the battery. Do not attempt to troubleshoot, open, or repair the battery yourself. Contact your authorized eBliss retailer for inspection and service. Continued use of a battery that displays a fault condition may result in fire, serious personal injury, or death.

CAUTION: Due to the natural process of transferring electricity and storing it inside the battery cells, the battery and charger housings can get hot while charging. Use caution when touching the battery and charger while charging. Additionally, the battery housing can get warm during use.


 **WARNING:** Do not install the battery on the eBike if the following circumstances are present:

- The battery is not the original battery supplied with the eBike or an Original Equipment (OE) replacement battery approved by eBliss Global for use with your specific eBike model.
- The battery is damaged in any way.
- The battery or bike have been exposed to excessive water or submersion.
- Failure to follow these warnings may cause a fire resulting in property damage, serious personal injury or death.


NOTE: Ensure the battery contacts, including connecting terminals or pins that interface with the eBike, are clean and free of dirt or debris. A contaminated interface can make installation or removal difficult and may cause the battery to become stuck. Dirty or corroded terminals can increase electrical resistance, leading to excessive heat buildup, reduced performance, or damage to the battery and eBike.


Clean the battery housing and electrical contacts using only a soft, dry cloth. Do not use water, sprays, solvents, or chemical cleaners on the battery or its terminals. Do not allow moisture to enter the battery compartment or contact the electrical connectors.


If the charge port has a cover, close the cover after charging to keep the charge port terminals clean and dry.


 **WARNING:** Turn the battery and eBike off before installing or removing the battery. For detailed instructions on battery removal and installation, refer to Section 6, "Removal and Installation of the Battery," in this Manual.

 **WARNING:** Do not attempt to install or remove the battery while riding.

 **WARNING:** Before transporting, storing or performing any work on your eBike, remove the battery, or turn it off if the battery cannot be removed. A drive system with a battery installed can turn on unexpectedly, which can cause serious injury.

 **WARNING:** If installing components or accessories that require wiring or servicing your eBike, it is recommended to remove the battery before performing the installation or service to avoid the risk of shock.

 **WARNING:** Do not pressure-wash your eBike or battery with a hose or other pressure-washing device. If the battery is removable, remove the battery when cleaning your eBike.


 **WARNING:** When handling components (especially the battery), handle with both hands. Failure to do so may result in dropping the component, which can result in personal injury and/or damage to the component.

CAUTION: When using rack-mounted batteries, unless specifically designed and approved by eBliss Global for lifting, do not use the battery or rear rack as a handle to lift the eBike. Doing so may damage the battery, mounting hardware, or frame.


Always make sure the battery is securely installed. If there is a lock, engage it and remove the key. If your battery uses a keyed locking system, record the key code provided with your eBike and store it in a safe place. In the event of a lost key, contact your authorized eBliss retailer for assistance. Familiarize yourself with the charge level indicator lights on your eBike system so you understand when the battery is fully charged and when the battery level is low. Riding with a critically low battery may result in loss of power assistance.

CAUTION: Do not discharge your battery completely (deep discharge) as this can damage the battery or shorten its useful life. A battery that runs out of power during a ride is functionally depleted. If it is left for an extended period of time (days) after being functionally depleted, it will naturally lose more power while not being used, which can lead to a state of deep discharge. This state of deep discharge can damage a battery resulting in significantly reduced energy capacity, and it can make it difficult to properly recharge, or worse, render it unserviceable, even with help from a qualified technician. After use and once cooled down, it is recommended to fully charge the battery in preparation for your next ride.

Pay particular attention to the charging habits and the operating and storage temperature ranges specified in this Manual for your eBike and battery. Lithium-Ion batteries perform best within their recommended temperature range. Exposure to temperatures outside the specified range during charging, use, or storage may reduce efficiency, performance, and lifespan, and may damage drive system components. Cold temperatures significantly reduce available energy capacity and riding range. Unless explicitly stated in this Manual, Lithium-Ion batteries do not require a break-in period and may be turned off and connected to or disconnected from the charger at any state of charge without damage. If the battery will not be used for more than a few days, disconnect it and remove it from the eBike if possible to prevent parasitic power drain and preserve battery life.


 **WARNING:** eBike batteries are intended only as a power supply for approved eBikes. Do not use eBike batteries for any other applications. Use of an eBike battery for other applications may create a risk of fire or electric shock.

B. Charging Your Battery

 **WARNING:** Carefully read, understand and follow all warnings and instructions for charging your battery. Failure to do so can lead to an electrical shock or sudden and severe fire, resulting in serious personal injury or death.

1. Before charging your battery

Before using your eBike or charging your battery for the first time, read all instructions in this Manual and any documentation included with your eBike. Turn the battery power on according to the instructions provided in this Manual to confirm whether the battery is charged, requires charging, or indicates a fault. Batteries are typically shipped with a partial charge. It is recommended to fully charge the battery before first use.

 **WARNING:** Charging the battery when any of the conditions listed below are present can result in electric shock, serious personal injury, or damage to the battery or property. Do not connect the charger to the battery and charge the battery if any of the following circumstances are present:


- The battery charge port terminals and/or the charger plug are contaminated. Repeatedly connecting contaminated terminals can result in worn and damaged terminals. Clean thoroughly before connecting the charger.


- Do not connect the charger if any part of the charging system has been submerged, exposed to rain, or is wet or damp in any way. This includes the battery, battery charge port, charger unit, power supply brick, power cord, wall outlet plug, extension cords, and all connector ends. Absolutely ensure that every component of the charging system is completely dry before connecting to electrical power.


If you are not 100 percent certain that all components are completely dry and free of internal moisture, do not use the battery or charger. Do not attempt to dry the battery or charger using external heat sources such as ovens, microwaves, hair dryers, heaters, or open flames. Improper drying methods can damage internal components and create a serious fire hazard. If there is any doubt about moisture exposure, discontinue use and contact your authorized eBliss retailer to obtain a replacement charger or have the system inspected before further use.


Never handle the battery, charger, power cord, or charge port terminals with wet hands. Connecting electrical components while wet or damp can result in electric shock, short circuit, fire, serious personal injury, or death.


- The battery is in an area exposed to explosive materials (e.g., a fueling station), or is exposed to chemicals or other flammable particles in the air. The battery has been dropped, noticeably scratched or damaged in any way.
- The charger shows any signs of damage. Inspect before each use.


 **WARNING:** Unless explicitly stated in this Manual for your specific model, charge the battery indoors only. Do not expose the eBike, battery, or charger to rain, moisture, or wind while charging. Exposure to water during charging may create a risk of electric shock or fire, resulting in serious personal injury, death, or property damage.

 **WARNING:** Use only Original Equipment (OE) batteries and chargers that are specifically approved by eBliss for use with your eBike model. The charger, charge cord, and power output cable must be compatible with your battery and eBike. Use of an incompatible, unapproved, or counterfeit battery or charger during charging can result in battery damage, thermal runaway, fire, explosion, serious personal injury, death, or property damage.

 **WARNING:** Do not modify or open the charger. Opening or modifying the charger can result in electric shock or damage to the internal circuitry that is designed to reduce the risk of thermal runaway, leading to a fire resulting in serious personal injury, death or property damage.

 **WARNING:** Do not touch the terminals of the battery or charger during an electrical storm in case of a lightning strike.

 **WARNING:** Handle the charger and power cables with care. Do not tightly bundle, apply excessive tension (pull force) or carry by the cables. Do not wash the charger.

 **WARNING:** Carefully read, understand, and follow all warnings and instructions in this Manual regarding charging your battery. Lithium-Ion batteries are sophisticated devices that require proper charging conditions. When charging the battery, ensure all the conditions listed below are met. Failure to do so can lead to electrical shock or a sudden and severe fire, resulting in serious personal injury or death.

Recommended conditions for charging your battery

- The battery and charger are compatible with each other and the eBike.
- The battery is being charged during daylight hours and where it can be observed in case of any indication of odor, smoke, fumes or fire.


- The charging area is protected from the elements, dry, well-ventilated, and has a smoke detector.
- If you charge your battery indoors, do not do it in a bedroom or any place blocking egress from the area.
- Charging must be supervised at all times. Do not leave a battery unattended while charging.
- The battery is on a clean, dry and flat, non-flammable surface, preferably metal, ceramic or glass.
- The battery and the charge port connectors (terminals or pins) are dry, clean and free of debris.
- The battery and charger have no items covering or placed on top impeding airflow around these components.
- The battery is not exposed to flammable materials or an open flame.
- The ambient temperature around the battery and charger is within the charging temperature range specified in this Manual for your eBike and battery.
- The rated voltage capacity from the power source (electrical outlet) matches the charger.
- The charger's outlet plug and battery connector plug are both fully inserted into the electrical outlet and the battery's charge port.
- The charger's fan vent is unobstructed (chargers with built-in fans).
- Do not use a power converter, for example to convert 220 volts to 110 volts.


2. How to charge your battery


Follow the order of operations for connecting the charger and charging the battery as specified in the eBliss documentation supplied with your eBike (see fig. 4, page 39).


- Remove the charge port cover (if present).
- Connect the charger to the battery and the power outlet in the order specified in this Manual for your eBike and charger.


- Once charging begins, periodically refer to the indicator lights on the charger and eBike's charge level display for power level information.
- Once the indicator lights indicate a full charge, immediately disconnect the charger from the power outlet and the battery in the order specified in this Manual for your eBike and charger.
- Replace the charge port cover (if present).
- If the battery will not be used right away, store the battery as outlined on Page 55, Section 6 : "Recommended conditions for storing your battery".

 **WARNING:** Do not leave a battery unattended while charging, especially overnight. Once the charge cycle is complete, immediately disconnect the charger plug from the battery. Do not leave the battery connected to the charger for an extended period of time after it has reached full charge. If a battery fails while left to charge unattended, the failure can get progressively worse, and can result in fire or explosion resulting in serious personal injury, death, or property damage.

 **WARNING:** Do not ride the eBike with the charger plugged into the battery.


 **WARNING:** Do not move the eBike or allow it to fall while it's charging. Make sure the eBike is stable and cannot move easily. If the plug comes loose during the charging process, it can cause an electrical spark leading to a fire, resulting in serious personal injury or property damage.

 **WARNING: TRIP HAZARD!** When charging, be aware of the location of the charger cable. Tripping over the charger cable can result in a fall, leading to personal injury or cause the eBike to fall over, resulting in property damage.

 **WARNING:** Do not use a power inverter to charge the battery from a 12-volt automobile auxiliary power outlet in a vehicle. Incorrect or excessive voltage can result in overheating, which can damage the battery and reduce the battery's lifespan or cause a sudden and severe fire resulting in serious personal injury or property damage.

CAUTION: Do not remove the battery from the eBike during the charging process. If the battery has to be removed, first end the charging process before removing the battery from the eBike, then once the battery is in a proper state for charging, restart the charging process.

- eBike batteries are equipped with temperature sensors that may prevent charging if the battery is outside the specified charging temperature range.
- Refer to the charging temperature range specified in this Manual for your eBike and battery.
- If the battery is being charged outside the recommended temperature range, the system may indicate a charging issue.
- If the battery is not charging, disconnect the charger and adjust the environment so the temperature is within the specified range. Reconnect the charger only once the battery is within the proper charging temperature range.
- If charging conditions are correct but the battery is not charging, or it does not reach full charge within the expected time stated in this Manual, disconnect the charger and have the battery and charger inspected by your authorized retailer.

 **WARNING:** If the battery becomes too hot, starts to emit smoke or a strong odor, shows any signs of deformation/bulging, or otherwise presents unusual characteristics, discontinue use of the battery. If a battery exhibits any of these symptoms and is failing catastrophically, evacuate the area immediately and call fire authorities. Only if possible to do so safely and quickly should you attempt to move the battery outdoors and away from people and flammable materials.

Recommended conditions for storing your battery

Storing your battery (long-term storage)

- Even under the best circumstances, the energy storage capacity of Lithium-Ion batteries gradually decreases over time and with each charge cycle. However, by following proper care and storage habits, you can maximize battery lifespan.

Please read and follow the storage recommendations below.

- If the battery will be stored for an extended period of time, store it with a partial charge and check the state of charge periodically.
- If the state of charge drops below the recommended storage range specified in this Manual, recharge the battery only to return it to the recommended storage range. Storing a battery in a fully discharged condition can lead to deep discharge, permanent damage, or render the battery unusable.
- Refer to the storage temperature and state-of-charge guidance in this Manual for additional information.

CAUTION: Do not store the battery in a discharged condition. A battery that is stored while functionally depleted, if left in that state for an extended period of time, will naturally lose more power while not being used, which can lead to a state of deep discharge. This state of deep discharge can damage a battery resulting in significantly reduced energy capacity, which can make it difficult to properly recharge, or worse, render it unserviceable, even with help from a qualified technician. To help protect battery life, recharge the battery to an appropriate level before storage and periodically check its charge during extended storage periods.


To help preserve battery life and reduce safety risks during storage, batteries should be stored indoors in a temperature- and climate-controlled environment whenever possible. When storing the battery, ensure the following conditions are met:

- The battery is removed from the eBike when possible. If the battery is integrated into the frame, store the entire eBike indoors.
- The storage area is protected from the elements, dry, well-ventilated, and equipped with a smoke detector. Do not store the battery in a bedroom or in any location that blocks exit pathways.
- The battery is placed on a clean, dry, flat, non-flammable surface, preferably metal, ceramic, or glass.
- The battery terminals, charge port, and connectors are dry, clean, and free of dirt or debris.
- No items are placed on or covering the battery or charger that could trap heat or restrict airflow.
- The battery is kept away from flammable materials, ignition sources, or open flames.
- The ambient temperature in the storage area must remain within the storage temperature range specified in this Manual for your eBike battery.
- For extended storage periods, periodically check the battery's condition and charge level, and recharge as recommended in this Manual to prevent deep discharge.


CAUTION: During storage, do not expose the battery to heat sources that could cause it to exceed the maximum storage temperature specified in this Manual for your eBike battery. Exceeding the recommended temperature range can damage the battery and reduce its lifespan.

For example:

- Direct sunlight
- A hot car in the summer
- Proximity to space heaters or other heat sources

 **WARNING:** Avoid exposing your eBike to conditions that can result in a short circuit:

- If possible, do not store your eBike outdoors. Exposure to the elements can quickly deteriorate the eBike and its components.
- Do not store your eBike under a cover as this can trap moisture. Condensation can result in corrosion and damage to the battery terminals or other components.
- Unplug the charger from the electrical outlet and the battery before storing the battery.
- Do not leave a battery connected to the charger after charging or while in storage.
- Do not store your eBike or battery near any strong magnetic sources. A short circuit may lead to a thermal runaway, sudden and severe fire or explosion, resulting in serious personal injury, death or property damage.

 **WARNING:** Electrical connectors are located within the battery compartment of the eBike and the battery. Before installing or removing the battery, inspect the connectors on both the battery and the eBike to ensure they are not bent, damaged, or contaminated. Connector design and installation procedures may vary by model. Follow the instructions and specifications provided for the applicable model.

Battery operating, charging, and storage temperatures affect performance, longevity, and safety. The following guidelines help maximize battery life and reliability.

Operating Temperature (Riding):

Your battery is designed to operate across a wide range of ambient temperatures. Extreme heat or cold may reduce performance or range, but does not necessarily indicate a fault.

Charging Temperature:

Charge the battery only within the charging temperature range specified in this manual for your battery and charger. Charging outside this range may be restricted by the battery management system.

Storage Temperature:

For long-term storage and to maximize battery lifespan, store the battery in a cool, dry environment, ideally between 50°F and 86°F (10°C–30°C), unless otherwise specified in this manual for your battery.

Note: These storage temperature values are recommendations for maximizing battery lifespan and do not represent operating limits.

Battery performance and range can vary significantly based on riding conditions such as terrain, rider weight, cargo load, wind, temperature, and assist level. Reduced range under demanding conditions is normal and does not indicate a defect. As riders become familiar with their eBike, they will learn how different conditions affect battery usage.

C. Removal of the Battery Can Differ Between Models

- 1.Insert key and unlock the battery.
- 2.Battery will be able to be removed out.
- 3.Remove battery completely and inspect battery and bike connectors to confirm in good shape. (See figs. 5.a and 5.b).

D. Installing Battery

Before installing the battery, inspect both the battery and the battery compartment carefully. Visually inspect the battery housing for cracks, dents, swelling, deformation, discoloration, or any signs of damage. Check for evidence of leaking fluid, corrosion, or contamination around the terminals or charge port. Ensure the electrical contacts are clean, dry, and free of debris.

Fig. 5.a - Battery loads from bottom

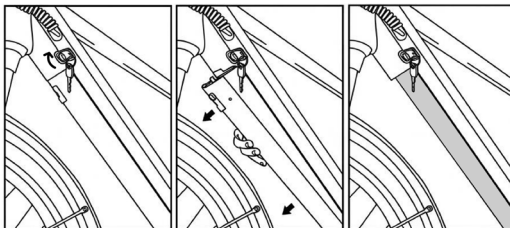
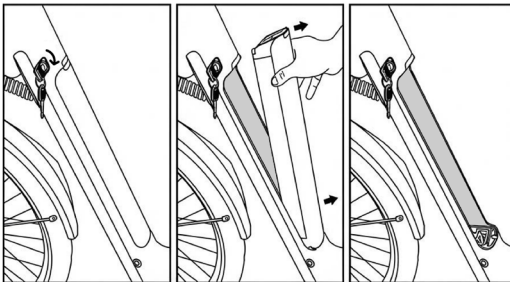


Fig. 5.b - Battery loads from top



Carefully touch the battery housing to confirm it is at ambient temperature. The battery should not feel unusually hot before installation. If the battery is hot, swollen, leaking, damaged, or shows any other abnormal condition, do not install or use it. Discontinue use immediately and contact your authorized eBliss retailer for inspection and service.

Installation Procedure:

- Ensure the connectors on the eBike and on the battery are clean, dry, undamaged, and properly aligned.
- Insert the battery into the battery compartment on the frame, ensuring the connectors engage smoothly. Do not force the battery into place.
- Pivot or press the battery into the locked position until you hear or feel a secure click. Confirm that the battery is fully seated and locked before riding.

To Charge the Battery**Before Charging:**

- Ensure the battery, charge port, charger, power supply unit, and all connectors are completely dry and free of dirt or debris.
 - Confirm that the charger, power cord, and plug are undamaged. Do not use the charger if there are cracks, exposed wires, loose connections, or other signs of damage. Contact your authorized eBliss retailer for inspection or replacement if any damage is present.
- Verify that the charging area is dry, well-ventilated, and free from flammable materials.
- Charge the battery only within an ambient temperature range of 50°F to 86°F (10°C to 30°C). Charging outside this range may damage the battery and can increase the risk of fire.

Charging Procedure:

- Turn the Command Center and the eBike power system to the OFF position.
- Locate the battery charge port and remove the protective cover, if equipped.
- Insert the charger connector fully into the battery charge port. Ensure the connection is secure and properly seated. Do not force the connector (see fig.6).
- Plug the charger into a properly grounded 110-volt wall outlet. Do not use extension cords, power strips, voltage converters, or inverters unless specifically approved.
- Confirm that the charger indicator light and battery indicator light illuminate. Most systems display a red light while charging and a green light when charging is complete.

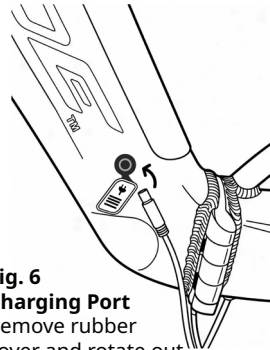



Fig. 6
Charging Port
Remove rubber cover and rotate out the way to plug in charger

During Charging:

- The battery must remain under observation while charging. Do not leave the battery unattended. If you must leave the area, disconnect the charger.
- Periodically check for abnormal heat, odor, smoke, unusual sounds, or other irregular conditions.
- Do not move the eBike or battery while charging.
- Do not allow the charger cable to be strained, pinched, or pulled loose.
- Charging typically takes between 3 and 8 hours depending on the battery's starting charge level.
 - Disconnect the charger promptly once a full charge is indicated. Do not leave the battery connected to the charger longer than necessary after charging is complete.


After Charging:


- Unplug the charger from the wall outlet first.
- Then disconnect the charger from the battery.
- Replace the charge port cover securely before riding.

 **WARNING:** Only use the charger supplied with your eBike or an approved replacement provided by eBliss. Use of an unapproved or incompatible charger can result in overheating, fire, electric shock, serious personal injury, or death.

E. Transporting Your eBike Battery

Lithium-Ion batteries are classified and regulated by transportation authorities as “Dangerous Goods” because of the inherent risk of a fire if they are damaged during transport. Check your local laws for details about shipping and transporting an eBike battery.

 **WARNING:** Do not ship or transport a damaged battery or attempt to circumvent laws regarding shipping of Lithium-Ion batteries. Failure to heed this warning may lead to a fire during the transportation process, resulting in serious personal injury or death to transportation workers or the public, and damage to vehicles or transportation facilities for which you may be held civilly and criminally responsible.

 **WARNING:** eBikes can be heavy and awkward to move. Failure to use proper lifting techniques may result in personal injury, or damage to the eBike if it is dropped.

CAUTION: Pay attention to the additional weight of an eBike when carrying, transporting, pushing, lifting, maneuvering or parking your eBike.

1. Transporting on a car rack

- Transporting an eBike inside a vehicle (if there's space in the vehicle to do so safely) is preferable to transporting on an exterior bike rack.
- Depending on the type, an eBike can be significantly heavier than a regular bicycle.
- Make sure the vehicle-mounted rack is rated for transporting eBikes and can accommodate the tire width.
- Pay particular attention when lifting it onto a vehicle-mounted bike rack. Use proper lifting techniques.
- Lifting the eBike may require assistance, especially if the rack is on the roof of a car.
- If the eBike is being transported on a roof rack, be aware that your vehicle's clearance is affected and the eBike can come in contact with low-hanging obstacles like garage doors or building entrances. Measure the height of the eBike on the roof and take note of the clearance measurement.
- If the battery and Command Center are easily removable, remove them and place them securely inside the vehicle. This not only keeps your battery safer, it also reduces the weight of the eBike, which makes it easier to lift and reduces the load on the bike rack.
- Make sure the battery can't roll around and is not exposed to direct sunlight or excessive heat or cold for an extended period of time, and the connectors are protected or covered.
- Do not use a rack that places the eBike upside down during transport. Placing the eBike upside down can result in damage to the handlebar controls.
- Regularly check that the eBike is securely held in place by the rack. An eBike that comes off the rack while driving can be a significant danger to other drivers.
- It is not recommended to transport your eBike on a rack that will result in significant exposure to rain without the use of a rain cover. This can lead to water ingress, which can cause damage to electrical components.

2. Transporting on public transit

- Familiarize yourself with any relevant rules regarding transporting your eBike on public transit, such as weight, battery restrictions and tire widths.
- Some public transit options require that a space is booked; others specify off-peak hours or the need to cover the eBike.

3. Transporting on an airplane

- Lithium-Ion batteries are classified as “Dangerous Goods” for transportation purposes and there are significant restrictions and regulations related to transporting a large Lithium-Ion battery by airplane.
- Check with your airline for any information about transporting a battery on an airplane before traveling.
- The battery may need to be shipped separately by a shipper who is trained and authorized to ship Dangerous Goods.

4. Shipping a battery

- Lithium-Ion batteries are classified and regulated by transportation authorities as “Dangerous Goods” because of the inherent risk of a fire if they are damaged during transport.
- Check your local laws for details about shipping and transporting an eBike battery.
- Many bicycle retailers are trained in the proper methods for shipping eBikes and batteries. Please consult your local retailer if you need to ship your eBike.



WARNING: Do not ship or transport a damaged battery or attempt to circumvent laws regarding shipping of Lithium-Ion batteries. Failure to follow this warning may lead to a fire during the transportation process, resulting in serious personal injury or death to transportation workers or the public, and damage to vehicles or transportation facilities for which you may be held civilly and criminally responsible.

5. Disposing of Your Battery (End of Battery Life)

Lithium-Ion batteries are highly efficient at storing large amounts of energy. However, they are consumable components and will not last indefinitely. Battery lifespan is affected by usage patterns, charging practices, storage conditions, operating temperatures, and overall care.

With each charge and discharge cycle, the battery's ability to store energy gradually decreases. Over time and with normal use, all Lithium-Ion batteries experience reduced capacity and shorter riding range.

To help maximize battery lifespan and performance:

- Charge only within the recommended temperature range stated in this Manual.
- Avoid storing the battery in a fully discharged condition.
- Store the battery indoors in a dry, temperature-controlled environment.
- Use only an Original Equipment (OE) charger approved by eBliss.
- Avoid exposure to extreme heat, freezing temperatures, moisture, impact, or physical damage.

Improper use, storage, modification, unauthorized repair, use of incompatible chargers, or use of non-approved replacement batteries can significantly reduce battery lifespan and may void the warranty.


A noticeable reduction in range or performance over time is normal and does not necessarily indicate a defect. However, when the battery no longer provides adequate performance for your intended use, it has reached the end of its practical service life.

If you notice a significant and sustained reduction in expected range or performance, contact your authorized eBliss retailer or eBliss Global customer support to have the battery inspected and replaced if necessary.

If replacement is required:

- Use only an Original Equipment (OE) battery approved by eBliss Global for your specific eBike model.
- Do not use unauthorized, refurbished, reconditioned, or incompatible third-party batteries.
- Do not attempt to open, modify, or repair the battery.

Use of unauthorized or incompatible batteries may create a safety risk and can result in fire, serious personal injury, death, or property damage.


 **WARNING:** Do not dispose of an eBike battery or any Lithium-Ion battery in household trash or a public waste receptacle. Batteries that enter the regular waste stream can be damaged, potentially leading to fire, serious personal injury, death, property damage, or environmental contamination.


Dispose of batteries and chargers that have reached end of life in an environmentally responsible manner and in accordance with regulations in effect in your country, state, or region.

In the United States, Call2Recycle partners with a national network of battery manufacturers and retailers to provide a battery recycling program. Contact your authorized eBliss retailer or eBliss Global customer support for disposal and recycling information applicable to your location.

EUROPE: In accordance with EU Directives 2012/19/EU and 2006/66/EC, waste electrical and electronic equipment (WEEE), including eBike batteries and chargers, must be collected separately from general waste. Contact your local eBike retailer for guidance on proper disposal.

7. SAFELY OPERATING YOUR EBIKE

 **WARNING:** Failure to read, understand and follow all instructions and warnings regarding the safe operation of an eBike may lead to a crash resulting in serious personal injury or death.

 **WARNING:** Electric bicycles can accelerate quickly and reach higher speeds than traditional bicycles. Increased speed reduces reaction time, increases stopping distance, and magnifies the consequences of loss of control or collision. Always ride within your skill level, remain attentive to road, traffic, and environmental conditions, and comply with all applicable laws and operating restrictions. Riding faster than conditions allow, beyond your ability, or in excess of legal limits can result in serious personal injury or death.

A. Safety First

Always wear an approved helmet when riding your eBike, and follow the helmet manufacturer's instructions for fit, use and care.

Always use all required and recommended safety equipment when operating your eBike. In addition to wearing an approved helmet, riders should use appropriate protective equipment and clothing, including:

- Closed-toe, secure footwear that will not slip off the pedals.
- Clothing that does not interfere with moving parts of the eBike.
- Eye protection to guard against debris and wind.
- Gloves to improve grip and help protect hands in the event of a fall.
- High-visibility or reflective clothing when riding in traffic or low-light conditions.

- Front and rear lights and reflectors when required by law or when visibility is reduced.

If carrying a passenger or using a child carrier or trailer, ensure all occupants wear properly fitted protective equipment appropriate for their age and size. Cycling apparel and conventional street clothing provide only limited abrasion or impact protection in the event of a fall or collision. Because eBikes can reach higher speeds than non-assisted bicycles, the risk of injury in a crash may be significant. Protective equipment reduces risk but does not eliminate it. You are responsible for complying with all applicable local laws regarding helmets, lighting, reflectors, and other required safety equipment.

Know where you are legally permitted to operate your eBike before riding. Laws governing eBike use vary by jurisdiction and may restrict where certain classes of eBikes may be operated. Refer to Page 37, Section 5: “eBike Features and Functions”, subsection E: “Where Can I Ride My eBike?”. You are responsible for understanding and complying with all applicable federal, state, and local laws governing eBike classification, speed limits, equipment requirements, and permitted riding locations.

Ensure your front and rear wheels are correctly installed and securely fastened before every ride. Improperly secured wheels can loosen, wobble, or disengage from the eBike during operation, which can result in loss of control, serious injury, or death. Page 130, Section 11: “Tech”, subsection A: “Wheels” for proper wheel installation and inspection procedures.

If your eBike is equipped with toeclips and straps or clipless (“step-in”) pedals, learn their proper use and adjustment before riding. These systems require specific techniques to engage and disengage safely. Failure to release your foot in time when slowing or stopping can cause a fall resulting in serious injury. Refer to Page 156, Section 11: “Tech”, subsection F: “Pedals”, and have your authorized eBliss retailer demonstrate proper setup and operation if you are unfamiliar with these systems.

Determine whether your eBike has “toe overlap” and understand its implications. On smaller-framed eBikes, the rider’s foot may contact the front wheel or fender when the pedal is forward and the handlebars are turned. This condition can affect low-speed maneuvering and tight turns. Refer to Page 156, Section 11: “Tech”, subsection F: “Pedals” to evaluate toe overlap and learn proper riding techniques to reduce risk.

If your eBike is equipped with front or rear suspension, understand that suspension components affect handling, braking performance, and overall ride stability. Improper setup or maintenance can negatively affect control. Suspension settings and service requirements may vary by model. Consult your authorized eBliss retailer for proper setup, inspection, and maintenance guidance.

B. Mechanical Check

Routinely check the condition of your eBike before every ride.

1. Nuts, bolts screws and other fasteners:

- Because eBikes incorporate a wide variety of fastener types, sizes, materials, and applications that may differ by model and component, the correct tightening force (torque) cannot be generalized.
- To ensure that the many fasteners on your eBike are correctly tightened, refer to the Fastener Torque Specifications provided in Appendix C, Page 204 of this Manual. If additional information is required for a specific component, consult your authorized eBliss retailer.
- Correctly tightening a fastener requires the use of a calibrated torque wrench.
- For optimal safety, fasteners should be tightened by a professional eBike mechanic using a calibrated torque wrench and the specifications provided in Appendix C of this Manual.
- If you choose to perform work on your own eBike, you must use a calibrated torque wrench and follow the torque specifications provided in Appendix C, Page 204 of this Manual or as confirmed by your authorized eBliss retailer.

- Failure to properly tighten fasteners may result in component failure, loss of control, serious personal injury, death, or property damage.

NOTE: There are some components, for example the drive system, battery and connecting wiring, that require special tools and knowledge, which you should not attempt to work on yourself. Refer to Page 119, Section 10: “Fit” and Page 130, Section 11: “Tech” for the items that you may be able to adjust yourself. All other adjustments and repairs should be done by a qualified eBike mechanic.



WARNING: Correct tightening force on fasteners, including nuts, bolts, and screws, is critical to the safe operation of your eBike. If a fastener is not tightened sufficiently, it may not hold securely. If a fastener is overtightened, threads may strip and components may stretch, deform, or break. Improper tightening can result in component failure, which may cause loss of control, serious injury, or death.

2. Inspect for Loose or Improperly Secured Components

Before every ride, perform a basic stability and attachment check.


- Lift the front wheel approximately two to three inches off the ground and allow it to drop. Listen for unusual rattling or metallic sounds that may indicate a loose component.
- Inspect the handlebar, stem, seatpost, saddle, racks, fenders, lights, and accessories to confirm they are firmly attached and do not move when pushed or pulled by hand.
- Visually examine all major components for gaps, misalignment, missing fasteners, or obvious movement at connection points.

If any component moves unexpectedly, shifts position, rattles excessively, or appears improperly secured, do not ride the eBike until it has been properly tightened or inspected by your authorized eBliss retailer.

3. Tires and Wheels:

- Confirm that both tires are inflated within the pressure range marked on the tire sidewall. Use a pump with an integrated pressure gauge for accurate measurement. Do not rely solely on visual appearance.
- Inspect each tire for visible cuts, cracks, embedded objects, excessive tread wear, bulges, or damage to the sidewall.
- Slowly rotate each wheel and observe that it spins smoothly without excessive side-to-side wobble.
- Check that the wheels are fully seated in the frame or fork and properly secured according to the wheel mounting system described on page 130, Section 11: “Tech”, subsection A: “Wheels”.

Do not ride the eBike if a tire is underinflated, damaged, excessively worn, or if a wheel is not properly secured. Replace damaged tires before riding.

 **WARNING:** Wheel trueness. Spin each wheel and observe for side-to-side or vertical wobble. A wheel that wobbles, appears out of true, or does not rotate smoothly may indicate improper spoke tension, wheel damage, or other structural issues. Riding with an out-of-true or damaged wheel can negatively affect handling and may lead to wheel failure. If any wheel wobble or abnormal movement is observed, do not ride the eBike and have the wheel inspected and serviced by an authorized retailer. Wheel truing is a skill that requires special tools and experience. Do not attempt to true a wheel unless you have the knowledge, experience and tools needed to do the job correctly.

4. Wheel retention system:

- Make sure the front and rear wheels are correctly secured. Refer to Page 130, Section 11: “Tech”, subsection A: “Wheels”.



WARNING: Riding with an improperly secured wheel can cause the wheel to wobble or disengage from the eBike, resulting in serious personal injury or death.

5. Brakes:

- Test both front and rear brakes before every ride to confirm proper operation.
- While standing next to the eBike, squeeze each brake lever firmly.
- The brake should begin to engage within approximately one inch of lever travel.
- The brake lever should not pull all the way to the handlebar grip when fully applied.
- When the brake is fully applied, the eBike should not roll forward or backward when you attempt to push it.
- Visually inspect the brake cables or hydraulic lines for fraying, cracks, kinks, leaks, or obvious damage. Ensure that cables or hoses are securely attached at the brake lever and at the brake caliper.

If the brake lever pulls to the handlebar, if braking feels weak or inconsistent, if you hear grinding or scraping noises, or if you observe damaged cables or fluid leaks, do not ride the eBike.

CAUTION: Do not operate the eBike until the brakes have been properly inspected and adjusted by a qualified professional eBike mechanic.

Disc brakes:

Disc brakes provide significantly greater stopping power than other brake systems. Sudden or excessive brake application, especially of the front brake, can cause wheel lock, loss of control, or cause the rider to be pitched forward, particularly if the rider is unfamiliar with disc brake performance. Refer to Page 130, Section 11: “Tech”, subsection A: “Wheels”.

6. Seat post:

- If your seat post has an over-center cam-action fastener for easy height adjustment, check that it is properly adjusted and in the locked position. Refer to Page 145, Section 11: “Tech”, subsection B: “Seat Post Cam-Action Clamp”.

7. Handlebar and saddle alignment:

- Make sure the saddle and handlebar stem are parallel to the eBike’s center line and clamped tightly enough so that you can’t twist them out of alignment. Refer to Section 10: “Fit”, subsection B: “Saddle Position” on Page 122, and subsection C: “Handlebar Height and Angle” on Page 126.



WARNING: The seat post must not be raised above the minimum insertion mark indicated on the seat post. Riding with the seat post extended beyond the minimum insertion line can cause the seat post or frame to fail, leading to loss of control, a crash, and serious personal injury or death. Always ensure the seat post is inserted to at least the minimum depth specified and securely clamped before riding.

8. Handlebar grips:

- Make sure the handlebar grips are secure and in good condition.
- If your grips are loose, or have cuts, tears or worn-out areas, have your authorized retailer replace them.
- Some handlebars are equipped with grips that lock on with a mechanical connection.
- They must have adequate space to properly align the grips with the handlebar ends and be properly plugged so no portion of the handlebar end is exposed.
- Locking grips must be properly tightened to avoid movement.



WARNING: Loose or damaged handlebar grips or unsecured handlebar extensions can cause you to lose control, causing a crash resulting in serious injury or death.



WARNING: Improperly secured locking grips could lead to a loss of control or a crash, resulting in serious injury or death.

9. Handlebar ends:

- Make sure the ends of the handlebar and any extensions are plugged. If not, have your authorized retailer plug them before you ride.
- If the handlebars are equipped with bar end extensions, ensure they are securely clamped and tightened to the torque specifications provided in Appendix C of this Manual or as confirmed by your authorized eBliss retailer. Improperly secured extensions can rotate or loosen during use, resulting in loss of control, serious personal injury, or death.
- Make sure your handlebar, extensions, grips and brake and shifting controls are secure and allow the safe operation of your eBike, including the ability to steer, brake and shift without any interference.



WARNING: The ends of handlebars and handlebar extensions must be plugged at all times. Unplugged handlebars or extensions can cut or impale you even in a minor crash, resulting in serious injury or death.


VERY IMPORTANT SAFETY NOTE:


Please also read and become thoroughly familiar with the important information on the lifespan of your eBike and its components. See Appendix B. "The Lifespan of Your eBike and Its Components" Page 192.

C. Before Your First Ride

When riding an eBike for the first time, be sure to familiarize yourself with the features and functions of your eBike by reading all product documentation and reviewing the features with your authorized retailer. Check the handling, response, and overall comfort of the eBike. If you have any questions, or if you feel anything about the eBike is not as it should be, consult your authorized retailer before you ride again. The following sections are intended to help familiarize you with the controls, features, and safe operation of your eBike before your first ride.

Brakes

 **WARNING:** For eBikes manufactured and shipped for sale in the United States, the front brake is installed on the left brake lever and the rear brake on the right brake lever at the factory. Brake lever configuration may be altered during assembly, service, or adjustment after delivery. In some international markets, brake lever function may be reversed. Before your first ride, and after any service, adjustment, or component replacement, confirm proper brake function at low speed in a controlled area. With the eBike stopped and under full control, slowly apply each brake lever one at a time to determine which lever operates the front brake and which operates the rear brake.

 **WARNING:** When riding, apply the rear brake first and increase braking force gradually. Sudden or excessive application of the front brake can cause loss of control and may pitch the rider over the handlebars. Excessive braking force can also cause a wheel to lock, resulting in a skid and a fall.

- Test the brakes at slow speeds by shifting your weight slightly toward the back while gently applying the brakes, rear brake first.

- Applying brakes too hard can lock up a wheel, which could cause you to lose control and fall.
- Skidding is an example of what can happen when a wheel locks up.

Familiarize yourself with the types of brakes and braking action of your eBike. Refer to Page 147, Section 11: “Tech”, subsection C: “Brakes” for more information on brakes and braking.


Braking feel on an eBike may differ from what you are accustomed to on a traditional bicycle. Disc brakes, in particular, provide strong and immediate stopping power. Riders new to disc brakes or eBikes may require a short familiarization period to develop smooth and controlled braking technique. Practice braking in a safe, controlled area until you are comfortable with the braking response of your eBike.


Disc brakes:


- Disc brakes are very common on most eBikes, and they provide significantly more stopping power than other types of brakes.


Disc brake rotors:

- Braking performance relies upon a clean rotor.
- It is not recommended to touch the disc brake rotors, as this can transfer oils from the hands to the braking surface and the brake pads.
- Only touch the rotor when it's cool, not moving, and with gloves on.

 **WARNING:** Disc brakes can generate strong and immediate stopping power. Riders who are unfamiliar with disc brake response may apply excessive front braking force, which can result in loss of control or the rider being pitched forward. Practice controlled braking in a safe area until you are comfortable with the braking characteristics of your eBike.

 **WARNING:** Properly functioning brakes are essential to the safe operation of your eBike. If your brakes do not seem to work properly, lose braking power, squeal excessively, or show any signs of damage to the brake levers, cables, housing, calipers, pads or rotors, stop using your eBike and bring it to your bicycle retailer for inspection and any required repairs. Riding an eBike with improperly functioning brakes can lead to a crash resulting in serious personal injury or death.

 **WARNING:** Be sure to carefully familiarize yourself with the stopping power of your brakes. If you are new to disc brakes, practice using the front and rear brakes together in a safe place away from traffic until you can safely stop your eBike in a controlled way. Failure to use disc brakes properly, locking up your wheels or excessive use of the front disc brake can lead to a crash or pitchover, resulting in serious personal injury or death.

 **WARNING:** Disc brakes are equipped with rotors that can generate a lot of heat. Avoid touching any part of the brake system with exposed skin (e.g., hands or legs). Skin contact against a hot brake rotor can result in burns.



WARNING: Disc brakes are equipped with rotors that can be very sharp. Avoid touching the rotors, especially when the wheels are rotating. Contact with a sharp rotor can cause serious injury.

Gears:

- Learn which shifter controls select easier and harder gears before riding in traffic.
- Practice shifting in a controlled area to become familiar with gear changes.
- Never move the shifter while pedaling backward, and do not pedal backward immediately after shifting.

Refer to Page 154, Section 11: “Tech”, subsection E: “Shifting Systems”.

Pedals:

- If your eBike is equipped with clipless pedals or toeclips, learn proper engagement and release techniques before riding in traffic. Practice in a controlled area until you can safely engage and disengage without hesitation. Refer to Page 156, Section 11: “Tech”, subsection F: “Pedals”.

Suspension:

- If your eBike has suspension, familiarize yourself with how the suspension responds to brake application and rider weight shifts. Refer to Page 159, Section 11(G): “Bicycle Suspension”.

Display Monitor/Command Center:

- Become familiar with all display features and control buttons before riding.

- Learn how to turn the system on and off, adjust pedal assist levels (PAS), and access essential ride information such as speed and battery status.
- Adjust pedal assist levels or navigate display menus only when stopped and in a safe location.
- Do not attempt to change settings while riding, as diverting attention from the roadway can result in loss of control or a crash.

Refer to Page 30, Section 5: “eBike Features and Functions”, subsection B: “Display and Control Systems” for detailed operating instructions.

Lights:

- Confirm how your lighting system operates and whether lights activate automatically or must be switched on manually.
- Use lights in accordance with local laws and whenever visibility conditions require it.
- Adjust the headlight beam so it illuminates the road ahead without shining into the eyes of oncoming traffic.

Power:

- Become familiar with your eBike’s power output and assist levels before riding in traffic.
- Begin riding in lower assistance settings and gradually increase as your skill and confidence improve.
- Transition to normal traffic conditions only after you are comfortable controlling the eBike.

Walk-assist:


- Learn how the walk-assist function operates before using it in confined areas.
- Practice walking beside the eBike while using walk-assist in a safe, open area to understand its speed and responsiveness.

Battery:

- Can the battery be easily removed from the eBike? If so, be sure to familiarize yourself with the process to properly and safely remove and install the battery.

Starting a ride:

- Develop a consistent and controlled starting procedure.
- Before mounting, ensure the power system is OFF.
- Sit fully on the saddle and place both hands on the handlebars.
- Apply at least one brake and confirm that the eBike is stable before placing a foot on a pedal.
- Do not apply forward pressure to a pedal until you are fully seated, balanced, and ready to move. Applying pedal pressure while the system is powered on can immediately activate motor assist and cause the eBike to move unexpectedly.

 **WARNING:** Do not place a foot on a pedal and swing a leg over the eBike while mounting. This is especially dangerous if the power system is on. Unlike a conventional bicycle, applying pressure to a pedal on an eBike can immediately activate motor assist and cause unintended forward movement. Unexpected acceleration during mounting can result in loss of control, serious personal injury, or death.

D. Before Every Ride

Before every ride, confirm that your eBike is in proper working order. Perform the following checks:

- Confirm that all battery and electrical connections, including the Command Center and drive unit connections, are fully seated and secure.
- Ensure the battery is securely installed and locked (if equipped with a lock).
- Verify that the battery has sufficient charge for your planned ride, as indicated on the Command Center. Recharge the battery after each ride as needed, and avoid allowing it to remain in a deeply discharged condition, as deep discharge can reduce battery lifespan and charging performance.
- Turn the system on and confirm the Command Center powers up normally and displays no error messages or fault codes. If any fault codes appear, or if displayed information seems abnormal, do not ride the eBike. Contact your authorized eBliss retailer for inspection before operating the eBike.



CAUTION: Do not operate the eBike if error messages, fault codes, or abnormal system information are displayed.

- Confirm that the battery is fully seated in its mounting position and securely locked, if equipped with a locking mechanism.
- Ensure all required lights are functioning and properly aimed. Replace non-functioning bulbs or components only with compatible parts approved for your eBike model.
- Inspect tires for cuts, cracks, embedded objects, excessive wear, or sidewall damage. Confirm that both tires are inflated within the pressure range printed on the tire sidewall. Use a pump with an integrated pressure gauge for accurate measurement.
- Test both front and rear brakes by firmly squeezing each brake lever. The levers should engage before reaching the handlebar and provide sufficient resistance to stop the eBike from rolling when pushed.

NOTE: Some brake systems have a cutoff switch to stop the motor when the brakes are applied. If your eBike is equipped with a motor cutoff switch integrated into the brake system, confirm that motor assistance disengages when the brake lever is applied.

E. General eBike Safety



WARNING: Failure to read, understand and follow all instructions and warnings regarding the safe operation of an eBike may lead to a crash resulting in serious personal injury or death.

An eBike incorporates an integrated electric drive system that changes how the bicycle accelerates, handles, and stops. Higher speed capability and increased weight require greater attention to braking distance, cornering speed, and overall control. You must read and follow all instructions and warnings in this Manual. The safety information in this Manual applies to all eBikes, regardless of type or class.

Important factors to consider when riding an eBike:

- **Power:** The added power and weight of the drive system means an eBike may accelerate faster and weigh more than a traditional bicycle. This additional acceleration, speed, and weight can significantly affect handling, cornering, and braking performance. The faster you travel and the more weight you carry (including passengers or cargo), the more caution is required when navigating traffic, slowing down (as stopping distances may increase), and entering corners (reduce speed before turning).

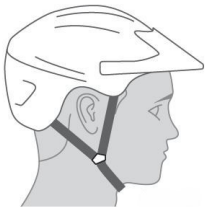
During normal operation, you may notice sounds or sensations that differ from a traditional bicycle, such as motor noise, drivetrain engagement, or changes in assistance level. These characteristics may vary depending on speed, terrain, load, and assist setting. Such sounds or sensations are typically normal and do not indicate a malfunction.

- **Cargo weight:** When transporting cargo or passengers, pay particular attention to the handling and braking characteristics when riding the eBike with the additional load. Carrying additional weight alters the center of gravity and can affect acceleration, braking distance, and cornering stability. Improper load management increases the risk of a crash, including the possibility of the rider or passenger being thrown forward or losing balance.

! **WARNING:** Failure to take into account the additional weight and speed of an eBike and its cargo can lead to a crash resulting in serious personal injury or death.

- **Helmet use (fig. 7):** Always wear a properly fitted helmet that is certified as meeting safety regulations when riding your eBike. Helmets designed specifically for higher-speed or electric bicycle use may offer additional protection features.

Fig. 7 - Properly Fitted Helmet



! **WARNING:** Wearing a helmet has been shown to reduce the frequency and severity of injury should there be a crash. Failure to wear a helmet may increase the risk of serious personal injury or death. See fig. 7.

- **Display Monitor/Command Center:** If your eBike has a display on the handlebar or frame, avoid paying excessive attention to it. Prolonged attention to the display can distract you from roadway hazards and increase the risk of a crash. It's intended only for occasional glances. Be sure to keep your attention on the road ahead


- **Children and pets:** When riding an eBike in proximity of children or animals, always be aware of their location and exercise caution to reduce the risk of injury.
- **Hot surfaces:** Hot surfaces: Some components of the eBike may become extremely hot during operation.




WARNING: Components can reach very high temperatures during use, especially when the eBike is subjected to high loads at low speeds, resulting in poor air movement around the eBike. For example, riding up a long, sustained hill, riding with a heavy load, or riding down a long hill with prolonged brake application, can result in one or more systems generating significant heat. Avoid contact with the battery housing, drive system, or brake system until components have cooled. Contact with hot surfaces can result in burns.

Avoid parking the eBike for extended periods in direct sunlight. Prolonged exposure to excessive heat and ultraviolet radiation can damage the battery and other components. It may also cause paint fading and deterioration of rubber or plastic parts, including drying, brittleness, or cracking.

- **Component temperature:** Various operating and environmental conditions can affect component temperatures. Increased mechanical load, reduced airflow, and extended operation may cause the motor, battery, or braking system to generate additional heat. The examples below describe conditions that typically increase thermal load on these components.
 - High ambient temperature
 - Hilly terrain (elevation gain)
 - Long distance of ride
 - Low level of assistance
 - High rider energy output
 - High combined weight of eBike, rider and cargo
 - Inefficient gear selections
 - Sustained application of brakes


 **WARNING:** Due to higher speeds and increased weight, eBikes may place greater loads on tires than traditional bicycles. If replacing tires, use only tires rated for eBike use. Worn, damaged, or incorrect tires can result in loss of control during braking or cornering, which may lead to a crash resulting in serious personal injury or death.


 **WARNING:** Keep medical devices or implants (e.g., pacemakers), and sensitive electronic devices that store digital data, away from magnets or sensors located on the eBike. Magnets or electromagnetic fields may interfere with the function of such devices.

F. Lighting and Night Riding


Riding an eBike at night presents significantly greater risk than riding during daylight hours. Cyclists are more difficult for motorists and pedestrians to see in low-light conditions. Night riding increases the likelihood of collision. Children should not ride at dawn, dusk, or at night. Adults who choose to ride at dawn, dusk, or at night must exercise additional caution and use appropriate lighting and visibility equipment to help reduce the increased risks associated with low-light conditions. Consult your authorized retailer about night riding safety equipment. Using a headlight while riding increases your visibility to other road users, even during daylight hours. Many eBikes are equipped with a headlight that is connected to and powered by the drive system, when the battery is charged and the system is turned on. If your eBike is equipped with a headlight, it is recommended to always have it on while riding. If your headlight does not turn on automatically when the drive system is turned on, turn on the headlight.


NOTE: Light systems connected to the drive system won't work if the battery is removed or fully discharged. In some countries, if the eBike is ridden without lights, it won't be in compliance with traffic laws.

 **WARNING:** Using a headlight and taillight is highly recommended. Riding an eBike at night or in low light or visibility conditions without a functioning headlight and taillight can create an increased risk of impact with obstacles, unseen road conditions, pedestrians, animals or other road users, including motor vehicles, leading to a crash resulting in serious personal injury or death.

 **WARNING:** Reflectors are not a substitute for required lights. Riding at dawn, at dusk, at night or at other times of poor visibility without an adequate bicycle lighting system and without reflectors is dangerous and may result in serious injury or death.

Bicycle reflectors are designed to pick up and reflect car lights and street lights in a way that may help you to be seen and recognized as a moving bicyclist.

 **CAUTION:** Check lights and/or reflectors and their mounting brackets regularly to make sure that they are clean, straight, unbroken and securely mounted. Have your authorized retailer replace damaged reflectors and straighten or tighten any that are bent or loose.

 **WARNING:** Do not remove the front or rear reflectors or reflector brackets from your eBike. They are an integral part of the eBike's safety system. Removing the reflectors reduces your visibility to others using the roadway. Being struck by other vehicles may result in serious injury or death.

If you choose to ride under conditions of poor visibility, check and be sure you comply with all local laws about night riding, and take the following strongly recommended additional precautions:

- If your eBike is not already equipped with compliant lighting, purchase and install battery- or generator-powered head and tail lights that meet all applicable regulatory requirements where you ride and provide adequate visibility.
- Wear light-colored, reflective clothing and accessories, such as a reflective vest, reflective arm and leg bands, reflective stripes on your helmet, flashing lights attached to your body and/or your eBike. Any reflective device or light source that moves will help you get the attention of approaching motorists, pedestrians and other traffic.
- Make sure your clothing or anything you may be carrying on the eBike does not obstruct a reflector or light.
- Make sure that your eBike is equipped with correctly positioned and securely mounted compliant lighting system or reflectors.

While riding at dawn, at dusk or at night:

- Ride slowly.
- Avoid dark areas and areas of heavy or fast-moving traffic.
- Avoid road hazards.
- If possible, ride on familiar routes.
- Ride defensively at all times and assume that other road users may not see you.

If riding in traffic:

- Be predictable. Ride so that drivers can see you and predict your movements.
- Be alert. Ride defensively and expect the unexpected.
- If you plan to ride in traffic often, ask your authorized retailer about traffic safety classes or a good book on bicycle traffic safety.

Your eBike may be equipped with an integrated lighting system designed to improve rider visibility. On some models, the lights may operate in a flashing mode to help attract attention during daylight riding. Lighting systems, reflector configurations, and regulatory requirements vary by model and jurisdiction. Consult your authorized EBliss retailer to confirm the specific lighting equipment installed on your eBike and to determine whether it meets applicable local laws and regulations for your intended use.

When riding in conditions where illumination is required to see the roadway or surroundings, including night or low-light conditions, the headlight must be set to **steady (non-flashing) ON mode**.



WARNING: Flashing lights may improve visibility to others but do not provide sufficient forward illumination for riding in dark or low-light conditions. Riding without adequate steady illumination increases the risk of collision and may result in serious personal injury or death.

Switching the Headlight to Steady ON Mode

To activate steady (non-flashing) headlight mode:

1. Power on the Command Center.
2. Press and hold the top button until the headlight remains continuously illuminated (see fig. 8).

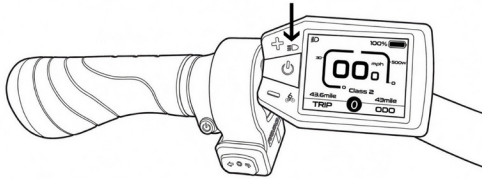


Fig. 8
Headlight Power Button
Press and hold to turn on

Note: The headlight will remain in steady mode until it is turned off, the system is powered down, or the battery is fully discharged.

NOTICE: Lighting requirements vary by jurisdiction. Some local laws require continuous illumination and may prohibit flashing headlights when riding at night or in low-visibility conditions.

If you are unsure whether your lighting configuration complies with local laws or is appropriate for your riding environment, consult your authorized eBike retailer.

G. General Bicycle Safety

The same safe riding practices that apply to unpowered bicycles also apply to eBikes. However, the addition of motor power allows greater acceleration and higher speeds. Strict adherence to these general safety practices is especially important.

Always perform the Mechanical Check before riding. Refer to Section 7, “Safely Operating Your eBike,” subsection B, “Mechanical Check” (Page 70). Be thoroughly familiar with the controls of your eBike. Refer to Section 11, “Tech” (Page 130), subsections C, “Brakes,” E, “Shifting Systems,” and F, “Pedals.”

Keep body parts and loose objects away from chainrings, belts, pedals, cranks, and spinning wheels.

Always wear:

- Shoes that stay securely on your feet and provide good grip on the pedals.
- Clothing that will not become entangled in moving parts. Secure shoelaces and never ride barefoot or in sandals.
- Bright, visible clothing that is not so loose that it can become tangled in the eBike or snagged by roadside objects.
- Protective eyewear to shield against airborne dirt, dust, and debris. Use tinted lenses in bright conditions and clear lenses in low-light conditions.

Unless your eBike was specifically designed for jumping as described in Appendix A, Page 180, Intended Use, do not jump your eBike. Jumping can place significant and unpredictable stress on the frame and components and may result in serious damage or rider injury. Before attempting stunts, jumping, or racing, read Page 98, Section 7: “Safely Operating Your eBike”, subsection J: “Extreme, Stunt or Competition Riding.”

Ride at a speed appropriate for conditions. Increased speed increases risk.



WARNING: Recognizing Abnormal Operation:

As you become familiar with your eBike, you will develop an understanding of how it normally sounds, feels, accelerates, brakes, and handles. If at any time the eBike behaves differently than expected, including unusual noises, vibrations, resistance, inconsistent braking response, unexpected power delivery, warning indicators, or changes in handling, stop riding as soon as it is safe to do so. Do not continue riding an eBike that does not feel or operate normally. Riding with a suspected mechanical, electrical, or structural issue can lead to a loss of control or component failure. If you are unsure whether a condition is normal, consult your authorized retailer before continuing to ride.

Riding Conditions and Performance Variability:

eBike performance characteristics such as acceleration, braking distance, handling, range, and motor assistance may vary depending on riding conditions. Factors including terrain, surface conditions, weather, temperature, wind, rider weight, cargo load, assist level, and riding style can all influence how the eBike responds. Riders should anticipate that riding conditions can affect handling, braking distance, and range, and should adjust speed and riding behavior accordingly.

H. Riding Safety

Obey all Rules of the Road and all local traffic laws.

You are sharing the road or path with others, including motorists, pedestrians, and other cyclists. Respect their rights. Ride defensively. Always assume that others may not see you.

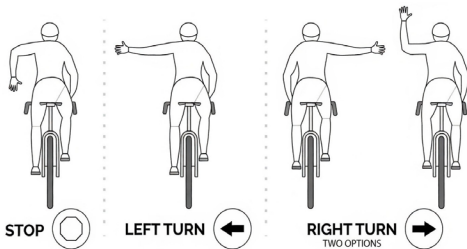
Look ahead and be prepared to avoid:

- Vehicles slowing, turning, entering the road or your lane ahead of you, or approaching from behind.
- Parked car doors opening.
- Pedestrians stepping into your path.
- Children or pets playing near the road.
- Potholes, sewer grates, railroad tracks, expansion joints, road or sidewalk construction, debris, and other obstructions that could cause you to swerve, lose control, or crash.
- Other hazards and distractions that may arise during a ride.

Ride in designated bike lanes or on designated paths when available. Otherwise, ride as close to the edge of the roadway as practicable in the direction of traffic flow, or as directed by local law.

Stop at stop signs and traffic lights. Slow down and look both ways at intersections. Remember that an eBike will not win in a collision with a motor vehicle. Be prepared to yield, even if you have the right of way. Use approved hand signals for turning and stopping. See fig.9.

Fig. 9
Hand Signals



Never ride with headphones or earbuds. They can mask traffic sounds and emergency vehicle sirens, reduce awareness of your surroundings, and may become entangled in moving parts, causing loss of control.

Never carry a passenger unless the eBike was designed to do so. Before installing a child carrier or trailer, consult your authorized eBliss retailer to confirm compatibility. If the eBike is suitable, ensure the carrier or trailer is properly mounted and that the child is secured and wearing an approved helmet. Refer to Page 105, Section 8, “Best Practices for Riding and Carrying Passengers and Cargo,” for additional guidance.

Never carry anything that obstructs your vision, interferes with control of the eBike, or could become entangled in moving parts.

Never hitch a ride by holding onto another vehicle.

Do not perform stunts, wheelies, or jumps. If you choose to do so despite this guidance, refer to Section 7, subsection J, “Extreme, Stunt or Competition Riding” (Page 98). Carefully consider your skill level before engaging in high-risk riding.

Do not weave through traffic or make unpredictable movements that may surprise other road users.

Observe and yield the right of way as required.

Never ride your eBike under the influence of alcohol or drugs.

If possible, avoid riding in poor weather, low visibility, at dawn, at dusk, in the dark, or when excessively fatigued. Each of these conditions increases the risk of a crash.

I. Off-Road Safety

We recommend that children not ride on rough terrain unless accompanied by an adult. Some eBikes may be designed for off-road use. If your eBike is designed for off-road use and you choose to ride off-road, follow these best practices:

Off-road riding involves variable terrain and hazards that require attention and skill. Start slowly on easier terrain and gradually build your skills. If your eBike is equipped with suspension, the increased speed you may develop can also increase the risk of losing control or falling. Become comfortable handling your eBike safely before attempting higher speeds or more difficult terrain.

Wear safety gear appropriate for the type of riding you plan to do.

Do not ride alone in remote areas. Even when riding with others, ensure someone knows your route and expected return time.

Carry identification in case of emergency, and consider bringing means for communication and basic necessities such as water and emergency funds.

Yield the right of way to pedestrians and animals. Ride in a manner that does not frighten or endanger them, and allow sufficient space to accommodate unexpected movements.


Be prepared. Assistance may not be readily available if a problem occurs while riding off-road.

Before attempting jumps, stunts, or racing, read and understand Section 7, subsection J, “Extreme, Stunt or Competition Riding” (Page 98).

Trail and Environmental Responsibility

Follow all regulations governing where off-road riding is permitted and respect private property. Trails may be shared with hikers, runners, equestrians, and other cyclists. Treat all users with courtesy. Stay on designated paths, avoid riding in muddy conditions, and do not create new trails or shortcuts. Protect the environment by leaving areas as you found them and carrying out all personal belongings and trash.

Wet-Weather Riding

 **WARNING:** Wet weather impairs traction, braking performance, and visibility for both the rider and other vehicles sharing the road. The risk of a crash is significantly increased in wet conditions.

In wet conditions, braking performance is reduced and tires provide less grip. This makes it more difficult to control speed and increases the likelihood of losing control. To reduce risk, ride more slowly and apply the brakes earlier and more gradually than you would under dry conditions.

Refer to Page 96, Section 7, “Safely Operating Your eBike,” subsection J, “Wet-Weather Riding,” for additional guidance.


J. Extreme, Stunt or Competition Riding

Whether you call it Aggro, Hucking, Freeride, North Shore, Downhill, Jumping, Stunt Riding, Racing, Enduro, or something else, if you engage in this sort of extreme or aggressive riding, you voluntarily assume a greatly increased risk of injury or death.

Not all eBikes are designed for these types of riding, and those that are may not be suitable for all types of aggressive riding. Check with your authorized eBliss retailer about the suitability of your eBike before engaging in extreme riding.

When riding fast downhill, you can reach speeds comparable to those achieved by motorcycles and therefore face similar hazards and risks. Have your eBike and equipment carefully inspected by a qualified mechanic and ensure it is in proper condition. Consult expert riders, site personnel, and race officials regarding conditions and equipment appropriate for the location where you plan to ride.

Wear appropriate safety gear, including an approved full-face helmet, full-finger gloves, and body armor. Ultimately, it is your responsibility to have proper equipment and to be familiar with course conditions.

 **WARNING:** Although many catalogs, advertisements, and articles depict riders engaged in extreme riding, this activity is extremely dangerous, increases your risk of injury or death, and increases the severity of any injury. The actions shown are performed by professionals with many years of training and experience. Know your limits and always wear a helmet and other appropriate safety gear. Even with advanced protective equipment, you could be seriously injured or killed when jumping, stunt riding, riding downhill at speed, or competing.



WARNING: eBikes and bicycle components have strength and durability limits. This type of riding can exceed those limits or significantly reduce their service life.

We recommend against this type of riding because of the increased risks. However, if you choose to take the risk, at least:

- Take lessons from a competent instructor.
- Start with easy exercises and gradually develop your skills before attempting more difficult or dangerous riding.
- Use only designated areas for stunts, jumping, racing, or fast downhill riding.
- Wear a full-face helmet, safety pads, and other protective gear.
- Understand that the stresses imposed on your eBike by this activity may damage components and void the warranty.
- Take your eBike to your authorized retailer if any part breaks or bends.
- Do not ride your eBike if any part is damaged.
- Know the limits of your skill and experience.
- Ultimately, avoiding injury is your responsibility.

K. Changing Components or Adding Accessories

There are many components and accessories available to enhance the comfort, performance, and appearance of your eBike. However, if you change components or add accessories, you do so at your own risk. Components or accessories not specified or approved by eBliss Global may not have been tested for compatibility, reliability, or safety with your eBike.

Before installing any component or accessory, including but not limited to a different size tire, lighting system, luggage rack, child seat, or trailer, confirm compatibility with your authorized retailer. Be sure to read, understand, and follow all instructions that accompany the products you purchase. See Appendix A. "Intended Use", Page 180, and Appendix B. "The Lifespan of your eBike and its components" Page 192.

! **WARNING:** Failure to confirm compatibility or to properly install, operate, and maintain any component or accessory may result in serious injury or death.

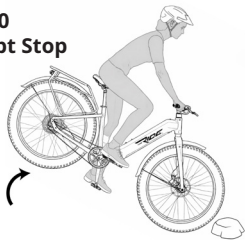
! **WARNING:** Exposed saddle springs on any eBike fitted with a child seat can cause serious injury to the child.

! **WARNING:** Changing components on your eBike with non-genuine replacement parts may compromise safety and may void the warranty. Check with your authorized retailer before making changes.

! **WARNING:** Any accessory or component attached to, on, or near a rotating wheel poses a risk of contacting or stopping the wheel, leading to a crash resulting in serious injury or death. Before every ride, ensure all such accessories and fasteners are secure.

! **WARNING:** Any object that unexpectedly and abruptly stops the rotation of the front wheel can cause the eBike and rider to pitch forward (see fig.10), which may result in serious injury or death.

Fig. 10
Abrupt Stop



L. Walk-Assist Mode

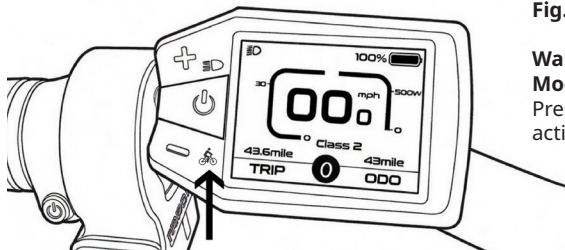


Fig. 11

Walk Assist Mode Button

Press and hold to activate

Some eBikes are equipped with a walk-assist mode to help move the eBike without riding it. Proper use of walk-assist mode is important to prevent loss of control and injury (see fig.11).

- Use only when dismounted.
- Keep both hands on the grips and fingers on one or both brake levers so motor power can be stopped immediately if necessary.
- Keep clear of the pedals while walking the eBike.

! **WARNING:** Make sure the eBike system is turned off so walk-assist mode cannot be accidentally activated when:

- Pushing the eBike without walk-assist engaged.
- Transporting the eBike, including lifting it onto a vehicle, rack, or train.
- Carrying the eBike up or down stairs.
- Performing maintenance or service near drivetrain components, including placing the belt on a chainring or repairing a flat tire.

M. Getting the Most Out of Your eBike

The variety of factors that affect your eBike's range makes it impossible to accurately estimate the range before a ride. Pay attention to the variables to maximize your range and adjust any factors during the ride as needed (e.g., lower assistance level, optimal gear shifting or lower speeds) to help you reach your destination. To maximize battery range, turn off the drive system when not in use. Most drive systems have a sleep mode to conserve energy, which will turn off if the eBike has not been active for a predetermined amount of time.

Your eBike's range varies based on a number of factors:

- **The level of motor assistance (power mode):** More power assistance from the motor will make riding easier but will use more battery power.
- **How much power you apply to the pedals:** The more power the rider provides, the less the motor has to work.
- **How fast you ride:** The faster you ride, the more power the motor generates, the more energy is required from the battery.
- **Riding habits:** The more efficiently you ride, the greater the range will be. For example, regular starts and stops will reduce your range.
- **Gear choices:** The higher the gear, the more power is required from the motor. Choosing the best gear for the terrain can improve your range.
- **Tire type and air pressure:** Tires with aggressive tread or lower than recommended pressure can increase your rolling resistance and reduce your range.
- **Number of battery charge/discharge cycles:** Regular charging and discharging reduces the battery's capacity, which will reduce your range.
- **Terrain features:** Hilly terrain will reduce your range more than flat terrain.
- **Wind and temperature conditions:** A strong headwind or colder temperatures can reduce the efficiency of your eBike and reduce your range.

- **Total combined weight (eBike, rider and cargo):** Carrying heavier cargo makes the motor work harder, which can reduce your range.
- **Condition of eBike components:** Certain components like wheel bearings, if not functioning smoothly, can increase rolling resistance, which can reduce your range.

To get the most range:


- Fully charge the battery before each ride.
- Use lower assistance modes.
- Ride more slowly and efficiently.
- Choose the right gear for the terrain and accelerate gently.
- Check tire pressure regularly and inflate the tires to a pressure within the range printed on the tire sidewall. Do not exceed the maximum pressure listed.
- Make sure your eBike is in proper working order and serviced regularly, the wheels spin freely and brake discs clear the brake pads.
- Carry the least amount of weight necessary. Choose your gears according to the speed and incline you're riding. Shift gears regularly to keep a consistent, comfortable pedaling speed, or cadence. Riding in a high gear with a low cadence increases the demand on the motor and battery, which can reduce your range. Choosing a lower gear with a higher cadence also puts less strain on the drivetrain, which can increase the longevity of the drivetrain. Maintain a steady pace and anticipate changes to your surroundings whenever possible. Any unnecessary deceleration requires more energy to accelerate back up to speed, which reduces your available range. Before coming to a stop, shift gears into an easier gear. This will make accelerating from a stop easier, and require less energy from the battery to get back up to speed. When riding uphill, keep to a reasonable pace and choose a lower gear with a higher cadence. This puts less strain on the motor, which can help increase the available range.

CAUTION (eBikes equipped with throttle): Riding uphill at slow speed using only the throttle can result in overheating of the drive system due to excessive strain. This can result in component failure, as well as subject the battery to excessive stress, which can reduce its capacity.

Center-mounted or “mid-drive” motors (motor that applies power to the cranks) share many of the same drivetrain components as a regular bicycle. However, the increase in force applied at the crank from the motor can result in greater strain on drivetrain components. In order to minimize the strain and maximize the lifespan

of the drivetrain, apply best practices when shifting:

- Shift efficiently by anticipating when the shift will be needed beforehand. For example, shifting into an easier gear before starting to climb a hill instead of during the climb.
- Ride with a cadence that matches the terrain and speed, so you’re not pedaling too slowly and with too much force.
- When shifting, reduce your pedal force or throttle, shift the gears, then gently re-engage your pedal force once the shift is complete.

 **WARNING: Shifting under heavy load can damage drivetrain components, which may result in loss of control. This can cause a crash, resulting in serious personal injury or death.**

Keep your eBike clean, well-maintained and functioning optimally. Check tire pressure regularly. The better your eBike is maintained, the more efficiently it will operate. Familiarize yourself with the startup procedures described in this Manual before riding. Before doing more extensive, longer and more demanding rides, become familiar with your eBike’s functions, features and operation so you can adapt your riding style to changing conditions.



WARNING: Conditions on the road, path or trail you are riding on can present sudden hazards. Avoid or exercise caution by slowing your speed on dangerous terrain, including:

- Potholes
- Train tracks
- Wet, oily or icy terrain
- Gravel or sand
- Curbs
- Wet leaves
- Speed bumps
- Drain grates
- Broken glass
- Thorns
- Steep hills
- Sharp or sudden turns
- Other hazards that can cause a puncture and/or loss of control

Failure to take these potentially dangerous conditions into account can cause a crash, leading to serious personal injury or death.

8. BEST PRACTICES FOR RIDING AND CARRYING PASSENGERS AND CARGO

When riding your eBike, you are usually sharing the roadway, path or trail with other users. This presents certain risks to yourself and others.



WARNING: Riding your eBike on public roads shared with motor vehicles presents an inherent and assumed risk of collision. Most serious injuries and fatalities related to eBike use are the result of collisions with larger, faster motor vehicles. When on an eBike, remember that you do not have the protection enjoyed by motorists, such as seat belts, airbags and the surrounding structure of a motor vehicle. As a road user, it is your responsibility to follow the rules of the road and operate your eBike in such a manner as to reduce your risk of a collision. Failure to follow this warning may lead to a collision or crash, resulting in serious personal injury or death.

Please be considerate of others around you, whether they are motorists, pedestrians or cyclists. Please pay attention to the following factors:

- **Your speed:** Always ride at a speed within your comfort zone and/or according to the conditions you're riding in (e.g., rain, darkness or loose dirt). This especially applies when riding in wet weather, as you'll need even more time and greater distance to slow down and are more likely to crash. Give lots of room to slow down and apply brakes gently. Riding at speeds beyond your comfort or skill level can result in a serious crash. Even if it's legal, it's not always safe to be riding at high speeds on paths or trails when other users are present.

- **Surrounding speeds:** Consider the speeds of those around you and how your speed may be perceived. eBike speeds are often underestimated because they resemble regular bicycles, and other road users may assume you are traveling slower than you are. Always remain vigilant at intersections and anywhere vehicles may cross your path.
- **Surrounding people:** Exercise caution when passing pedestrians or other cyclists. The greater the speed difference, the greater the likelihood of a crash. Slow when people or pedestrians are present, as they may not be aware of your presence and may step out in front of you. Riding with greater speed and weight requires more care, especially around other riders. Avoid distractions and stay focused on the road ahead. When following other riders, maintain a sufficient enough gap to allow you to stop safely. The higher your speed, the greater the gap should be.



CAUTION: When riding in a group, following other riders, or riding on crowded roads, paths or trails, always maintain a gap sufficient to allow you to stop safely.

- **Applying brakes:** Always be prepared to squeeze the brake levers. Your brakes are designed to take into account the weight of the eBike, rider and cargo to stop your eBike. If you apply them in a controlled manner, your eBike will slow down and come to a stop.
- **Brake power:** Do not rely exclusively on the front brake to slow down. Excessive front braking can shift too much weight forward and increase the risk of loss of control. To slow safely, begin by gently applying the rear brake, then progressively apply the front brake as needed. The appropriate braking force depends on terrain, weather conditions, speed, rider and cargo weight, and riding direction.



WARNING: Applying excessive force to the front brake to slow down can result in loss of control, including causing the rider to pitch over the handlebars, which can result in serious personal injury or death.

A. Riding with Passengers

Consult your authorized eBliss retailer for information about transporting passengers with your eBike. Many eBikes are designed for use by one person (the rider) unless otherwise stated in this Manual. Transporting a passenger beyond the intended design or capacity of the eBike is at your own risk. Certain passenger and cargo eBikes may have specific requirements regarding passenger placement and weight limits. Follow the rules and restrictions described in this Manual.

Before transporting passengers, including children (see “Transporting Youth and Children” below), inform yourself of all applicable laws, requirements and restrictions (including age restrictions) for your particular country or region. Some regions do not allow riding with passengers.

When carrying a passenger behind the rider, since they cannot see what’s coming, ride with more caution, anticipate whenever possible what’s coming sooner than usual, and always notify the passenger of an upcoming sudden acceleration, deceleration, turn, bump or obstacle that could impact their safety as a passenger, so they can brace for the event.

Remember: It is the rider’s responsibility to ensure the safe operation of the eBike and the safety of their passenger. Whenever possible, plan your route to avoid riding significant hills while carrying passengers.




WARNING: Do not exceed the specified payload capacity for your eBike model. For cargo eBikes, the maximum cargo payload is 150 pounds. Exceeding the applicable payload capacity can compromise structural integrity, increase braking distance, reduce handling stability, and lead to component failure, loss of control, or a crash resulting in serious personal injury or death.


Weight Limits: eBikes have maximum structural weight limits for the rider, passenger, and any cargo. Pay close attention to the structural weight limits specified in this Manual and do not exceed them. If you are unsure about the weight limit for your eBike, consult your authorized eBliss retailer. Even if the combined rider, passenger, and cargo weight is within the stated structural limits, the rider must determine whether they can safely and comfortably manage the total load.



WARNING: Do not exceed the maximum weight limits specified for your eBike model in Appendix A. "Intended Use", Page 180. These limits include rider, luggage, and total weight. For cargo eBike models, the maximum permitted cargo payload is 150 pounds in addition to the applicable rider weight limit. Exceeding these limits can compromise structural integrity, increase braking distance, reduce handling stability, and lead to component failure, loss of control, or a crash resulting in serious personal injury or death.

To protect passengers, always make sure to prevent loose clothing or personal belongings such as purses or backpacks from interfering with moving parts **W**hile your eBike is in motion.

 **WARNING:** Any contact from body parts, clothing or cargo with the eBike while in motion can unexpectedly and abruptly stop the eBike, leading to a crash resulting in serious personal injury or death.

 **CAUTION:** Make sure the eBike is secured and stable when loading or unloading passengers. The eBike can tip over when passengers are being loaded or unloaded, which can result in injury.

Your eBike may be equipped with a kickstand. The kickstand is designed to support only the eBike without a rider, cargo, or passengers, and only on a stable, flat surface.


Do not rely on the kickstand to support the eBike during loading or unloading.

Passengers should not mount the eBike unless the rider is holding it steady.

Never allow a child to climb onto the eBike without an adult ensuring it is stable.


Some eBikes may include a seating area, handholds, or foot supports for passengers.


Passengers must remain seated and use handholds and foot supports at all times while the eBike is in motion.

 **WARNING:** Passengers must not stand on foot supports while the eBike is in motion. Standing on the foot supports negatively affects the center of gravity of the eBike and can cause instability leading to a crash, which can result in serious personal injury or death.


Carrying Pets: Due to the unpredictable nature of pets, it is not recommended to ride with a pet as a passenger or live cargo. Pets should always be transported in a closed pet carrier or in a trailer designed for that purpose. Transporting a pet that is not restrained or confined puts the rider and pet at significant risk of injury, and you do so at your own risk.


B. Transporting Youth or Children

 **WARNING:** Riding with youth or children as passengers on an eBike carries significant risks. Parents must exercise caution and good judgment, and know they assume all risks when transporting a child.


 **WARNING:** Children must always wear an approved helmet when passengers on eBikes.


Age restrictions vary depending on the country or region. Before riding with a child as a passenger, familiarize yourself with and obey all applicable laws, requirements and restrictions for your country or region.

 **WARNING:** Always follow the installation, safety, and compatibility instructions provided with the child carrier. Ensure the child carrier is properly installed, with sufficient clearance for the child's heels and protection for fingers, and that the child is within the weight range specified for the child carrier. Always install foot restraints or guards designed to prevent body parts from becoming caught in a revolving wheel. Failure to follow these warnings and all instructions provided with the child carrier can cause serious injury to the child or a crash, resulting in serious personal injury or death.


 **WARNING:** Do not leave a child unattended in a child carrier, and do not rely on a kickstand to hold an eBike up safely, except when buckling the child in the child carrier. Always hold the eBike safely and securely when a child is in the child carrier, and remove the child before leaving the eBike. An unattended child can wriggle unexpectedly and cause the eBike to fall over, which can result in serious personal injury or death.

Check on your child regularly. If they fall asleep, it can put excessive strain on their neck. A child should only be placed in a child seat if they're able to hold their head up independently, as well as withstand the movements and bouncing that come with riding on an eBike.

 **CAUTION:** Your eBike provides motor-assisted speed enhancement. Increased speed requires greater braking distance and heightened awareness. Use of eBike features involves increased risk of injury. Know your eBike and your personal limits. Always wear a helmet and other appropriate safety gear, and comply with all applicable laws and regulations. eBliss Global is not responsible for injuries or damages resulting from misuse, overloading, improper installation, unsafe operation, or non-compliance with applicable laws.


 **WARNING:** Improper mounting of a child carrier, trailer or accessory may result in failure of the frame, fork or components, causing serious personal injury or death.


C. Transporting Cargo

 **WARNING:** Cargo should only be carried on an eBike that is designed for that purpose. Carrying cargo on an eBike that is not designed for that purpose may lead to loss of control or crash, which can result in serious personal injury or death.


Always load cargo as low as possible to help maintain a low center of gravity. This helps improve the stability of the eBike.

When riding with cargo, practice and familiarize yourself with the braking distances and handling characteristics of the eBike by starting with lighter loads and gradually increasing the weight. Carrying increased weight will increase your braking distance, which requires more careful use of your brakes. To help maintain control, start by applying the rear brake first, then gently apply the front brake. Gradually increase the braking force as needed to safely slow the eBike in a controlled manner.

 **WARNING:** Cargo must be properly secured to the eBike with no loose straps and checked periodically to ensure the cargo remains secure. Loose cargo can shift or fall off the eBike and can interfere with moving parts. Loose straps can also interfere with moving parts. Either of these situations can cause a crash, resulting in serious personal injury or death.

 **WARNING:** Always make sure the eBike is stable and secure before loading or unloading any cargo, and the cargo is loaded to minimize any interference with obstacles, other cyclists, pedestrians or motorists. Always be aware of your surroundings. Cargo that interferes with your surroundings can cause a crash, which can result in serious personal injury or death.


1. Cargo eBikes

 **WARNING:** All of the above instructions and warnings about carrying passengers and cargo apply to cargo eBikes. Failure to follow these warnings could result in a crash leading to serious personal injury or death.

Cargo eBikes are eBikes designed specifically to carry cargo and/or passengers. The handling characteristics of cargo eBikes can be very different from a regular eBike. As cargo eBikes typically handle much slower, additional practice is often required to get used to the handling. Ride more defensively, give more room for turning, anticipate needing more distance to slow down, especially when carrying cargo. Practice parking the cargo eBike as well. Do not ride with cargo that isn't properly secured.


D. Using a Trailer

If use of a trailer, carrier or other passenger accessory is allowed with your eBike, make sure the trailer is compatible with your eBike. Consult your authorized retailer for more information about trailer compatibility and installation. The eBike must be safe to ride with the trailer accessories installed, and the trailer must be securely attached to the eBike.

 **WARNING:** eBliss Global cannot test all available trailers for compatibility and safety. Always follow the installation, safety, and usage instructions provided with the trailer. An incompatible or incorrectly installed trailer can cause a crash, resulting in serious personal injury or death.

Towing a trailer with passengers or cargo increases the weight being towed by the eBike, which can negatively affect handling in multiple ways:

- **Balance and handling:** Passengers or cargo in the trailer can move around and shift the balance and center of gravity of the eBike, which can affect the safe handling of the eBike.
- **Cornering:** Entering corners must be done more slowly and carefully.
- **Stopping:** It takes more distance to slow and stop your eBike.
- **Maneuvering:** Making quick direction changes is more difficult.
- **Accelerating:** More motor power is required to accelerate, which requires more battery energy.

 **WARNING: Towing a trailer behind your eBike can result in instability of the eBike and trailer. This can cause a crash, which can result in serious personal injury or death.**

9. DRIVE SYSTEMS

A. General Information About Your Drive System

Read, understand, and follow all drive system instructions provided in this Manual. Refer to this Manual for information on how to turn the system on or off. Only turn the eBike on or off as described in this Manual.



WARNING: NEVER open the battery pack or modify the wiring or any electrical components of your eBike. Opening the battery or modifying the wiring can result in electric shock and can cause a fire.



WARNING: Do not expose the drive system to excessive water. Never fully submerge the drive system or use a pressure washer to clean your eBike. Exposure of the battery or internal components of the drive system to water can result in serious damage to the system components, resulting in electric shock or fire, leading to property damage, serious personal injury or death.



WARNING: The drive system does not contain any user-serviceable parts. Any service should be performed by a qualified technician. Do not attempt to open, disassemble, modify, adjust or service any part of the drive system or its components. Any tampering with the internals of the motor, battery or other drive system components can result in damage to the system or lead to a battery fire, which can cause serious personal injury or death.

 **WARNING: eBike drive system components are only intended for use on eBikes. Do not use these components for any other purpose or vehicle.**

eBikes are equipped with electronic components that may occasionally require software or firmware updates. Regularly check with your authorized retailer for any updates specific to your eBike drive system. The mechanical parts of the drivetrain on most eBikes are often very similar to a drivetrain used on a regular bicycle, and often shift in the same way. Follow the same recommendations and best practices as a regular bicycle to shift in a way that is most beneficial to the durability and efficiency of your drivetrain. For more information on servicing your eBike, including the mechanical components, please refer to Page 171, Section 12, “Maintaining and Servicing Your eBike”.

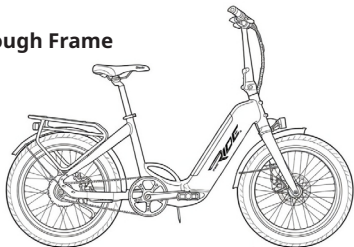
10. FIT

NOTE: Correct fit is an essential element of bicycling safety, performance and comfort. Making the adjustments to your eBike that result in correct fit for your body and riding conditions requires experience, skill and special tools. Always have your authorized retailer make the adjustments on your eBike. Or, if you have the experience, skill and tools, have your authorized retailer check your work before riding.

! **WARNING:** If your eBike does not fit properly, you may lose control and fall. If your new eBike doesn't fit, ask your authorized retailer to exchange it before you ride it.

! **WARNING:** No rider should operate an eBike that is too large or improperly sized for them. This is especially important for children. Proper fit is essential for safe control, balance, and braking. While some eBikes have step-through frames (see fig.12) that may make mounting easier, that does not mean the eBike is appropriately sized for a child. An eBike that is too large for the rider can lead to loss of control, falls, or crashes resulting in serious personal injury or death.

Fig. 12
Step-through Frame



Ensure your eBike is the correct size before riding. Refer to Page 120, Section 10, “Fit,” subsection A, “Standover Height.” Riding an eBike that is too large or too small can result in loss of control and a fall. If your eBike is not the correct size, contact your authorized retailer before riding.

Set the saddle to the correct height. Refer to Page 121, Section 10, “Fit,” subsection B, “Saddle Position.” When adjusting saddle height, follow all Minimum Insertion instructions.

Confirm that the saddle and seat post are securely clamped. A properly tightened saddle should not move in any direction. Refer to Page 121, Section 10, “Fit,” subsection B, “Saddle Position.” and Page 145, Subsection B, “Seat Post Cam-action Clamp.”

Adjust the stem and handlebars to the proper height and angle. Refer to Page 126, Section 10, “Fit,” subsection C, “Handlebar Height and Angle.”

Ensure you can comfortably and fully operate the brakes. If necessary, adjust control position and brake reach. Refer to Page 127, Section 10, “Fit,” subsections D, “Control Position Adjustments,” and E, “Brake Reach.”

Fully understand how to operate your eBike before your first ride. If you are unsure about any function or feature, consult your authorized retailer for instruction.

A. Standover Height



Fig. 13a
Diamond Frame



Fig. 13b
Step-Through Frame

1. Diamond-frame eBikes

Standover height is the basic element of eBike fit (see fig. 13a). It is the distance from the ground to the top of the eBike's frame at that point where your crotch is when straddling the eBike. To check for correct standover height, straddle the eBike while wearing the kind of shoes in which you'll be riding, and bounce vigorously on your heels. If your crotch touches the frame, the eBike is too big for you. Don't even ride the eBike around the block. An eBike which you ride only on paved surfaces and never take off-road should give you a minimum standover height clearance of two inches (5 cm). An eBike that you'll ride on unpaved surfaces should give you a minimum of three inches (7.5 cm) of standover height clearance. And an eBike that you'll use off-road should give you four inches (10 cm) or more of clearance.

2. Step-through frame eBikes

Standover height does not apply to eBikes with step-through frames (see fig. 13b). Instead, the limiting dimension is determined by saddle height range. You must be able to adjust your saddle position as described on page 122, Section "B. Saddle Position", item 1. "Up and down adjustment." without exceeding the limits set by the height of the top of the seat tube and the "Minimum Insertion" or "Maximum Extension" mark on the seat post.

B. Saddle Position

Correct saddle adjustment is an important factor in getting the most performance and comfort from your eBike. If the saddle position is not comfortable for you, see your authorized retailer. Small changes in saddle position can have a substantial effect on performance and comfort. To find your best saddle position, make only one adjustment at a time. The saddle can be adjusted in three directions:

1. **Up and down adjustment.** To check for correct saddle height (see fig. 14):

- sit on the saddle
- place one heel on a pedal
- rotate the crank until the pedal with your heel on it is in the down position and the crank arm is parallel to the seat tube.

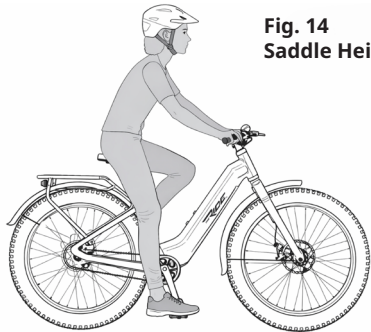


Fig. 14
Saddle Height

If your leg is not completely straight, your saddle height needs to be adjusted. If your hips must rock for the heel to reach the pedal, the saddle is too high. If your leg is bent at the knee with your heel on the pedal, the saddle is too low. Ask your authorized retailer to set the saddle for your optimal riding position and to show you how to make this adjustment. If you choose to make your own saddleheight adjustment:

- Loosen the seat post clamp
- Raise or lower the seat post in the seat tube
- Make sure the saddle is level fore and aft
- Re-tighten the seat post clamp to the torque specification listed in Appendix C, Page 204 of this Manual.

Once the saddle is at the correct height, make sure that the seat post does not project from the frame beyond its “Minimum Insertion” or “Maximum Extension” mark (see Fig. 15 and Fig. 16).

NOTE: Some eBikes have a sight hole in the seat tube, the purpose of which is to make it easy to see whether the seat post is inserted in the seat tube far enough to be safe. If your eBike has such a sight hole, use it in addition to the “Minimum Insertion” or “Maximum Extension” mark to make sure the seat post is inserted in the seat tube far enough to be visible through the sight hole (see fi

Fig. 15
Minimum
Insertion

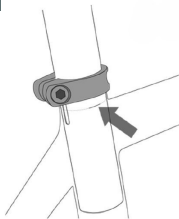




Fig. 16
Maximum
Extension




 **WARNING:** If your seat post is not inserted in the seat tube as described in B.1 above, the seat post, binder or even frame may break, which could cause you to lose control and fall.

- 2. Front and back adjustment.** The saddle can be adjusted forward or back to help you achieve an optimal riding position on the eBike. Ask your authorized retailer to set the saddle for your optimal riding position and to show you how to make this adjustment. If you choose to make your own front and back adjustment, make sure that the clamp mechanism is clamping on the straight portion of the saddle rails and is not contacting the curved portion of the rails, and that you tighten the clamping fastener(s) to the torque specification listed in Appendix C, Page 204 of this Manual.
- 3. Saddle angle adjustment.** Most people prefer a horizontal saddle, but some riders prefer the saddle nose angled slightly up or down. Your authorized retailer can adjust saddle angle or teach you how to do it. If you choose to make your own saddle angle adjustment and you have a single-bolt saddle clamp on your seat post, it is critical that you loosen the clamp bolt sufficiently to allow any serrations on the mechanism to disengage before changing the saddle angle, and then ensure the serrations fully re-engage before tightening the clamp bolt to the torque specification listed in Appendix C, Page 204 of this Manual.


 **WARNING:** When making saddle angle adjustments with a single bolt saddle clamp, always check to make sure that the serrations on the mating surfaces of the clamp are not worn. Worn serrations on the clamp can allow the saddle to move, causing you to lose control and fall.

 **WARNING:** Always tighten fasteners to the correct torque. Bolts that are too tight can stretch and deform. Bolts that are too loose can move and fatigue. Either mistake can lead to a sudden failure of the bolt, causing you to lose control and fall.

NOTE: If your eBike is equipped with a suspension seat post, the suspension mechanism may require periodic service or maintenance. Ask your authorized retailer for recommended service intervals for your suspension seat post.

 **WARNING:** After any saddle adjustment, be sure that the saddle adjusting mechanism is properly seated and tightened before riding. A loose saddle clamp or seat post clamp can cause damage to the seat post, or can cause you to lose control and fall. A correctly tightened saddle adjusting mechanism will allow no saddle movement in any direction. Periodically check to make sure that the saddle adjusting mechanism is properly tightened.

If, in spite of carefully adjusting the saddle height, tilt and fore-and-aft position, your saddle is still uncomfortable, you may need a different saddle design. Saddles, like people, come in many different shapes, sizes and resilience. Your authorized retailer can help you select a saddle which, when correctly adjusted for your body and riding style, will be comfortable.

 **WARNING:** Some people have claimed that extended riding with a saddle which is incorrectly adjusted or which does not support your pelvic area correctly can cause short-term or long-term injury to nerves and blood vessels, or even impotence. If your saddle causes you pain, numbness or other discomfort, listen to your body and stop riding until you see your authorized retailer about saddle adjustment or a different saddle.

C. Handlebar Height and Angle

Your eBike is equipped either with a “threadless” stem, which clamps on to the outside of the steerer tube, or with a “quill” stem, which clamps inside the steerer tube by way of an expanding binder bolt.

Important Notice: Folding Specific Stem Design

CAUTION: Some of our folding bicycle models use a folding-specific stem design that differs from conventional bicycle stems.

If you own one of our folding bikes, your bicycle may not use a traditional quill stem or a standard threadless stem. Instead, folding models often use a folding-specific stem assembly designed for use on folding bicycles.

This stem design:

- Clamps directly to the fork steerer tube, below the folding mechanism
- Uses a long, narrow, vertical stem tube that connects the headset and steerer tube to the handlebars
- Is an integral structural component of the folding system

Because of this design:

- Standard stem adjustment, replacement, or service procedures may not apply
- Improper adjustment, disassembly, or substitution of components can result in loss of control, serious injury, or death

Do not attempt to modify, replace, or service the stem or folding mechanism unless you are specifically instructed to do so in this manual or by an authorized dealer.

If you are unsure which type of stem your bicycle uses, or if you have any questions about adjustment or service, **stop riding and contact an authorized dealer or qualified bicycle mechanic** before proceeding.

If you aren't absolutely sure which type of stem your eBike has, ask your authorized retailer.

If your eBike has a "threadless" stem (see fig. 17) your authorized retailer may be able to change handlebar height by moving height adjustment spacers from below the stem to above the stem, or vice versa. Otherwise, you'll have to get a stem of different length or rise. Consult your authorized retailer. Do not attempt to do this yourself, as it requires special knowledge.

If your eBike has a "quill" stem (see fig. 18) you can ask your authorized retailer to adjust the handlebar height a bit by adjusting stem height. A quill stem has an etched or stamped mark on its shaft that designates the stem's "Minimum Insertion" or "Maximum Extension". This mark must not be visible above the headset.

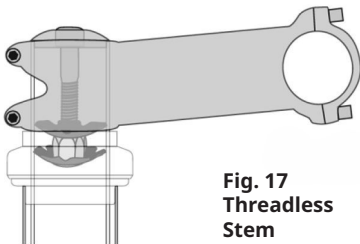


Fig. 17
Threadless
Stem

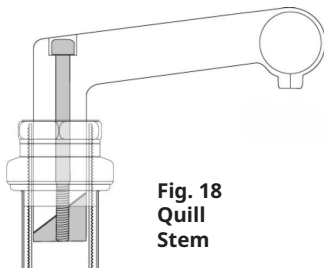





Fig. 18
Quill
Stem

 **WARNING:** A quill stem's Minimum Insertion Mark must not be visible above the top of the headset. If the stem is extended beyond the Minimum Insertion Mark the stem may break or damage the fork's steerer tube, which could cause you to lose control and fall.

 **WARNING:** On some eBikes, changing the stem or stem height can affect the tension of the front brake cable, locking the front brake or creating excess cable slack which can make the front brake inoperable. If the front brake pads move in toward the wheel rim or out away from the wheel rim when the stem or stem height is changed, the brakes must be correctly adjusted before you ride the eBike.

Some eBikes are equipped with an adjustable angle stem. If your eBike has an adjustable angle stem, ask your authorized retailer to adjust it. Do not attempt to make the adjustment yourself, as changing stem angle may also require adjustments to the eBike's controls.

Your authorized retailer can also change the angle of the handlebar or bar end extensions.

 **WARNING:** An insufficiently tightened stem clamp bolt, handlebar clamp bolt or bar end extension clamping bolt may compromise steering action, which could cause you to lose control and fall. Place the front wheel of the eBike between your legs and attempt to twist the handlebar/stem assembly. If you can twist the stem in relation to the front wheel, turn the handlebars in relation to the stem, or turn the bar end extensions in relation to the handlebar, the bolts are insufficiently tightened.

WARNING: Be aware that adding aerodynamic extensions to handlebars will change the steering and braking response of the eBike.

D. Control Position Adjustments

The angle of the brake and shift control levers and their position on the handlebars can be adjusted. Ask your authorized retailer to make these adjustments for you. If you choose to adjust the control lever angle yourself, be sure to re-tighten the clamp fasteners to the torque specification listed in Appendix C, Page 204 of this Manual.

E. Brake Reach

Many eBikes have brake levers that can be adjusted for reach. If you have small hands or find it difficult to squeeze the brake levers, your authorized retailer can either adjust the reach or fit shorter-reach brake levers.



WARNING: The shorter the brake lever reach, the more critical it is to have correctly adjusted brakes, so that full braking power can be applied within available brake lever travel. Brake lever travel insufficient to apply full braking power can result in loss of control, which may result in serious injury or death.

11. TECH

It's important to your safety, performance and enjoyment to understand how things work on your eBike. We urge you to ask your authorized retailer how to do the things described in this section before you attempt them yourself, and that you have your authorized retailer check your work before you ride the eBike. If you have even the slightest doubt as to whether you understand something in this section of the Manual, talk to your authorized retailer. See Appendix A. "Intended Use", Page 180 & Appendix B. "The Lifespan of Your eBike and Its Components", Page 192 & Appendix C. "Fastener Torque", Page 204.

A. Wheels

eBike wheels are designed to be removable for easier transportation and for repair of a tire puncture. The wheel axles are inserted into slots, called "dropouts," in the fork and frame, but some eBikes use what is called a "thru-axle" wheel mounting system.

Identify the retention system used for each wheel with assistance from your authorized retailer if needed before proceeding with the instructions below.

If a wheel on your bike is equipped with a thru-axle retention system, refer to Page 136, Section 11, Tech, subsection A.3, "Thru-Axle Wheel Mounting System".

If a wheel on your bike is not equipped with a thru-axle wheel mounting system, it will be secured in one of the following ways:

1. A hollow axle with a shaft ("skewer") running through it which has an adjustable tension nut on one end and an over-center cam lever on the other (cam-action system, fig. 19a & 19b).

Fig. 19a
Cam-Action
System

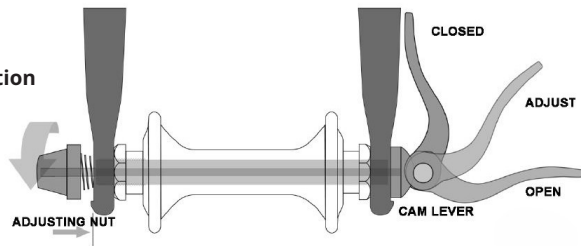
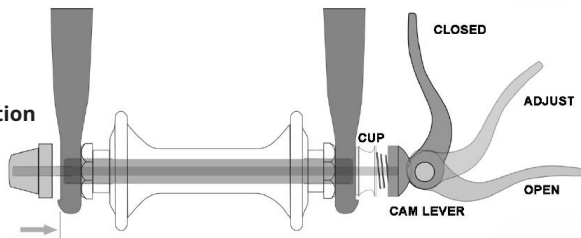


Fig. 19b
Cam-Action
System



2. A hollow axle with a shaft (“skewer”) running through it which has a nut on one end and a fitting for a hex key, lock lever, or other tightening device on the other (through-bolt, fig. 20).
3. Hex nuts or hex key bolts which are threaded on to or into the hub axle (bolt-on wheel, fig. 21).

Your eBike may be equipped with a different securing method for the front wheel than for the rear wheel. Discuss the wheel securing method for your eBike with your authorized retailer.

Fig. 20
Through-Bolt

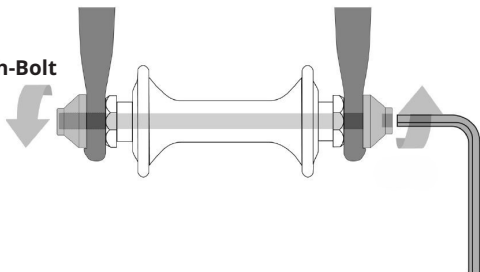
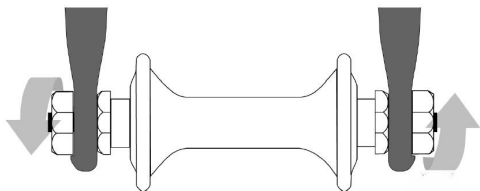


Fig. 21
Bolt-On
Wheel



It is very important that you understand the type of wheel securing method on your eBike, that you know how to secure the wheels correctly, and that you know how to apply the correct clamping force that safely secures the wheel. Ask your authorized retailer to instruct you in correct wheel removal and installation, and ask your authorized retailer to provide any available instructions.



WARNING: Riding with an improperly secured wheel can allow the wheel to wobble or fall off the eBike, which can cause serious injury or death. Therefore, it is essential that you:


- 1. Ask your authorized retailer to help you make sure you know how to install and remove your wheels safely.**
- 2. Understand and apply the correct technique for clamping your wheel in place.**
- 3. Each time before you ride the eBike, check that the wheel is securely clamped. The clamping action of a correctly secured wheel must emboss the surfaces of the dropouts.**

1. Front wheel secondary retention devices

Most eBikes equipped with an over-center cam, through-bolt or bolt-on front wheel retention have front forks with slotted dropouts that utilize a secondary wheel retention device to reduce the risk of the wheel disengaging from the fork if the wheel is incorrectly secured. Secondary retention devices are not a substitute for correctly securing your front wheel. Secondary retention devices fall into two basic categories:

- a. The clip-on type is a part installed on the front wheel hub or front fork.**
- b. The integral type is molded, cast or machined into the outer faces of the front fork dropouts.**

Ask your authorized retailer to explain the particular secondary retention device on your eBike.

 **WARNING:** Do not remove or disable the secondary retention device. As its name implies, it serves as a back-up for a critical adjustment. If the wheel is not secured correctly, the secondary retention device can reduce the risk of the wheel disengaging from the fork. Removing or disabling the secondary retention device may also void the warranty.

Secondary retention devices are not a substitute for correctly securing your wheel. Failure to properly secure the wheel can cause the wheel to wobble or disengage, which could cause you to lose control and fall, resulting in serious injury or death.

2. Wheels with cam-action systems

There are currently two types of over-center cam wheel retention mechanisms: the traditional over-center cam (fig. 22a, page 136) and the cam-and-cup system (fig. 22b, page 136). Both use an over-center cam-action to clamp the eBike's wheel in place. Your eBike may have a cam-and-cup front wheel retention system and a traditional rear wheel cam-action system.

a. Adjusting the traditional cam-action mechanism (fig. 22a, page 136)

The wheel hub is clamped in place by the force of the over-center cam pushing against one dropout and pulling the tension adjusting nut, by way of the skewer, against the other dropout. The amount of clamping force is controlled by the tension adjusting nut. Turning the tension adjusting nut clockwise while keeping the cam lever from rotating increases clamping force; turning it counterclockwise while keeping the cam lever from rotating reduces clamping force. Less than half a turn of the tension adjusting nut can make the difference between safe clamping force and unsafe clamping force.



WARNING: The full force of the cam-action is needed to clamp the wheel securely. Holding the nut with one hand and turning the lever like a wing nut with the other hand until everything is as tight as you can get it will not clamp a cam-action wheel safely in the drop-outs. See also the first WARNING in this section, on Page 133.

b. Adjusting the cam-and-cup mechanism (fig. 22b, page 136)

The cam-and-cup system on your front wheel will have been correctly adjusted for your eBike by your authorized retailer. Ask your authorized retailer to check the adjustment every six months. Do not use a cam-and-cup front wheel on any eBike other than the one for which your authorized retailer adjusted it.

Fig. 22a
Cam-Action
System

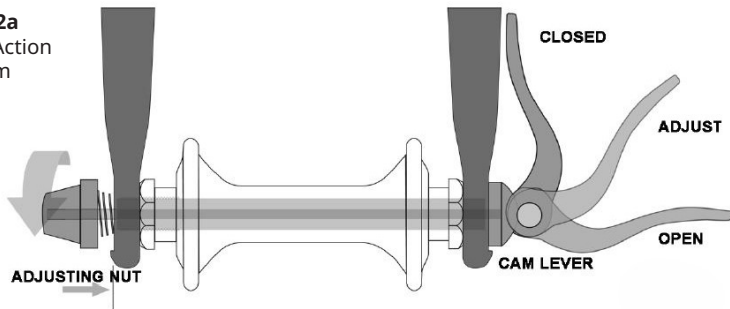
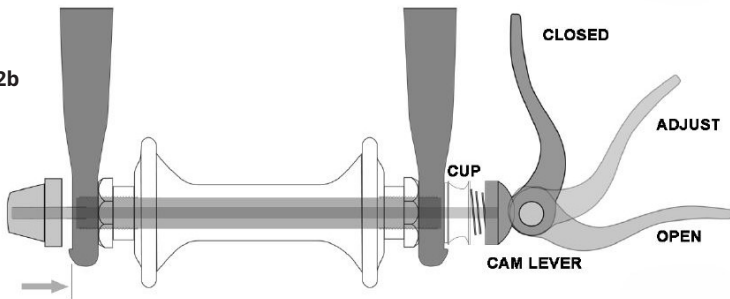


Fig. 22b



3. Thru-axle wheel mounting system

If a wheel on your eBike is equipped with a thru-axle wheel mounting system, follow the instructions in this section. If you are unsure whether your eBike uses a thru-axle wheel mounting system, or are unsure how to identify the wheel retention system, consult your authorized retailer before attempting wheel removal or installation.

If a wheel on your eBike is equipped with a thru-axle, the thru-axle length, diameter, and thread pitch must match the specifications of your frame, fork, and wheel hubs. Always install or remove the wheel in accordance with the instructions provided in this Manual. If you have questions, consult your authorized eBliss retailer. If you intend to replace the thru-axle, make sure the replacement is compatible with your eBike and meets the required specifications. Do not remove the thru-axle from your eBike and use it on a different eBike, as it may not be compatible and may not properly secure your wheel.



WARNING: A wheel attachment device that is not properly secured can allow the wheel to loosen or come off, suddenly stop the wheel, decrease your control, and cause you to fall, resulting in serious injury or death. Ensure the thru-axle is not interfering with any part of the eBike and is fully secured.

a. Adjusting the thru-axle mechanism (fig. 23a & 23b)

The thru-axle is inserted through the unthreaded hole in the frame or fork's dropout, through the wheel hub, and is threaded directly into the opposing dropout by tightening the thru-axle. Common installation methods may use an Allen hex key (see fig. 23a) or a cam lever (see fig. 23b). Refer to the instructions in this Manual for specific information about your thru-axle's operation, including correct torque specifications and lever adjustment information.

Fig. 23a
Allen Hex Key

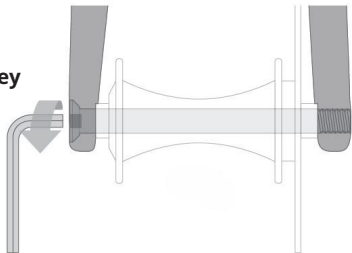
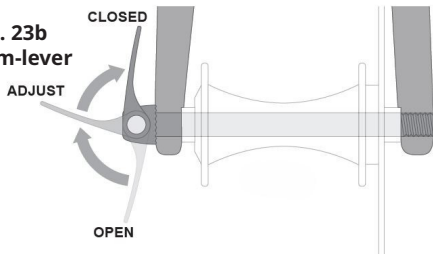



Fig. 23b
Cam-lever




4. Removing and installing wheels

Rear Hub Motor Service Notice:

eBikes equipped with a rear hub motor incorporate electrical connections, drivetrain components, and brake systems that require careful handling and precise reassembly. Rear wheel removal and installation on these eBikes is not a routine maintenance procedure and differs significantly from conventional bicycle rear wheel service.

 **WARNING:** Improper removal or installation of a rear wheel on an eBike equipped with a rear hub motor can result in damage to electrical wiring, drivetrain components, or braking systems. Incorrect reinstallation may lead to improper motor operation, loss of braking performance, or loss of control, which could result in serious injury or death. Unauthorized service, modification, or improper reinstallation of rear hub motor components may void the product warranty. Do not disconnect or reconnect motor wiring unless you have received proper instruction and have the required mechanical expertise.

Rear wheel removal or service on eBikes equipped with a rear hub motor should be performed **only by individuals who have received proper instruction and are familiar with the required procedures.** If you are unsure how to proceed, or have not been trained to service rear hub motor systems, consult your authorized retailer or a qualified bicycle mechanic for assistance.

 **WARNING:** If your eBike is equipped with an internal gear rear hub or a rear hub motor, do not attempt to remove the rear wheel unless you have the proper knowledge and tools. Removal and reinstallation of these systems may require specialized procedures. Incorrect removal, wiring damage, improper axle installation, or incorrect assembly can result in drivetrain failure, motor malfunction, loss of control, or a crash resulting in serious personal injury or death.



CAUTION: If your eBike has a disc brake, exercise care in touching the rotor or caliper. Disc rotors have sharp edges, and both rotor and caliper can get very hot during use.

a. Removing a disc brake front wheel

Refer to Page 147, Section 11, Tech, subsection C, “Brakes”.

- 1.If your eBike has a cam-action front wheel retention, move the cam lever from the locked or CLOSED position to the OPEN position (figs. 20 & 21, page 132). If your eBike has through-bolt or bolt-on front wheel retention, loosen the fastener(s) a few turns counter-clockwise using an appropriate wrench, lock key or the integral lever.
- 2.If your front fork has a clip-on type secondary retention device, disengage it. If your front fork has an integral secondary retention device, and a traditional cam-action system (fig. 22a, page 136) loosen the tension adjusting nut enough to allow removing the wheel from the dropouts. If your front wheel uses a cam-and-cup system, (fig. 22b, page 136) squeeze the cup and cam lever together while removing the wheel. No rotation of any part is necessary with the cam-and-cup system.

3.If your eBike has a thru-axle front wheel mounting system (figs. 20 & 21, page 132), loosen and remove the thru-axle as described in this Manual, then remove the front wheel.

b. Installing a disc brake front wheel




CAUTION: If your eBike is equipped with a front disc brake, be careful not to damage the disc, caliper or brake pads when re-inserting the disc into the caliper. Never activate a disc brake's control lever unless the disc is correctly inserted in the caliper. Refer to Page 147, Section 11, Tech, subsection C, "Brakes".

1. If your eBike has a cam-action front wheel retention, move the cam lever so that it curves away from the wheel (figs. 22a & 22b, page 136). This is the OPEN position. If your eBike has a thru-axle, through-bolt or bolt-on front wheel retention, go to the next step.
2. With the steering fork facing forward, insert the wheel between the fork blades so that the axle seats firmly at the top of the fork dropouts. The cam lever, if there is one, should be on rider's left side of the eBike (figs. 22a & 22b, page 136). If your eBike has a clip-on type secondary retention device, engage it.
3. If your eBike has a thru-axle front wheel mounting system, insert the thru-axle through the unthreaded dropout side and through the hub body, then thread the thru-axle into the threads of the opposing dropout.

4. If your eBike has a traditional cam-action mechanism: holding the cam lever in the ADJUST position with your right hand, tighten the tension adjusting nut with your left hand until it is finger tight against the fork dropout (fig. 22a, page 136). If you have a cam-and-cup system: the nut and cup (fig. 22b, page 136) will have snapped into the recessed area of the fork dropouts and no adjustment should be required.
5. While pushing the wheel firmly to the top of the slots in the fork dropouts, and at the same time centering the wheel rim in the fork:
 - (a) With a cam-action system, move the cam lever upwards and swing it into the CLOSED position (figs. 22a & 22b, page 136). The lever should now be parallel to the fork blade and curved toward the wheel. To apply enough clamping force, you should have to wrap your fingers around the fork blade for leverage, and the lever should leave a clear imprint in the palm of your hand.
 - (b) With a through-bolt or bolt-on system, tighten the fasteners to the torque specifications listed in Appendix C. "Fastener Torque", Page 204 of this Manual.
 - (c) With a thru-axle system, tighten the thru-axle (figs. 20 & 21, page 132) to the torque specification listed in Appendix C. "Fastener Torque", Page 204 of this Manual.

NOTE: If, on a traditional cam-action system, the lever cannot be pushed all the way to a position parallel to the fork blade, return the lever to the OPEN position. Then turn the tension adjusting nut counterclockwise one-quarter turn and try tightening the lever again.

 **WARNING:** Securely clamping the wheel with a cam-action retention device takes considerable force. If you can fully close the cam lever without wrapping your fingers around the fork blade for leverage, the lever does not leave a clear imprint in the palm of your hand, and the serrations on the wheel fastener do not emboss the surfaces of the dropouts, the tension is insufficient. Open the lever; turn the tension adjusting nut clockwise a quarter turn; then try again. See also the first WARNING in this Section, Page 133.



WARNING: Rear wheel removal on eBikes equipped with an internal gear rear hub requires specialized service procedures. Attempting rear wheel removal without proper instruction or training can result in drivetrain damage or loss of control. Always consult your authorized retailer or a qualified bicycle mechanic for assistance.

If your eBike uses a single-speed drivetrain and you are familiar with the rear wheel removal procedure, proceed to Step (4) below. If you are unsure how to remove the rear wheel, consult your authorized retailer or a qualified bicycle mechanic before proceeding.

If you are unsure whether your eBike uses an internal gear hub, rear hub motor, or other specialized drivetrain, consult your authorized retailer or a qualified bicycle mechanic before attempting wheel removal.

c. Installing a rear wheel (disc brake equipped models)

CAUTION: If your eBike is equipped with a rear disc brake, be careful not to damage the disc, caliper, or brake pads when re-inserting the disc into the caliper. Never activate a disc brake control lever unless the disc is correctly inserted in the caliper.



WARNING: If your eBike is equipped with an internal gear rear hub, rear hub motor, or belt-drive system, rear wheel removal and installation may require specialized procedures, including proper alignment, tensioning, and reconnection of components. Incorrect installation can result in drivetrain malfunction, brake interference, motor failure, or loss of control. If you are unsure, have the work performed by an authorized retailer or qualified technician.

1. Prepare the wheel and drivetrain.

- (a) If your eBike uses a cam-action wheel retention system, move the cam lever to the OPEN position (fig. 23b, page 138). The lever should be positioned according to the wheel retention system design.
- (b) On a single-speed eBike, relieve tension in the drive system as required, then properly position the drive belt on the rear sprocket.

2. Install the wheel into the frame.

With the wheel properly aligned, insert the wheel into the rear frame dropouts and pull it fully into position.

NOTE: On an eBike with a single rear gear, ensure the wheel is straight in the frame and the has approximately 1/4 inch of vertical play before securing the wheel.

3. Secure the wheel.

- (a) With a cam-action system, move the cam lever upward and swing it into the CLOSED position (figs. 22a & 22b). The lever should be parallel to the seat stay or chain stay and curved toward the wheel. Proper clamping force requires firm hand pressure and should leave a clear imprint in the palm of your hand.
- (b) With a through-bolt or bolt-on system, tighten the fasteners to the torque specifications listed in Appendix C. "Fastener Torque", Page 204 of this Manual.
- (c) With a thru-axle system, tighten the thru-axle (figs. 20 & 21, page 132) to the torque specification listed in Appendix C. "Fastener Torque", Page 204 of this Manual.

NOTE: If the cam lever cannot be fully closed to a position parallel to the seat stay or chain stay, return the lever to the OPEN position, turn the tension adjusting nut counterclockwise one-quarter turn, and try again.

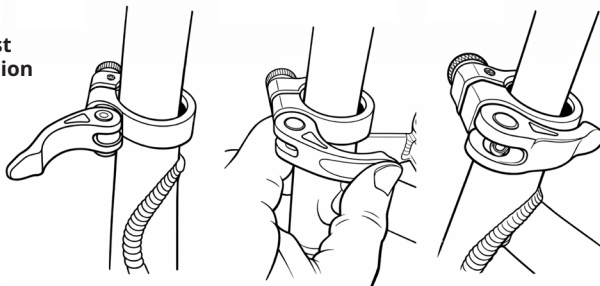
4. Restore braking and check alignment.


- (a) If the brake quick-release mechanism was disengaged during wheel removal, re-engage it to restore correct brake pad-to-disc clearance.
- (b) Spin the wheel to confirm it is centered in the frame and clears the brake pads.
- (c) Squeeze the brake lever to verify proper brake operation.

B. Seat Post Cam-action Clamp

Some eBikes are equipped with a cam-action seat post binder. The seat post cam-action binder works exactly like the traditional wheel cam-action fastener. Refer to page 134 Section 11. TECH,, Subsection A.2: "Wheels with cam-action systems". While a cam-action binder looks like a long bolt with a lever on one end and a nut on the other, the binder uses an over-center cam-action to firmly clamp the seat post (see fig. 24).

Fig. 24
Seat Post
Cam-action
Clamp




 **WARNING:** Riding with an improperly tightened seat post can allow the saddle to turn or move and cause you to lose control and fall.


Therefore:

1. Ask your authorized retailer to help you make sure you know how to correctly clamp your seat post.
2. Understand and apply the correct technique for clamping your seat post.
3. Before you ride the eBike, first check that the seat post is securely clamped.

Adjusting the seat post cam-action mechanism

The action of the cam squeezes the seat collar around the seat post to hold the seat post securely in place. The amount of clamping force is controlled by the tension adjusting nut. Turning the tension adjusting nut clockwise while keeping the cam lever from rotating increases clamping force; turning it counterclockwise while keeping the cam lever from rotating reduces clamping force. Less than half a turn of the tension adjusting nut can make the difference between safe and unsafe clamping force.

 **WARNING:** The full force of the cam-action is needed to clamp the seat post securely. Holding the nut with one hand and turning the lever like a wing nut with the other hand until everything is as tight as you can get it will not clamp the seat post safely.

 **WARNING:** If you can fully close the cam lever without wrapping your fingers around the seat post or a frame tube for leverage, and the lever does not leave a clear imprint in the palm of your hand, the tension is insufficient. Open the lever; turn the tension adjusting nut clockwise a quarter turn; then try again.

C. Brakes

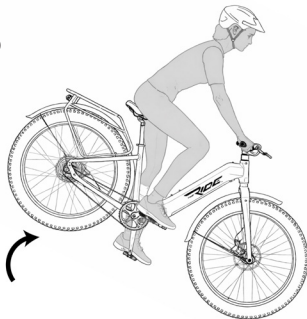
There are three general types of bicycle brakes: rim brakes, which operate by squeezing the wheel rim between two brake pads; disc brakes, which operate by squeezing a hub-mounted disc between two brake pads; and internal hub brakes. All three can be operated by way of a handlebar-mounted lever.



WARNING:

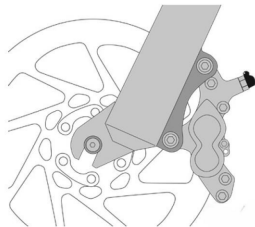
- 1. Riding with improperly adjusted brakes, worn brake pads, or wheels on which the rim wear mark is visible is dangerous and can result in serious injury or death.**
- 2. Applying brakes too hard or too suddenly can lock up a wheel, which could cause you to lose control and fall (see fig. 25). Sudden or excessive application of the front brake may pitch the rider over the handlebars, which may result in serious injury or death.**

Fig. 25
Wheel Lock-up



3. Some bicycle brakes, such as disc brakes (fig. 26) are extremely powerful. Take extra care in becoming familiar with these brakes and exercise particular care when using them.
4. Some bicycle brakes are equipped with a brake force modulator, a small, cylindrical device through which the brake control cable runs and which is designed to provide a more progressive application of braking force. A modulator makes the initial brake lever force more gentle, progressively increasing force until full force is achieved. If your eBike is equipped with a brake force modulator, take extra care in becoming familiar with its performance characteristics. Some brake force modulators are adjustable. If you don't like the feel of your brakes, ask your authorized retailer about adjusting the brake force modulation.
5. Disc brakes can get extremely hot with extended use. Be careful not to touch a disc brake until it has had plenty of time to cool.
6. Refer to the brake section of this Manual for general information on brake operation and care. If you are unsure about brake condition, brake pad wear, or service requirements, consult your authorized eBliss retailer.
7. If replacing worn or damaged parts, use only Original Equipment (OE) replacement parts specified or approved by eBliss Global for use with your eBike.

Fig.26
Disc
Brake



eBikes are heavier and can reach higher speeds than conventional bicycles. Increased weight and speed result in longer stopping distances and greater braking forces. As a result, braking performance, brake condition, and rider technique are especially important on an eBike. Always allow additional distance to slow or stop, apply brakes smoothly and progressively, and become familiar with how your eBike responds to braking under different riding conditions.

1. Brake controls and features

It's very important to your safety that you learn and remember which brake lever controls which brake on your eBike. Brake lever configuration may vary by country or region to comply with local regulations. In the United States, the right brake lever typically controls the rear brake and the left brake lever controls the front brake. In other countries, the configuration may differ. Always confirm which lever controls which brake before riding by squeezing one brake lever at a time and observing which brake, front or rear, engages. Now do the same with the other brake lever.

Make sure that your hands can reach and squeeze the brake levers comfortably. If your hands are too small to operate the levers comfortably, consult your authorized retailer before riding the eBike. The lever reach may be adjustable; or you may need a different brake lever design. Check each time to make sure both brakes work correctly before you get on the eBike.

Motor Cut-Off During Braking

When a brake lever is applied, most eBikes are designed to automatically disengage motor assistance. This motor cut-off feature helps reduce drive force during braking and supports safer stopping. Riders should be aware that motor assistance may stop abruptly when braking begins, which can change how the eBike feels compared to normal riding. Always anticipate this behavior, maintain a firm grip on the handlebars, and apply brakes smoothly and progressively. **Depending on model design, applying the brakes may also disable throttle input until the brake lever is released; braking and motor cut-off behavior can vary between eBike models.**

Brake Feel and Regenerative Braking

Some eBikes may slow or decelerate when motor assistance is reduced, even before the brake levers are applied. This behavior may be caused by regenerative braking or by motor control systems that reduce or resist wheel rotation when power input changes. As a result, braking feel on an eBike may differ from that of a conventional bicycle, particularly when transitioning between powered riding and braking. Riders should become familiar with how their eBike responds to changes in motor assistance and practice smooth, controlled braking in a safe environment.

2. How brakes work

The braking action of an eBike is a function of the friction between the braking surfaces. To make sure that you have maximum friction available, keep your wheel rims and brake pads or the disc rotor and caliper clean and free of dirt, lubricants, waxes or polishes.

Brakes are designed to control your speed, not just to stop the eBike. Maximum braking force for each wheel occurs at the point just before the wheel “locks up” (stops rotating) and starts to skid. Once the tire skids, you actually lose most of your stopping force and all directional control. You need to practice slowing and stopping smoothly without locking up a wheel. The technique is called progressive brake modulation. Instead of jerking the brake lever to the position where you think you’ll generate appropriate braking force, squeeze the lever, progressively increasing the braking force. If you feel the wheel begin to lock up, release pressure just a little to keep the wheel rotating just short of lockup. It’s important to develop a feel for the amount of brake lever pressure required for each wheel at different speeds and on different surfaces. To better understand this, experiment a little by walking your eBike and applying different amounts of pressure to each brake lever, until the wheel locks.

When you apply one or both brakes, the eBike begins to slow, but your body wants to continue at the speed at which it was going. This causes a transfer of weight to the front wheel (or, under heavy braking, around the front wheel hub, which could send you flying over the handlebars).

A wheel with more weight on it will accept greater brake pressure before lockup; a wheel with less weight will lock up with less brake pressure.

So, as you apply brakes and your weight is transferred forward, you need to shift your body toward the rear of the eBike, to transfer weight back onto the rear wheel; and at the same time, you need to both decrease rear braking and increase front braking force. This is even more important on descents, because descents shift weight forward.

Two keys to effective speed control and safe stopping are controlling wheel lockup and weight transfer. This weight transfer is even more pronounced if your eBike has a front suspension fork. Front suspension “dips/compresses/dives” under braking, increasing the weight transfer (see also Page 158, Section 11, Tech, subsection G, “Bicycle Suspension”.) Practice braking and weight transfer techniques where there is no traffic or other hazards and distractions.

Everything changes when you ride on loose surfaces or in wet weather. It will take longer to stop on loose surfaces or in wet weather. Tire adhesion is reduced, so the wheels have less cornering and braking traction and can lock up with less brake force. Moisture or dirt on the brake pads reduces their ability to grip. The way to maintain control on loose or wet surfaces is to go more slowly.

D. Throttle



WARNING: Throttle-equipped eBikes can accelerate unexpectedly and more rapidly than conventional bicycles. Before your first ride, practice operating the throttle in a controlled, hazard-free environment away from traffic, pedestrians, and obstacles. Always begin in the lowest pedal-assist setting and apply throttle gradually until you are fully familiar with the eBike's acceleration characteristics. Unintended throttle activation during mounting, dismounting, or handling may cause sudden movement, which can result in loss of control, serious injury, or death.

Throttle Safety and Familiarization

Throttle-equipped eBikes can accelerate quickly and may respond differently than conventional bicycles. Always begin riding at low speed and apply throttle gradually until you are familiar with how your eBike responds. Avoid resting fingers or objects on the throttle when mounting, dismounting, or walking alongside the eBike, as unintended activation may cause sudden movement.

The throttle allows you to control motor assistance and regulate forward speed when equipped and operating as designed on your electric bicycle. Familiarize yourself with the throttle installed on your bicycle before riding. If you are uncertain about its function or use, consult your authorized retailer for guidance.

1. Thumb Throttle:

A thumb throttle is operated by pressing a small, spring-loaded lever with your thumb (see fig. 27)

Depressing the lever gradually increases motor output. The farther the lever is pressed forward, the greater the level of propulsion provided.

Throttle Interaction and Model Variation

Throttle response, power delivery, and interaction with braking systems vary by eBike model. On some eBikes, applying the brakes may automatically disable throttle input or reduce motor assistance until the brake lever is released. Riders should become familiar with how throttle operation changes under braking and during transitions between powered and unpowered riding.

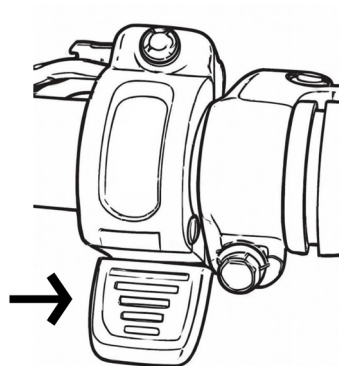


Fig. 27
Throttle

E. Shifting Systems

This eBike is equipped with an internal gear hub shifting system. Unlike derailleur-based drivetrains, all gear-changing components are housed inside the rear hub. Gears are changed by engaging different internal gear ratios within the hub rather than moving the chain across multiple rear sprockets. This enclosed design protects the shifting mechanism from dirt, water, and impact damage, resulting in consistent performance and reduced maintenance.

When the rider operates the handlebar-mounted shifter, a control cable or internal actuation mechanism signals the rear hub to engage a different internal gear ratio. The belt remains aligned on a single rear sprocket at all times. Because the shifting mechanism is internal, proper gear engagement depends on forward rotation of the drivetrain to complete each shift.


Gears may be shifted while pedaling lightly, while coasting, or while stopped. For the smoothest shifting, reduce pedal pressure briefly while changing gears. Avoid shifting under heavy load, such as during hard acceleration or while climbing steep hills. Internal gear hubs allow shifting while stopped, which can be helpful when starting from traffic signals or after coming to a complete stop.

Lower-numbered gears correspond to easier gears and require less pedaling effort. These gears are intended for starting from a stop, riding uphill, or riding with heavy loads. Higher-numbered gears correspond to harder gears and require more pedaling effort and are intended for higher speeds and riding on flat or downhill terrain. The numerically lowest gear is the easiest gear, and the numerically highest gear is the hardest gear.

When starting from a stop, the eBike should be in one of the lower-numbered gears. Starting in a gear that is too high may make pedaling difficult and can place unnecessary strain on the drivetrain. If you are unsure which gear the eBike is in, shift to a lower-numbered gear before starting.

If the eBike does not shift as expected, reduce pedal pressure and attempt the shift again. Stop pedaling briefly, then resume forward pedaling lightly after shifting to allow the gear to fully engage. Ensure the shifter is fully engaged in the selected gear position. Do not force the shifter or continue pedaling under heavy load if the gear does not engage.

If shifting remains inconsistent or gears do not engage properly, the eBike may require adjustment or service by an authorized retailer or qualified eBike mechanic. Internal gear hubs may feel different from derailleur-based systems. A brief pause during shifts, soft engagement, and changes in pedaling cadence between gears can be normal and do not necessarily indicate a malfunction.

 **WARNING:** Do not shift gears while pedaling backwards. Internal gear hubs require forward drivetrain movement to properly engage internal gear mechanisms. Shifting while pedaling backwards can prevent the selected gear from fully engaging and may result in delayed or unexpected gear engagement when forward pedaling resumes, increased wear, or damage to internal hub components. Always shift gears while pedaling forward lightly, while coasting, or while stopped. If a shift is attempted while pedaling backwards, stop pedaling, resume forward pedaling with light pressure, and allow the gear to fully engage before applying normal force.

Do not attempt to disassemble the internal gear hub. Periodic inspection and adjustment may be required to maintain proper shifting performance. Adjustment procedures vary by hub model and should be performed by an authorized retailer or qualified eBike mechanic unless otherwise specified.

F. Pedals

Toe overlap is when your toe can touch the front wheel when you turn the handlebars to steer while a pedal is in the forward-most position. This is common on small-framed eBikes, and is avoided by keeping the inside pedal up and the outside pedal down when making sharp turns. On any eBike, this technique will also prevent the inside pedal from striking the ground in a turn.

NOTE: Changing tire size or pedal crank arm length affects toe overlap.




WARNING: Toe overlap could cause you to lose control and fall. Ask your authorized retailer to help you determine if the combination of frame size, crank arm length, pedal design and shoes you will use results in toe overlap. Whether you have overlap or not, you must keep the inside pedal up and the outside pedal down when making sharp turns.

Some eBikes come equipped with pedals that have sharp and potentially dangerous surfaces. These surfaces are designed to increase grip between the rider's shoe and the pedal. If your eBike has this type of high-performance pedal, you must take extra care to avoid serious injury from the pedals' sharp surfaces. Based on your riding style or skill level, you may prefer a less aggressive pedal design, or choose to ride with shin pads. Your authorized retailer can show you a number of options and make suitable recommendations.


Clipless pedals (sometimes called "step-in pedals") are another means to keep feet securely in the correct position for maximum pedaling efficiency. They have a plate, called a "cleat," on the sole of the shoe, which clicks into a mating spring-loaded fixture on the pedal. They only engage or disengage with a very specific twisting motion that must be practiced until it becomes instinctive.

Clipless pedals require shoes and cleats that are compatible with the specific pedal system being used. Clipless systems mechanically secure the rider's feet to the pedals and require practice to use safely.

 **WARNING: Failure to disengage your feet in time when slowing or stopping can cause loss of balance and a fall, which may result in serious personal injury. Clipless pedals are intended for use only with shoes specifically designed to properly engage the pedal system. Do not use shoes that do not correctly engage the pedals.**

If your eBike is equipped with clipless pedals, follow the setup and adjustment instructions provided with the pedal system, or consult your authorized eBliss retailer for assistance. Before riding in traffic, practice engaging and disengaging the pedals in a controlled environment free of obstacles and motor vehicles. It is recommended that you practice while holding onto a wall, railing, or other stable support until clipping in and out becomes a reflex action.

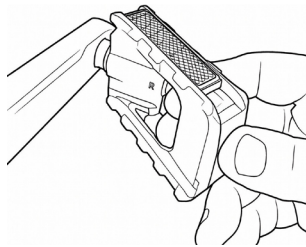
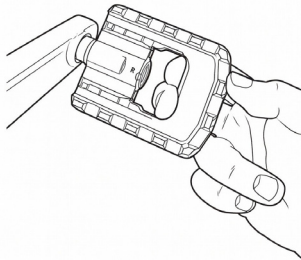
Many clipless pedals allow adjustment of the force required to engage or disengage the foot. Begin with the lowest release tension setting and increase gradually as skill and confidence improve, while ensuring there is sufficient tension to prevent unintended release during normal riding.

 **WARNING: Some folding bicycle models are equipped with folding pedals designed to reduce protrusion when the bicycle is folded for storage or transport. Folding pedals must be fully opened and locked into their operating position before the bicycle is ridden. The folding mechanism allows the pedal body to rotate from the folded position into a normal forward-and-back riding alignment and is secured by a locking mechanism.**

Figs. 28a & 28b

Folding Pedals

To fold pinch button located inside the pedal and push the pedal up towards the crank arm until fully folded and locked in position




Before each ride, the rider must ensure that each folding pedal is fully engaged and securely locked into the operating position. When properly unfolded, the pedal should be aligned straight and remain rigid under pressure. Some pedal designs provide an audible or tactile indication when the locking mechanism is fully engaged. Once unfolded, apply firm pressure by hand or foot to confirm that the pedal is securely locked and does not rotate or fold unintentionally.

A pedal that is not fully locked into position may fold or shift unexpectedly during use, resulting in a loss of control and increasing the risk of a fall, serious injury or death. If there is any doubt about whether a folding pedal is securely locked, do not ride the bicycle until proper engagement has been confirmed. If proper engagement cannot be confirmed, bring the bicycle to your authorized retailer or a qualified service technician for inspection.


Operating the bicycle with pedals that are not correctly secured is hazardous and may result in a malfunction, loss of control or crash causing serious injury or death. Use of the bicycle under these conditions may be considered improper use and could void applicable warranty or liability coverage.

G. Bicycle Suspension


Many eBikes are equipped with suspension systems. There are many different types of suspension systems, too many to address individually in this Manual. Suspension components affect handling, braking, and rider control and must be properly adjusted and maintained. Improper adjustment can negatively affect performance and safety. If you are unsure about setup, adjustment, inspection, or service requirements, consult your authorized eBliss retailer.

 **WARNING: Failure to properly maintain, inspect, and adjust the suspension system may result in suspension malfunction, which can cause loss of control and a fall.**

If your eBike has suspension, the increased speed you may develop also increases your risk of injury. When braking, the front of a suspended eBike may dip or compress. If you are unfamiliar with this behavior, you could lose control and fall. Learn to handle your suspension system safely before riding at higher speeds.

 **WARNING: Changing suspension adjustment can alter the handling and braking characteristics of your eBike. Never change suspension settings unless you fully understand the adjustment procedures. After making any suspension adjustment, perform a careful test ride in a hazard-free area to evaluate changes in handling and braking.**

Suspension can increase control and comfort by allowing the wheels to better follow terrain. This improved capability may allow higher speeds, but do not confuse the enhanced capabilities of the eBike with your own skill level. Developing skill requires time and practice. Ride conservatively until you are confident handling the full capabilities of your eBike.

 **WARNING: Not all eBikes can be safely retrofitted with suspension systems. Before installing any suspension component not originally specified for your eBike, consult your authorized eBliss retailer to confirm compatibility with the eBike's design. Improper retrofitting can result in structural failure, which may cause serious personal injury or death.**

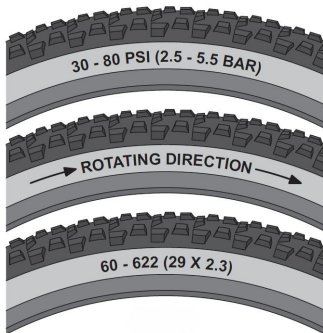
H. Tires and Tubes

1. Tires

Bicycle tires are available in many designs and specifications, ranging from general-purpose designs to tires designed to perform best under very specific weather or terrain conditions. If, once you've gained experience with your new eBike, you feel that a different tire might better suit your riding needs, your authorized retailer can help you select the most appropriate design.

The size, pressure rating, and, on some high-performance tires, the specific recommended use are marked on the sidewall of the tire (fig. 29). Some wheel rims may also display a maximum tire pressure marking. The safest way to inflate a bicycle tire to the correct pressure is with a bicycle pump that has a built-in pressure gauge.

Fig. 29
Tire
Sidewall



! **WARNING:** There is a safety risk in using gas station air hoses or other air compressors. They are not made for bicycle tires. They move a large volume of air very rapidly, and will raise the pressure in your tire very rapidly, which could cause the tube to explode.

CAUTION: Pencil-type automotive tire gauges can be inaccurate and should not be relied upon for consistent, accurate pressure readings. Instead, use a high-quality dial or digital gauge.

Tire pressure is given either as maximum pressure or as a pressure range. How a tire performs under different terrain or weather conditions depends largely on tire pressure. Inflating the tire to near its maximum recommended pressure gives the lowest rolling resistance; but also produces the harshest ride. High pressures work best on smooth, dry pavement.

Very low pressures, at the bottom of the recommended pressure range, give the best performance on smooth, slick terrain such as hard-packed clay, and on deep, loose surfaces such as deep, dry sand.

Tire pressure that is too low for your weight and the riding conditions can cause a puncture of the tube by allowing the tire to deform sufficiently to pinch the inner tube between the rim and the riding surface. This may also result in rim damage.



WARNING: Never inflate a tire beyond the maximum pressure marked on the tire's sidewall or the wheel rim. If the maximum pressure rating for the wheel rim is different from the maximum pressure shown on the tire, always use the lower rating. Exceeding the recommended maximum pressure may blow the tire off the rim or damage the wheel rim during installation or while riding, resulting in a loss of control or crash causing serious injury or death, as well as damage to the tire, tube, and/or wheel rim.



WARNING: Never ride a tire inflated below the minimum pressure marked on the tire's sidewall. Tire pressure below the minimum may cause a flat tire and/or the tire to detach from the rim while riding, resulting in a loss of control or crash causing serious injury or death, as well as damage to the tire, tube, and/or wheel rim.

Ask your authorized retailer to recommend the best tire pressure for the kind of riding you will most often do, and have your authorized retailer inflate your tires to that pressure. Then, check inflation as described on Page 70, Section 7, "Safely Operating Your eBike", subsection B, "Mechanical Check" or "Tires and Wheels" on Page 72", so you'll know how correctly inflated tires should look and feel when you don't have access to a gauge. Some tires may need to be brought up to pressure every week or two, so it is important to check your tire pressures before every ride.

Some special high-performance tires have unidirectional treads: their tread pattern is designed to work better in one direction than in the other. The sidewall marking of a unidirectional tire will have an arrow showing the correct rotation direction. If your eBike has unidirectional tires, be sure that they are mounted to rotate in the correct direction.


2. Tubeless rims and tires


Some bicycles on the market are designed to be compatible with tubeless tires and rims. The bikes covered by this owner's manual are not designed, approved, or equipped for tubeless tire or tubeless rim use.


All Ride and Always bikes are designed to be used only with standard inner tubes and rims intended for tube-type tires, as originally specified and supplied.

Do not attempt to convert eBliss Global bikes to tubeless configurations. Installing tubeless tires, tubeless rims, or using tubeless sealants on bikes not designed for tubeless use can result in improper tire seating, air loss, rim damage, or loss of control, which may lead to serious injury.

Always use replacement tires, tubes, and rims that match the original specifications, and consult your authorized dealer if you have questions about compatible components.

 **WARNING:** Riding on an improperly installed, incompatible, or damaged tubeless tire and rim combination can cause the tire to unexpectedly lose pressure and detach from the rim, resulting in a crash causing serious injury or death. Ensure that the tire, rim, and related components are compatible before installation and follow the installation instructions provided with those components.

 **CAUTION:** During installation, an incompatible or damaged tubeless tire and rim combination can cause the tire to unexpectedly lose pressure and tire sealant and detach from the rim, resulting in damage to the wheel or other components, and may injure the installer. Use of eye and ear protection is recommended.

 **WARNING:** For this reason, the bikes covered by this owner's manual are not designed, tested, or approved for tubeless tire or tubeless rim use. Tubeless use is not recommended and constitutes use of non-compatible components. Such use can result in component failure, sudden loss of air pressure, loss of control, serious injury, or death.

3. Tire and rim width/diameter

Wheel rims and tires come in a wide range of diameters (fig. 30) and widths (fig. 31). The nominal diameter of the rim (A) must match the nominal diameter of the tire (B), and the width of the rim (C) must be compatible with the width of the tire (D).

Fig. 30
Wheel
Diameter

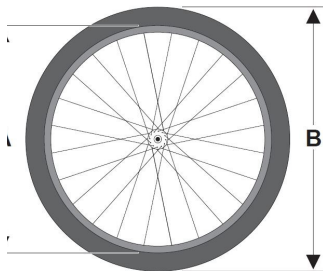
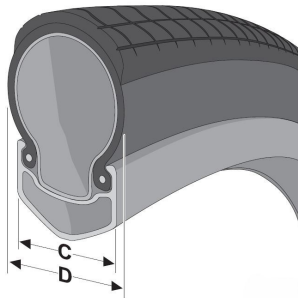


Fig. 31
Wheel
Width



! **WARNING:** Always ensure that the tire and rim combination used on your eBike is compatible in size and type. Failure to use a compatible tire and rim combination can cause the tire to unexpectedly lose pressure and detach from the rim, resulting in a crash causing serious injury or death. Before installation, confirm that the tire, rim, and related components are properly matched and suitable for use together.

4. Tire clearance

The diameter and width of the original equipment wheels and tires on your eBike have been selected to ensure they provide adequate clearance between the rotating tire and wheel, and the frame, fork or other components. Any change to your wheels or tires can affect this clearance.

Tires that are marked as being the same size may have different widths when installed, properly inflated and mounted on your eBike. Always verify your tire clearance with the tires mounted and fully inflated even if the replacement tires are marked as being the same size as the tires that are being replaced.

Minimum clearance between a properly inflated tire and any part of the eBike should be at least 6 mm (figs. 32a & 32b). Some regulations may allow clearance as low as 1.6 mm. If you are unsure about proper tire clearance for your eBike, consult your authorized eBliss retailer.

Fig. 32a
Minimum
Clearance

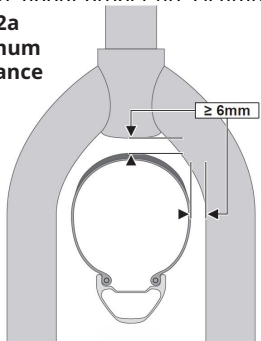
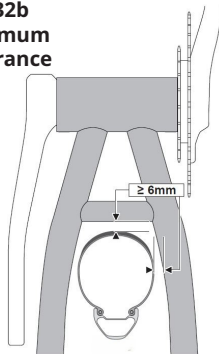




Fig. 32b
Minimum
Clearance




Always maintain enough clearance between the rotating tire and rim (fig. 32a & 32b, page 166), and the frame, fork or other components. Regularly inspect the frame and fork for damage, as well as the area around the wheel for debris or objects that could become stuck.


When riding your eBike, the tires must not be able to contact the fork, frame or any components when a suspension system is fully compressed or the wheels are subjected to flex from side loads. For example, with a suspension fork, the front tire must clear the fork crown when the fork is fully compressed.

 **WARNING:** Inadequate tire clearance can allow debris or objects to become trapped or cause the wheels to stop unexpectedly, which could cause a crash resulting in serious injury or death.

 **WARNING:** Inadequate tire clearance that results in contact between the tire and any part of the eBike can result in damage which can lead to failure, which could cause a crash resulting in serious injury or death.

If you have mounted additional accessories or components on your eBike, particularly fenders, these products may require additional clearance between the tire/wheel and the accessory or component. You should verify that any accessory or component mounted on your eBike maintains the required tire clearance, and do not use the eBike if proper clearance cannot be maintained. For additional information on changing components or adding accessories, see Page 99, Section 7, “Safely Operating Your eBike”, subsection K, “Changing Components or Adding Accessories”.

 **WARNING:** Any accessory or component attached to, on or near a rotating wheel poses a risk of contacting or stopping the wheel, leading to a crash resulting in serious injury or death. Before every ride check to ensure that all such accessories and components, and the fasteners used to attach them, are securely mounted to your eBike.

 **WARNING:** Any object that unexpectedly and abruptly stops the rotation of the front wheel can cause the eBike and rider to pitch forward (fig. 10, page 100), which can result in serious injury or death.

5. Tire valves

There are two primary types of bicycle tire valves: Schrader and Presta. Your eBike is equipped with one of these valve types, depending on the model and wheel configuration. Verify the valve type installed on your specific bicycle before inflating the tires. If you are unsure, consult your authorized retailer.

Schrader valves are commonly used on automobile tires and are sometimes referred to as “auto valves.” Presta valves are narrower and are commonly used on performance bicycle wheels.

The Schrader valve (fig. 33), sometimes referred to as an “auto valve” (short for automobile valve), is the same type of valve used on most car tires. To inflate a tire with a Schrader valve, remove the valve cap and firmly attach a compatible pump head to the end of the valve stem. Inflate the tire to the pressure range indicated on the tire sidewall, using a pump with an accurate pressure gauge whenever possible. After inflating, remove the pump head and replace the valve cap. To release air from a Schrader valve, briefly depress the small pin located in the center of the valve stem using a key or other suitable object.

Some bicycles use Presta (also known as French) valves (fig. 34). Presta valves are narrower than Schrader valves and include a small threaded tip at the top of the valve stem.

To inflate a Presta valve, remove the valve cap and loosen the small locknut at the top of the stem by turning it counterclockwise. Briefly press the tip to release a small amount of air and confirm the valve is open. Attach a compatible pump head and inflate to the recommended tire pressure. After inflation, tighten the locknut, remove the pump, and replace the valve cap.

Always ensure that the pump being used is compatible with the valve type installed on the bicycle.

Fig. 33
Schrader
Valve

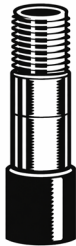



Fig. 34
Presta
Valve



 **WARNING:** We strongly recommend that riders carry a spare inner tube and a suitable means of inflation, such as a bicycle pump capable of inflating the tire to the recommended pressure, when riding an eBike. Being prepared can help prevent extended delays in the event of a flat tire.

Patching a damaged tube should be considered a temporary, emergency measure only. An improperly applied patch, or multiple patches, may fail unexpectedly and could result in loss of control and serious injury. A patched tube should be replaced as soon as possible.

Riding with insufficient tire pressure is hazardous and can result in reduced handling, increased stopping distance, rim damage, or loss of control. Tires must be inflated to the pressure range specified on the tire sidewall.

Wheel removal and reinstallation on many eBikes may require specialized knowledge and may involve electrical wiring, drivetrain alignment, brake components, or hub systems. Riders should not attempt roadside tire or tube service unless they have the proper tools, have received appropriate instruction, and understand the required procedures.

Carrying a spare tube or pump does not imply that the rider should attempt wheel removal if they are not qualified to do so. If you are not trained to safely perform these tasks, seek assistance from a qualified person or transport the eBike to an authorized retailer or service provider.

12. MAINTAINING AND SERVICING YOUR EBIKE

A. Servicing the Electrical Drive System

Your eBike requires regular inspection, maintenance and service by a qualified technician to ensure the proper and safe function, performance and maximum life expectancy of your eBike and its components. Exposure to road salt, rain, dirt or snow, can result in corrosion/deterioration of certain eBike components. If any malfunctions or problems occur, or if you have any questions related to component installation, adjustment or maintenance, please refer to your authorized retailer for additional information.

Service to the drive system components (motor, battery, Command Center, sensor(s), wiring, software/firmware updates) should always be performed by an authorized retailer. While it is recommended to have all service done by an authorized retailer, depending on mechanical competence and ease of required work, some service to non-drive-system-related components can be performed by the owner, with proper tools and knowledge. For example, the most basic services would include cleaning the eBike or lubricating the chain (**belt drive systems operate dry and must not be lubricated**). More involved services would include adjusting brakes or gears or fixing a flat tire that requires detaching electrical wiring or components.



WARNING: Belt Drive Lubrication:

Do not lubricate belt drive systems. Belt drives are designed to operate dry. Applying oil, grease, solvents, or spray lubricants to a belt drive can attract dirt, degrade belt materials, cause slippage, reduce belt life, and lead to sudden loss of drive power. Operating an eBike with a contaminated or damaged belt drive may result in loss of control, serious injury, or death. If you are unsure whether your eBike uses a belt drive or a chain drive, consult your authorized retailer before performing any drivetrain maintenance.




WARNING: Modifying your eBike or attempting to service it without having the requisite tools, skills and knowledge can result in damage to your eBike or create a risk of fire or electrical shock resulting in serious injury or death.




WARNING: The drive system does not contain any user-serviceable parts. Any service should be performed by a qualified technician. Do not attempt to open, disassemble, modify, adjust or service any parts of the drive system components. Any tampering with the internals of the motor, battery or other drive system components can result in damage, which can cause serious personal injury or death.

Follow the service and maintenance recommendations provided in this Manual. Please refer to your authorized retailer for any questions about eBike service intervals.

- Maintain your battery as outlined on Page 18, Section 3, “General Lithium-Ion Battery Safety” and Page 39, Section 6, “eBike Battery Safety”.
- During periodic inspections, also inspect the battery terminals for any signs of corrosion. Also inspect any visible wiring. Frayed or otherwise damaged wires, loose or corroded plugs, or bad connections can result in damage to the drive system and should be inspected and replaced as necessary by your authorized retailer.
- Do not apply any cleaning agents, paint or chemicals to any of the drive system components on your eBike, including the battery. Applying paint to these components can result in failure. Dirt and salt from riding in winter or near the ocean, as well as sweat, can be damaging to bicycle components. This includes eBike drive system and wiring parts. Regularly keep the eBike clean.
- When performing service on an eBike, if possible, remove the battery before starting maintenance. If the battery is integrated into the frame and not easily removed, make sure the system is turned off unless absolutely necessary for a specific service, and make sure you're not at risk of injury should the system unexpectedly turn on and the drive system start rotating.
- Don't turn the eBike upside down onto the handlebars and seat. This can result in damage to any handlebar-mounted Command Center or controller components.

 **WARNING:** Technological advances have made eBikes and bicycle components more complex, and the pace of innovation is increasing. It is impossible for this manual to provide all the information required to properly repair and/or maintain your eBike. In order to help minimize the chances of a crash and possible injury, it is critical that you have any repair or maintenance that is not specifically described in this manual performed by your authorized retailer. Equally important is that your individual maintenance requirements will be determined by everything from your riding style to geographic location. Consult your authorized retailer for help in determining your maintenance requirements.

 **WARNING:** Many eBike service and repair tasks require special knowledge and tools. Do not begin any adjustments or service on your eBike until you have learned from your authorized retailer how to properly complete them. Improper adjustment or service may result in damage to the eBike or in a crash which can cause serious injury or death.

B. Servicing the Mechanical Parts of Your eBike

You may wish to service the mechanical (non-drive system and battery) parts of your eBike yourself. If you want to learn to do minor service and repair work on your eBike:

1. Ask your authorized eBliss retailer for installation and service information for the components on your eBike.
2. Ask your authorized retailer to recommend a book on bicycle repair.
3. Ask your authorized retailer about the availability of bicycle repair courses in your area.

We recommend that you ask your authorized retailer to check the quality of your work the first time you work on something and before you ride the eBike, just to make sure that you did everything correctly. Since that will require the time of a mechanic, there may be a modest charge for this service.

We also recommend that you ask your authorized retailer for guidance on what spare parts, such as tires, inner tubes, light bulbs, batteries, patch kit or lubricants it would be appropriate for you to have once you have learned how to replace such parts when they require replacement.

C. Servicing Intervals

Some service and maintenance of mechanical parts of an eBike can and should be performed by the owner, and require no special tools or knowledge beyond what is presented in this manual. The following are examples of the type of service you should perform yourself. All other service, maintenance, and repair should be performed in a properly equipped facility by a qualified eBike mechanic using the correct tools and appropriate procedures.

1. Break-in Period: Your eBike will last longer and work better if you break it in before riding it hard. Control cables and wheel spokes may stretch or “seat” when a new eBike is first used and may require readjustment by your authorized retailer. Your Mechanical Check will help you identify some things that need readjustment. Refer to Page 70, Section 7, “Safely Operating Your eBike”, subsection B, “Mechanical Check”. But even if everything seems fine to you, it’s best to take your eBike back to your authorized retailer for a checkup. Authorized retailers typically suggest you bring the eBike in for a 30-day checkup. Another way to judge when it’s time for the first checkup is to bring the eBike in after three to five hours of hard off-road use, or about 10 to 15 hours of on-road or more casual off-road use. But if you think something is wrong with the eBike, take it to your authorized retailer before riding it again.
2. Before every ride: Mechanical Check (Page 70, Section 7, “Safely Operating Your eBike”, subsection B, “Mechanical Check”).
3. After every long or hard ride, if the eBike has been exposed to water or grit, or at least every 100 miles, clean the eBike thoroughly. Inspect the drivetrain for debris or buildup. Belt-drive systems do not require lubrication. Keep the belt and sprockets clean and free of contaminants. If your eBike is equipped with a chain-drive system, lightly lubricate the chain with a high-quality bicycle chain lubricant and wipe off any excess with a lint-free cloth.

4. After every long or hard ride or after every 10 to 20 hours of riding:

- Squeeze the front brake and rock the eBike forward and back. Everything feel solid? If you feel a clunk with each forward or backward movement of the eBike, you probably have a loose headset. Have your authorized retailer check it.
- Lift the front wheel off the ground and swing it from side to side. Feel smooth? If you feel any binding or roughness in the steering, you may have a tight headset. Have your authorized retailer check it.
- Grab one pedal and rock it toward and away from the centerline of the eBike; then do the same with the other pedal. Anything feel loose? If so, have your authorized retailer check it.
- Take a look at the brake pads. Do they look worn, or are they making unusual noises? Time to have your authorized retailer adjust or replace them.
- Carefully check the control cables and cable housings. Any rust? Kinks? Fraying? If so, have your authorized retailer replace them.
- Squeeze each adjoining pair of spokes on either side of each wheel between your thumb and index finger. Do they all feel about the same? If any feel loose, have your authorized retailer check the wheel for tension and trueness.
- Check the tires for excess wear, cuts or bruises. Have your authorized retailer replace them if necessary.
- Check the wheel rims for excess wear, dings, dents and scratches. Consult your authorized retailer if you see any rim damage.
- Check to make sure that all parts and accessories are still secure, and tighten any that are not.
- Check the frame (particularly in the area around all tube joints), the handlebars, the stem and the seat post for any deep scratches, cracks or discoloration. These are signs of stress-caused fatigue and indicate that a part is at the end of its useful life and needs to be replaced. See page 194 Appendix B, subsection A, “Understanding metals”.

5. Disc brakes require additional inspection. Before every ride, check for the following:
- Brake pads rubbing continuously against the rotor.
 - Reduced braking performance or unusual noises during braking.
 - Brake levers that feel soft, “spongy,” or can be pulled all the way to the handlebar without adequate stopping power.
 - Visible damage, bending, or warping of the brake rotor.
 - Any condition that affects smooth braking or normal lever feel.

If any of these conditions are present, do not ride the eBike. Have the brake system inspected and serviced by your authorized retailer.



WARNING: Like any mechanical device, an eBike and its components are subject to wear and stress. Different materials and mechanisms wear or fatigue from stress at different rates and have different life cycles. If a component's life cycle is exceeded, the component can suddenly and catastrophically fail, causing serious injury or death to the rider. Scratches, cracks, fraying and discoloration are signs of stress-caused fatigue and indicate that a part is at the end of its useful life and needs to be replaced. While the materials and workmanship of your eBike or individual components may be covered by a limited warranty for a specified period of time by eBliss Global or the component supplier, this does not guarantee that the product will last for the full term of the warranty. Product life is often related to the kind of riding you do and to the treatment to which you submit the eBike. The eBike's warranty is not meant to suggest that the eBike cannot be broken or will last forever. It only means that the eBike is covered subject to the terms of the warranty. Please be sure to read Appendix A, “Intended Use of Your Bicycle” and Appendix B, “The Lifespan of Your Bike and Its Components”, starting on Page 180.

6. As required: If either brake lever fails the Mechanical Check Section 7, subsection B: “Mechanical Check” (Page 70), don’t ride the eBike. Have your authorized retailer check the brakes. If the eBike won’t shift, see your authorized retailer.
7. Please refer to your authorized retailer for any questions about eBike service intervals.


D. If Your eBike Sustains an Impact

First, check yourself for injuries, and take care of them as best you can. Seek medical help if necessary.


Next, check your eBike for damage.

After any crash, take your eBike to your authorized retailer for a thorough check.

All components, including frames, wheels, handlebars, stems, cranksets or brakes which have sustained an impact must not be ridden until they have been disassembled and thoroughly inspected by a qualified mechanic. Carbon composite components, including frames, wheels, handlebars, stems, cranksets or brakes, may not show visible signs of damage, but can fail suddenly and catastrophically after an impact. See also Appendix B: “The Lifespan of Your Bike and Its Components”, starting on Page 192, Appendix B, subsection A, “Understanding metals” on page 194, Appendix B, subsection B, “Understanding composites” on page 199.

 **WARNING: A crash or other impact can put extraordinary stress on bicycle components, causing them to fatigue prematurely. Components suffering from stress fatigue can fail suddenly and catastrophically, causing loss of control, serious injury or death.**

APPENDIX A: INTENDED USE OF YOUR BICYCLE

 **WARNING:** Understand your bike and its intended use. Choosing the wrong bicycle for your purpose can be hazardous. Using your bike the wrong way is dangerous.

All current EBliss electric bicycle models are designed and classified for General Purpose Riding – Condition 2 as defined in this Appendix. EBliss bicycles are engineered and intended for paved roads, smooth gravel roads, and improved trails where the tires maintain continuous ground contact. They are not designed, tested, or approved for off-road mountain biking, jumping, downhill, freeride, gravity, dirt jump, or other high-impact riding conditions described elsewhere in this Appendix. The additional intended-use categories included below are provided for comparison to the broader industry classification system. Their inclusion does not indicate that an EBliss bicycle is suitable for those uses. The intended-use classification stated above controls. Operation outside the stated Condition 2 classification constitutes misuse and may result in component failure, loss of control, serious injury, or death. No one type of bicycle is suited for all purposes. Your authorized retailer can help you pick the “right tool for the job” and help you understand its limitations. There are many types of bicycles and many variations within each type. There are many types of mountain, road, racing, hybrid, touring, cyclo-cross and gravel bicycles. Within each of type of bicycle, one can optimize for certain purposes. Visit your bicycle shop and find someone with expertise in the area that interests you. Do your own homework. Seemingly small changes such as the choice of tires can improve or diminish the performance of a bicycle for a certain purpose.

On the following pages, we generally outline the intended uses of various types of bikes. **Industry usage conditions are generalized and evolving. Consult your authorized retailer about how you intend to use your bike.**

High- Performance Road

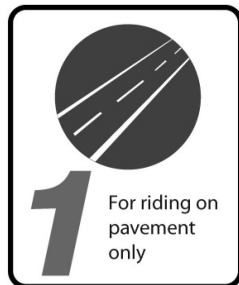
Condition 1

Bikes designed for riding on a paved surface where the tires do not lose ground contact.

INTENDED To be ridden on paved roads only.

NOT INTENDED For off-road, cyclo-cross, or touring with racks or panniers.

TRADE OFF Material use is optimized to deliver both light weight and specific performance. You must understand that (1) these types of bikes are intended to give an aggressive racer or competitive cyclist a performance advantage over a relatively short product life, (2) a less aggressive rider will enjoy longer frame life, (3) you are choosing light weight (shorter frame life) over more frame weight and a longer frame life, (4) you are choosing light weight over more dent-resistant or rugged frames that weigh more. All frames that are very light need frequent inspection. These frames are likely to be damaged or broken in a crash. They are not designed to take abuse or be a rugged workhorse. See Appendix A. "Intended Use", Page 18-, and Appendix B. "The Lifespan of your eBike and its components" Page 192.



MAXIMUM WEIGHT LIMIT

RIDER	LUGGAGE*	TOTAL
lbs/kg	lbs/kg	lbs/kg
300/136	5/2.3	305/138

*Seat Bag Only

General Purpose Riding

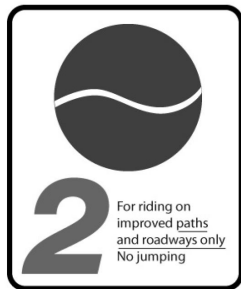
Condition 2

Bikes designed for riding Condition 1, plus smooth gravel roads and improved trails with moderate grades where the tires do not lose ground contact.

INTENDED For paved roads, gravel or dirt roads that are in good condition, and bike paths.

NOT INTENDED For off-road or mountain bike use, or for any kind of jumping. Some of these bikes have suspension features, but these features are designed to add comfort, not off-road capability. Some come with relatively wide tires that are

well-suited to gravel or dirt paths. Some come with relatively narrow tires that are best suited to faster riding on pavement. If you ride on gravel or dirt paths, carry heavier loads or want more tire durability, talk to your authorized retailer about wider tires.



MAXIMUM WEIGHT LIMIT

RIDER	LUGGAGE*	TOTAL
lbs/kg	lbs/kg	lbs/kg
300/136	30/14	330/150
for Touring or Trekking		
300/136	55/25	355/161

Cross-Country, Marathon, Hardtails

Condition 3

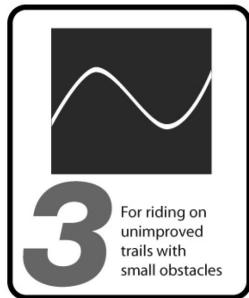
Bikes designed for riding Conditions 1 and 2, plus rough trails, small obstacles, and smooth technical areas, including areas where momentary loss of tire contact with the ground may occur. NOT jumping. All mountain bikes without rear suspension are Condition 3, and so are some lightweight rear suspension models.

INTENDED For cross-country riding and racing which ranges from mild to aggressive over intermediate terrain (e.g., hilly with small obstacles like roots, rocks, loose surfaces and hard pack

and depressions). Cross-country and marathon equipment (tires, shocks, frames, drive trains) are light weight, favoring nimble speed over brute force. Suspension travel is relatively short since the bike is intended to move quickly on the ground.

NOT INTENDED For Hardcore Freeriding, Extreme Downhill, Dirt Jumping, Slopestyle, or very aggressive or extreme riding. No spending time in the air landing hard and hammering through obstacles.

TRADE OFF Cross-Country bikes are lighter, faster to ride uphill, and more nimble than All-Mountain bikes. Cross-Country and Marathon bikes trade off some ruggedness for pedaling efficiency and uphill speed.



MAXIMUM WEIGHT LIMIT

RIDER	LUGGAGE*	TOTAL
lbs/kg	lbs/kg	lbs/kg
300/136	5/2.3	305/138
for Touring or Trekking		
Front suspension frames manufactured with original equipment seat stay and dropout rack mounts only.		
300/136	55/25	355/161

*Seat Bag Only

All Mountain

Condition 4

Bikes designed for riding Conditions 1, 2, and 3, plus rough technical areas, moderately sized obstacles, and small jumps.

INTENDED For trail and uphill riding. All-Mountain bicycles are: (1) more heavy-duty than cross-country bikes, but less heavy-duty than Freeride bikes, (2) lighter and more nimble than Freeride bikes, (3) heavier and have more suspension travel than a cross-country bike, allowing them to be ridden in more difficult terrain, over larger obstacles and moderate jumps, (4) intermediate in suspension travel and use components that fit the

intermediate intended use, (5) cover a fairly wide range of intended use, and within this range are models that are more or less heavy-duty. Talk to your authorized retailer about your needs and these models.

NOT INTENDED For use in extreme forms of jumping/riding such as hardcore mountain, Freeriding, Downhill, North Shore, Dirt Jumping, Hucking etc. No large drop-offs, jumps or launches (wooden structures, dirt embankments) requiring long suspension travel or heavy-duty components; and no spending time in the air landing hard and hammering through obstacles.

TRADE OFF All-Mountain bikes are more rugged than cross-country bikes, for riding more difficult terrain. All-Mountain bikes are heavier and harder to ride uphill than cross-country bikes. All-Mountain bikes are lighter, more nimble and easier to ride uphill than Freeride bikes. All-Mountain bikes are not as rugged as Freeride bikes and must not be used for more extreme riding and terrain.



MAXIMUM WEIGHT LIMIT

RIDER	LUGGAGE*	TOTAL
lbs/kg	lbs/kg	lbs/kg
300/136	5/2.3	305/138

*Seat Bag Only

Gravity, Freeride, and Downhill

Condition 5

Bikes designed for jumping, hucking, high speeds, or aggressive riding on rougher surfaces, or landing on flat surfaces. However, this type of riding is extremely hazardous and puts unpredictable forces on a bicycle which may overload the frame, fork or parts. If you choose to ride in Condition 5 terrain, you should take appropriate safety precautions such as more frequent bike inspections and replacement of equipment. You should also wear comprehensive safety equipment such as a full-face helmet, pads and body armor.

INTENDED For riding that includes the most difficult terrain that

only very skilled riders should attempt. Gravity, Freeride, and Downhill are terms that describe hardcore mountain, north shore or slopestyle. This is “extreme” riding and the terms describing it are constantly evolving. Gravity, Freeride, and Downhill bikes are: (1) heavier and have more suspension travel than All-Mountain bikes, allowing them to be ridden in more difficult terrain, over larger obstacles and larger jumps, (2) the longest in suspension travel and use components that fit heavy-duty intended use. While all that is true, there is no guarantee that extreme riding will not break a Freeride bike. The terrain and type of riding that Freeride bikes are designed for is inherently dangerous. Appropriate equipment, such as a Freeride bike, does not change this reality. In this kind of riding, bad judgment, bad luck, or riding beyond your capabilities can easily result in a crash, where you could be seriously injured, paralyzed or killed.

NOT INTENDED To be an excuse to try anything. Read Page 98, Section 7, “Safely Operating Your eBike”, subsection J, “Extreme, Stunt or Competition Riding”.

TRADE OFF Freeride bikes are more rugged than All-Mountain bikes, for riding more difficult terrain. Freeride bikes are heavier and harder to ride uphill than All-Mountain bikes.



MAXIMUM WEIGHT LIMIT

RIDER	LUGGAGE*	TOTAL
lbs/kg	lbs/kg	lbs/kg
300/136	5/2.3	305/138

*Seat Bag Only

Dirt Jump

Condition 5

Bikes designed for jumping, hucking, high speeds, or aggressive riding on rougher surfaces, or landing on flat surfaces. However, this type of riding is extremely hazardous and puts unpredictable forces on a bicycle which may overload the frame, fork or parts. If you choose to ride in Condition 5 terrain, you should take appropriate safety precautions such as more frequent bike inspections and replacement of equipment. You should also wear comprehensive safety equipment such as a full-face helmet, pads and body armor.



INTENDED For man-made dirt jumps, ramps, skate parks other predictable obstacles and terrain where riders need and use skill and bike control, rather than suspension. Dirt Jumping bikes are used much like heavy-duty BMX bikes. A Dirt Jumping bike does not give you skills to jump. Read Page 98, Section 7, “Safely Operating Your eBike”, subsection J, “Extreme, Stunt or Competition Riding”.

NOT INTENDED For terrain, drop-offs or landings where large amounts of suspension travel are needed to help absorb the shock of landing and help maintain control.

TRADE OFF Dirt Jumping bikes are lighter and more nimble than Freeride bikes, but they have no rear suspension and the suspension travel in the front is much shorter.

MAXIMUM WEIGHT LIMIT

RIDER	LUGGAGE*	TOTAL
lbs/kg	lbs/kg	lbs/kg
300/136	0	300/136

*Seat Bag Only

Gravel/Cyclo-cross

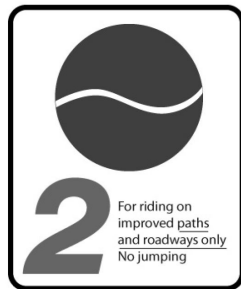
Condition 2

Bikes designed for riding Condition 1, plus gravel roads and improved trails with moderate grades where the tires do not lose ground contact.

INTENDED For gravel and cyclo-cross riding, training and racing. Gravel and cyclo-cross riding involves a variety of terrain and surfaces including dirt or mud. These bikes also work well for all-weather rough road riding and commuting.

NOT INTENDED For off-road or mountain bike use or jumping. Gravel and cyclo-cross bikes are not intended for mountain

bike use. The larger road bike size wheels are faster and lighter than mountain bike wheels, but not as strong. Cyclo-cross riders and racers dismount before reaching an obstacle, carry their bike over the obstacle and then remount.



MAXIMUM WEIGHT LIMIT

RIDER	LUGGAGE*	TOTAL
lbs/kg	lbs/kg	lbs/kg
300/136	30/13.6	300/150

*Seat Bag Only

APPENDIX B: THE LIFESPAN OF YOUR EBIKE AND ITS COMPONENTS

1. Nothing Lasts Forever, Including Your eBike.

When the useful life of your eBike or its components is over, continued use is hazardous.

Every eBike and its component parts have a finite, limited useful life. The length of that life will vary with the construction and materials used in the frame and components; the maintenance and care the frame and components receive over their life; and the type and amount of use to which the frame and components are subjected. Use in competitive events, trick riding, ramp riding, jumping, aggressive riding, riding on severe terrain, riding in severe climates, riding with heavy loads, commercial activities and other types of non-standard use can dramatically shorten the life of the frame and components. Any one or a combination of these conditions may result in an unpredictable failure.

All aspects of use being identical, lighter eBikes and their components will usually have a shorter life than heavier eBikes and their components. In selecting a lightweight eBike or components you are making a tradeoff, favoring the higher performance that comes with lighter weight over longevity. So, If you choose lightweight, high-performance equipment, be sure to have it inspected frequently. You should have your eBike and its components checked periodically by your authorized retailer for indicators of stress and/or potential failure, including cracks, deformation, corrosion, paint peeling, dents, and any other indicators of potential problems, inappropriate use or abuse. These are important safety checks and very important to help prevent crashes, bodily injury to the rider and shortened product life.

2. Perspective

Today's high-performance eBikes require frequent and careful inspection and service. In this Appendix we try to explain some underlying material science basics and how they relate to your eBike. We discuss some of the trade-offs made in designing your eBike and what you can expect from your eBike; and we provide important, basic guidelines on how to maintain and inspect it. We cannot teach you everything you need to know to properly inspect and service your eBike; and that is why we repeatedly urge you to take your eBike to your authorized retailer for professional care and attention.



WARNING: Frequent inspection of your eBike is important to your safety. Follow the Mechanical Safety Check on Follow the Mechanical Check on Page 70, Section 7, "Safely Operating Your eBike", subsection B, "Mechanical Check" of this Manual before every ride.

Periodic, more detailed inspection of your eBike is important. How often this more detailed inspection is needed depends upon you.

You, the rider/owner, have control and knowledge of how often you use your eBike, how hard you use it and where you use it. Because your authorized retailer cannot track your use, you must take responsibility for periodically bringing your eBike to your authorized retailer for inspection and service. Your authorized retailer will help you decide what frequency of inspection and service is appropriate for how and where you use your eBike.

For your safety, understanding and communication with your authorized retailer, we urge you to read this Appendix in its entirety. The materials used to make your eBike determine how and how frequently to inspect.

Ignoring this WARNING can lead to frame, fork or other component failure, which can result in serious injury or death.

A. Understanding Metals

Steel is the traditional material for building bicycle frames. It has good characteristics, but in high-performance eBikes, steel has been largely replaced by aluminum and in some cases by carbon fiber or titanium. The main factor driving this change is interest in lighter eBikes by cycling enthusiasts.

Properties of Metals

Please understand that there is no simple statement that can be made that characterizes the use of different metals for eBikes. What is true is how the metal chosen is applied is much more important than the material alone. One must look at the way the eBike is designed, tested, manufactured and supported along with the characteristics of the metal rather than seeking a simplistic answer.

Metals vary widely in their resistance to corrosion. Steel must be protected or rust will attack it. Aluminum and Titanium quickly develop an oxide film that protects the metal from further corrosion. Both are therefore quite resistant to corrosion. Aluminum is not perfectly corrosion resistant, and particular care must be used where it contacts other metals and galvanic corrosion can occur.

Metals are comparatively ductile. Ductile means bending, buckling and stretching before breaking. Generally speaking, of the common eBike frame building materials steel is the most ductile, titanium less ductile, followed by aluminum.

Metals are subject to fatigue. With enough cycles of use, at high enough loads, metals will eventually develop cracks that lead to failure. It is very important that you read the basics of metal fatigue below.

Let's say you hit a curb, ditch, rock, car, another cyclist or other object. At any speed above a fast walk, your body will continue to move forward, momentum carrying you over the front of the eBike. You cannot and will not stay on the eBike, and what happens to the frame, fork and other components is irrelevant to what happens to your body.

What should you expect from your metal frame? It depends on many complex factors, which is why we tell you that crashworthiness cannot be a design criteria. With that important note, we can tell you that if the impact is hard enough the fork or frame may be bent or buckled. On a steel eBike, the steel fork may be severely bent and the frame undamaged. Aluminum is less ductile than steel, but you can expect the fork and frame to be bent or buckled. Hit harder and the top tube may be broken in tension and the down tube buckled. Hit harder and the top tube may be broken, the down tube buckled and broken, leaving the head tube and fork separated from the main triangle.

When a metal eBike crashes, you will usually see some evidence of this ductility in bent, buckled or folded metal.

It is now common for the main frame to be made of metal and the fork of carbon fiber. See page 194 Appendix B, subsection A, "Understanding metals" and See Page 199, Appendix B, subsection B, "Understanding composites". The relative ductility of metals and the lack of ductility of carbon fiber means that in a crash scenario you can expect some bending or buckling in the metal but none in the carbon. Below some load the carbon fork may be intact even though the frame is damaged. Above some load the carbon fork will be completely broken.

The Basics of Metal Fatigue

Common sense tells us that nothing that is used lasts forever. The more you use something, and the harder you use it, and the worse the conditions you use it in, the shorter its life.

Fatigue is the term used to describe accumulated damage to a part caused by repeated loading. To cause fatigue damage, the load the part receives must be great enough. A crude, often-used example is bending a paper clip back and forth (repeated loading) until it breaks. This simple definition will help you understand that fatigue has nothing to do with time or age. An eBike in a garage does not fatigue. Fatigue happens only through use.

So what kind of “damage” are we talking about? On a microscopic level, a crack forms in a highly stressed area. As the load is repeatedly applied, the crack grows. At some point the crack becomes visible to the naked eye. Eventually it becomes so large that the part is too weak to carry the load that it could carry without the crack. At that point there can be a complete and immediate failure of the part.

One can design a part that is so strong that fatigue life is nearly infinite. This requires a lot of material and a lot of weight. Any structure that must be light and strong will have a finite fatigue life. Aircraft, race cars and motorcycles all have parts with finite fatigue lives. If you wanted an eBike with an infinite fatigue life, it would weigh far more than any eBike sold today. So we all make a tradeoff: the wonderful, lightweight performance we want requires that we inspect the structure.

What To Look For

<ul style="list-style-type: none">• ONCE A CRACKS STARTS IT CAN GROW AND GROW FAST. Think about the crack as forming a path-way to failure. This means that any crack is potentially dangerous and will only become more dangerous.	SIMPLE RULE 1 : If you find a crack, replace the part.
<ul style="list-style-type: none">• CORROSION SPEEDS DAMAGE. Cracks grow more quickly when they are in a corrosive environment. Think about the corrosive solution as further weakening and extending the crack.	SIMPLE RULE 2 : Clean your eBike, lubricate your eBike, protect your eBike from salt, remove any salt as soon as you can.
<ul style="list-style-type: none">• STAINS AND DISCOLORATION CAN OCCUR NEAR A CRACK. Such staining may be a warning sign that a crack exists.	SIMPLE RULE 3 : Inspect and investigate any staining to see if it is associated with a crack.
<ul style="list-style-type: none">• SIGNIFICANT SCRATCHES, GOUGES, DENTS OR SCORING CREATE STARTING POINTS FOR CRACKS. Think about the cut surface as a focal point for stress (in fact engineers call such areas "stress risers," areas where the stress is increased). Perhaps you have seen glass cut? Recall how the glass was scored and then broke on the scored line.	SIMPLE RULE 4 : Do not scratch, gouge or score any surface. If you do, pay frequent attention to this area or replace the part.

• **SOME CRACKS (particularly larger ones) MAY MAKE A CREAKING NOISE AS YOU RIDE.** Think about such a noise as a serious warning signal. Note that a well-maintained eBike will be very quiet and free of creaks and squeaks.

SIMPLE RULE 5 : Investigate and find the source of any noise. It may not be a crack, but whatever is causing the noise should be fixed promptly.

Fatigue Is Not A Perfectly Predictable Science

Fatigue is not a perfectly predictable science, but here are some general factors to help you and your authorized retailer determine how often your eBike should be inspected. The more you fit the “shorten product life” profile, the more frequent your need to inspect. The more you fit the “lengthen product life” profile, the less frequent your need to inspect.

Factors that shorten product life:

- Hard, harsh riding style
- “Hits”, crashes, jumps, other “shots” to the eBike
- High mileage
- Higher body weight
- Stronger, more fit, more aggressive rider
- Corrosive environment (wet, salt air, winter road salt, accumulated sweat)
- Presence of abrasive mud, dirt, sand, soil in riding environment

Factors that lengthen product life:

- Smooth, fluid riding style
- No “hits”, crashes, jumps, other “shots” to the eBike
- Low mileage
- Lower body weight
- Less aggressive rider
- Non-corrosive environment (dry, salt-free air)
- Clean riding environment



WARNING: Do not ride an eBike or component with any crack, bulge or dent, even a small one. Riding a cracked frame, fork or component could lead to complete failure, with risk of serious injury or death.

B. Understanding composites

All riders must understand a fundamental reality of composites. Composite materials constructed of carbon fibers are strong and light, but when crashed or overloaded, carbon fibers do not bend, they break.

What Are Composites?

The term “composites” refers to the fact that a part or parts are made up of different components or materials. You’ve heard the term “carbon fiber eBike.” This really means “composite eBike.”

Carbon fiber composites are typically a strong, light fiber in a matrix of plastic, molded to form a shape. Carbon composites are light relative to metals. Steel weighs 7.8 grams/cm³ (grams per cubic centimeter), titanium 4.5 grams/cm³, aluminum 2.75 grams/cm³. Contrast these numbers with carbon fiber composite at 1.45 grams/cm³.

The composites with the best strength-to-weight ratios are made of carbon fiber in a matrix of epoxy plastic. The epoxy matrix bonds the carbon fibers together, transfers load to other fibers, and provides a smooth outer surface. The carbon fibers are the “skeleton” that carries the load.

Why Are Composites Used?

Unlike metals, which have uniform properties in all directions (engineers call this isotropic), carbon fibers can be placed in specific orientations to optimize the structure for particular loads. The choice of where to place the carbon fibers gives engineers a powerful tool to create strong, light eBikes. Engineers may also orient fibers to suit other goals such as comfort and vibration damping.

Carbon fiber composites are very corrosion resistant, much more so than most metals. Think about carbon fiber or fiberglass boats.

Carbon fiber materials have a very high strength-to-weight ratio.

What Are The Limits Of Composites?

Well designed “composite” or carbon fiber eBikes and components have long fatigue lives, usually better than their metal equivalents.


While fatigue life is an advantage of carbon fiber, you must still regularly inspect your carbon fiber frame, fork or components.

Carbon fiber composites are not ductile. Once a carbon structure is overloaded, it will not bend; it will break. At and near the break, there will be rough, sharp edges and maybe delamination of carbon fiber or carbon fiber fabric layers. There will be no bending, buckling or stretching.

If you hit something or have a crash, what can you expect from your carbon fiber eBike?

Let's say you hit a curb, ditch, rock, car, other cyclist or other object. At any speed above a fast walk, your body will continue to move forward, the momentum carrying you over the front of the eBike. You cannot and will not stay on the eBike and what happens to the frame, fork and other components is irrelevant to what happens to your body.

What should you expect from your carbon frame? It depends on many complex factors. But we can tell you that if the impact is hard enough, the fork or frame may be completely broken. Note the significant difference in behavior between carbon and metal. See page 194 Appendix B, subsection A, "Understanding metals". Even if the carbon frame was twice as strong as a metal frame, once the carbon frame is overloaded it will not bend, it will break completely.

 **WARNING:** If your eBike or any carbon composite component (including frame, fork, handlebars, wheels, seatposts, or other parts) has been involved in a crash, impact, or significant load event, it must be inspected by an authorized retailer or qualified eBike mechanic before further use. Carbon components may not show visible signs of damage and can fail suddenly and catastrophically after impact. Continuing to ride without proper inspection may result in loss of control, serious injury, or death.

 **WARNING:** Be aware that high temperature in a confined environment can affect the integrity of composite materials, resulting in component failure which could cause you to lose control and fall.

Inspection of composite frame, fork, and components cracks

Inspect for cracks, broken or splintered areas. Any crack is serious. Do not ride any eBike or component that has a crack of any size.

Delamination:

- Delamination is serious damage. Composites are made from layers of fabric. Delamination means that the layers of fabric are no longer bonded together. Do not ride any eBike or component that has any delamination.

These are some delamination clues:

- A cloudy or white area. This kind of area looks different from the ordinary undamaged areas. Undamaged areas will look glassy, shiny, or “deep,” as if one was looking into a clear liquid. Delaminated areas will look opaque and cloudy.
- Bulging or deformed shape. If delamination occurs, the surface shape may change. The surface may have a bump, a bulge, soft spot, or not be smooth and fair.
- A difference in sound when tapping the surface. If you gently tap the surface of an undamaged composite you will hear a consistent sound, usually a hard, sharp sound. If you then tap a delaminated area, you will hear a different sound, usually duller, less sharp.

Unusual Noises:

Either a crack or delamination can cause creaking noises while riding. Think about such a noise as a serious warning signal. A well maintained eBike will be very quiet and free of creaks and squeaks. Investigate and find the source of any noise. It may not be a crack or delamination, but whatever is causing the noise must be fixed or replaced before riding.



WARNING: Do not ride an eBike or component with any delamination or crack. Riding a delaminated or cracked frame, fork or other component could lead to complete failure, with risk of serious injury or death.

B. Understanding components

It is often necessary to remove and disassemble components in order to properly and carefully inspect them. This is a job for a professional eBike mechanic with the special tools, skills and experience to inspect and service today's high-tech high-performance eBikes and their components.

Aftermarket “Super Light” Components

Think carefully about your rider profile as outlined above. The more you fit the “shorten product life” profile, the more you must question the use of super light components. The more you fit the “lengthen product life” profile, the more likely it is that lighter components may be suitable for you. Discuss your needs and your profile very honestly with your authorized retailer.

Take these choices seriously and understand that you are responsible for the changes.

A useful slogan to discuss with your authorized retailer if you are considering changing components is “Strong, Light, Cheap, pick two.”

Original Equipment Components

eBike and component manufacturers test the fatigue life of the components that are original equipment on your eBike. This means that they have met test criteria and have reasonable fatigue life. It does not mean that the original components will last forever. They won't.

APPENDIX C: FASTENER TORQUE SPECIFICATIONS

Correct tightening torque of threaded fasteners is critical to your safety. Always tighten fasteners to the torque specifications listed in this Manual. If you are unsure about the correct torque or procedure for any fastener, consult your authorized eBliss retailer before riding.

Improperly tightened fasteners can lead to component movement, deformation, fatigue, or sudden failure, which may result in loss of control, serious personal injury, or death.

Always use a properly calibrated torque wrench when tightening critical fasteners. You must fully understand how your torque wrench measures and displays torque, including its units of measurement and scale markings, before using it. Different torque wrenches operate differently, and misreading or misusing the tool can result in incorrect torque application. Carefully follow the torque wrench instructions for setup, adjustment, and use. Never guess at torque values or assume a fastener is properly tightened without verification. If you have any doubt about your ability to correctly use a torque wrench or apply the specified torque, stop and consult your authorized eBliss retailer before operating the eBike.

Fastener Torque Specifications

Correct tightening torque of threaded fasteners is critical to rider safety. Fasteners that are too tight can stretch or deform, while fasteners that are too loose can move, fatigue, and fail. Either condition can result in sudden component failure, loss of control, serious injury, or death.

Always use a properly calibrated torque wrench when tightening critical fasteners on your eBike, and ensure you understand how the tool measures and displays torque before use. If you are unsure about the correct torque specification or procedure, consult your authorized eBliss retailer for clarification before proceeding.

Fastener Recommended Torque

WHEELS:

Front Thru Axle Torque: 6mm Hex Key 10-15 Nm

Rear Axle Nuts: 35-45 Nm

PEDALS: 34-39 Nm

SADDLE CLAMP ON SEAT POST: 18-20 Nm

STEM STEERER TUBE CLAMP BOLTS: 5 Nm

HANDLEBAR CLAMP:

Folding and Cargo:

Handlebar Faceplate and Steerer Clamp: M6 9Nm

Fat and Urban:

Handlebar Faceplate: M6 6-8 Nm, M5 5 Nm

CONTROL LEVER CLAMP: 5-7 Nm

Fender mounting fasteners (if equipped):

Tighten using a hand tool only, with light force, until secure. Do not use power tools. Stop tightening if increased resistance is felt. If the fender or hardware will not secure properly, consult your authorized retailer.

***Pedal threads are side-specific:**

The right pedal tightens clockwise; the left pedal tightens counter-clockwise (reverse thread). Installing pedals on the incorrect side or tightening in the wrong direction may damage crank threads and result in pedal loosening or failure during use.

NOTE: Folding pedals (if equipped) do not rely on torque adjustment for securement. They use a mechanical folding and locking mechanism that must be fully unfolded and locked before riding. Improper engagement may result in pedal movement or collapse during use. Refer to Page 156, Section 11, "Tech," subsection F, "Pedals," for folding pedal operation and engagement requirements.

APPENDIX D: TROUBLESHOOTING

Some Common Issues

	Symptoms	Possible Causes	Most Common Solutions
1.	The bike does not work	<ul style="list-style-type: none">•Insufficient battery power•Faulty connections•Battery not full seated in tray•Improper turn on sequence•Brakes are applied	<ul style="list-style-type: none">•Charge the battery•Inspect connectors•Install battery correctly•Turn on bike with proper sequence•Ensure brake levers are fully released
2.	Reduced range	<ul style="list-style-type: none">•Low tire pressure•Low or faulty battery•Riding with too many hills, head-wind, braking and/or excessive load•Battery discharged for long period of time without regular charges, aged,damaged or unbalanced•Brakes rubbing	<ul style="list-style-type: none">•Adjust tire pressure•Check connections or charge battery•Assist with pedals or adjust route•Contact Product Support if range decline persists•Have brakes inspected

	Symptoms	Possible Causes	Most Common Solutions
3.	The battery will not charge	<ul style="list-style-type: none"> • Charge not well connected • Charger damaged • Battery damaged • Wiring damaged • Blown charge fuse 	<ul style="list-style-type: none"> • Check connections • Replace • Contact Product Support
4.	Irregular acceleration and/or reduced top speed	<ul style="list-style-type: none"> • Insufficient battery power • Loose or damaged throttle • Misaligned or damaged magnet ring 	<ul style="list-style-type: none"> • Charge or replace battery • Have inspected • Contact Product Support
5.	The motor does not respond with the bike is powered on	<ul style="list-style-type: none"> • Loose wiring • Loose or damaged throttle • Loose or damaged motor plug wire • Damaged motor 	<ul style="list-style-type: none"> • Contact Product Support • Tighten or replace • Repair or replace
6.	Wheel or motor makes strange noises	<ul style="list-style-type: none"> • Loose or damaged wheel spokes or rim • Loose or damaged motor wiring 	<ul style="list-style-type: none"> • Have Inspected • Contact Product Support

APPENDIX E: INITIAL ASSEMBLY AND SETUP

Your eBike is partially assembled at the factory but may require final assembly and adjustment prior to first use. **PROFESSIONAL ASSEMBLY IS STRONGLY RECOMMENDED.**

This eBike should be assembled, adjusted, and inspected by a qualified bicycle technician before it is ridden. If you choose to complete assembly yourself, you must have appropriate tools, mechanical knowledge, and experience.

Tools That May Be Required

- Metric hex wrench set (4 mm, 5 mm, 6 mm typical)
- Open-end or adjustable wrench
- Bicycle pump with pressure gauge
- Torque wrench (recommended)

Typical Assembly and Setup May Include

- Install and secure the front wheel (if not pre-installed)
- Install pedals (note left and right pedal threading)
- Align and secure the handlebar and stem
- Install and adjust the seatpost and saddle
- Check tire pressure and inflate to recommended levels
- Verify proper operation of brakes and shifting systems

IMPORTANT SAFETY NOTICE

Improper assembly, adjustment, or inspection can result in component failure, loss of control, serious injury, or death. If you are not confident in your ability to properly assemble and adjust this eBike, do not attempt to do so. Have the eBike assembled and inspected by an authorized retailer or qualified bicycle technician before riding.



WARNING: Pre-Ride Inspection Reminder

Before every ride, riders must confirm that the electric bicycle is in safe operating condition, as described throughout this Manual. The following checklist is provided as a practical reminder of critical pre-ride safety checks. Failure to perform these checks may result in loss of control, serious injury, fire risk, or death. If you are uncertain about any component, do not ride the bicycle. Contact your authorized retailer for assistance.

This checklist is not a substitute for professional inspection, scheduled maintenance, or the complete safety guidance provided throughout this Manual.

This checklist assumes the eBike is in its original, unmodified condition. Modifications, accessory installation, or component changes may affect safety and may require additional inspection or service.

Required Safety Checks Before Your First Ride and Each Subsequent Ride

Confirm that the battery is fully charged and correctly installed.

- The Command Center will not operate while the battery is connected to a charging device.
- To activate the Command Center, press the power button on the handlebar-mounted controller.
- Confirm that the Command Center is functioning properly and that no error messages are displayed. If error codes appear or incorrect information is shown, do not ride.
- The battery key is used exclusively to lock and remove the battery. It is not an on/off control and must not be relied upon as such.
- Operating the bicycle with an improperly installed or damaged battery may cause electrical failure or fire.

Verify that tire pressure is within the range indicated on the tire sidewall. Under-inflated or over-inflated tires can lead to handling instability, rim damage, or sudden tire failure.

Ensure both wheels are securely attached. Check all axle hardware or quick-release systems. Loose or improperly mounted wheels can cause immediate loss of control.

Test both brakes for proper function. Each brake must engage smoothly and fully. If braking response feels weak, uneven, or inconsistent, do not ride until the issue is corrected.

Inspect wheel alignment. Wheels must spin freely and remain true. A severely untrue wheel can interfere with braking, reduce stability, and increase crash risk.

Inspect for visible damage. Check the frame, fork, handlebars, seatpost, wheels, and major components for cracks, dents, deformation, deep scratches, or unusual noises. Damage may not always be obvious. If damage is observed or suspected, do not ride and consult your authorized retailer.

For folding models, ensure that the frame is fully unfolded and securely locked, the handlebar and stem are locked in the riding position, and the pedals are fully extended and locked before riding. If you are unsure whether any folding mechanism is properly secured, do not ride the eBike and consult your authorized retailer.

Inspect all critical fasteners. Confirm that handlebars, stem bolts, seatpost clamps, brake hardware, and other structural fasteners are tightened to the torque specifications listed in this Manual. Loose fasteners may cause component failure, resulting in loss of control, serious personal injury, or death.

After completing all safety checks, you may proceed with riding. Always wear an approved bicycle helmet and follow all applicable laws and regulations.

Starting the Bicycle (System Power-Up and Initial Operation)

Perform the following steps only after successfully completing the Pre-Ride Inspection above. This section explains how to power on and begin operating your eBike. It does not replace the Pre-Ride Inspection or the “Before Your First Ride” safety guidance elsewhere in this Manual.



WARNING: Helmet and protective equipment

Always wear a properly fitted and approved bicycle helmet when operating your eBike. Depending on riding conditions, additional protective equipment such as eye protection, gloves, and appropriate footwear may also be necessary. Failure to wear appropriate protective equipment increases the risk of serious injury or death in the event of a fall or collision.

While standing over the bicycle, locate the Command Center on the left side of the handlebar. It includes a “+” button, a “-” button, and a power button between them.

Press and hold the power button until the Command Center turns on.

Confirm the selected pedal-assist level (PAS). For initial operation, PAS 0 or PAS 1 is strongly recommended. Higher assist levels may result in rapid acceleration.

For detailed information on Command Center settings, modes, or advanced adjustments, refer to the separate Command Center or control system instructions provided with your eBike, or consult your authorized retailer.

Ensure the battery charge indicator on the Command Center shows sufficient charge for your planned ride.

Assess surrounding conditions and traffic before beginning your ride.

“Enjoy the Ride!”

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1211 W. 6th Street Unit 600 #533 Austin Texas 78703

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