Lithium-ion Battery Safety

At Archer's Bikes, your safety is our first priority. As a part of our ongoing commitment to ensuring your well-being and satisfaction, we would like to take this opportunity to inform you about the best practices for handling your Lithium-ion battery.

Lithium-ion batteries are the heart of your e-bike and require appropriate handling to ensure their safe and efficient operation. Proper charging procedures are particularly critical to minimize any potential risk. These safe practices also apply to lead-acid batteries, nickel-cadmium, and other types of batteries used in e-bikes or other appliances.

Although Archer's Bikes does not evaluate or endorse the safety of a particular battery or e-bike, a wealth of information supports the safety of high-quality batteries provided by prominent manufacturers. For more information, refer to the DOT or EPA for some of the best sources of lithium-ion battery handling.

Always refer to the manufacturer's user manual and guidelines for the proper use and operation of your e-bike. Many manufacturers participate in recycling programs. Archer's Bikes is a certified recycling center for this recycling program. Our suppliers pay half the fee and then ask that we collect the other half from our customers at the time of purchase. Archer's Bikes pays at least $15 (sometimes more) for every e-bike we purchase. In doing so, we trust that all e-bike batteries are recycled properly and never end up in a landfill.

Modern Lithium-ion batteries manufactured by major companies may be U.L. Listed and considered safe and reliable when used properly and undamaged. U.L. certification is a way for consumers to know that their bikes' batteries and electrical components are safe to use as designed. This certification helps minimize fire risk and includes a review of the electrical system, battery, and charger. Other independent laboratories also have programs to evaluate and certify the safety of lithium-ion batteries.

charging Guidelines

We urge you to consider the following five essential guidelines when charging your Lithium-ion battery:

- Do Not Leave Your Battery Charger Connected Indefinitely. Disconnect the charger promptly once the battery charge is complete.
- Always Use the Charger Provided with Your Battery. Avoid using a charger with a different voltage.

- Never Attempt to Modify Your Battery or Charger. Any alterations can pose serious safety risks.
- Chargers May Generate Heat During the Charging Process. Always ensure your battery is not being charged near any flammable materials.
- Refrain From Using Extension Cords or Power Strips When Charging. Always plug your charger directly into a wall outlet.

Safety Guidelines

The following can help to alleviate any risks associated with handling lithium-ion batteries. To minimize the risk of fire, explosion, or personal injury, please review these guidelines:

- Always follow the manufacturer's instructions for charging and storage. Only use the original manufacturer's battery, cord, and power equipment to charge the lithium-ion battery. Do not use the battery & charger for other purposes.
- Always plug the lithium-ion battery directly into a wall outlet. Never use power strips or extension cords to charge your lithium-ion batteries. Do not stack or cluster the lithium-ion batteries together while charging or storing. Charging multiple batteries with inadequate electrical support is a major safety hazard.
- Always charge the lithium-ion battery at room temperature. If the battery is still warm from usage, allow time for the battery to cool before charging. do not charge the lithium-ion battery at temperatures below 32°F (0°C) or above 105°F (40°C).
- After riding in cold weather, bring the battery indoors to warm up for two hours at room temperature before charging.
- Always store your lithium-ion battery in a well-ventilated area that has a fire detection system. Avoid excessive sun exposure, water, humidity, and condensation. Keep the lithium-ion battery away from any heat source or anything flammable materials, such as paper, under or on a pillow, bed, or couch.
- Continually monitor the battery and charger when charging; never leave it unattended or overnight. Do not keep charging the lithium-ion battery after it is fully charged. Disconnect the charger and the battery immediately if you notice a strange smell or smoke.
- Do not stack or cluster the lithium-ion batteries together while charging or storing. Charging multiple batteries with inadequate electrical support is a major safety hazard. Do not cover the battery & charger or place objects on it during charging.

- Do not use the battery or charger if your battery has been damaged, punctured, burned, been smoking, or has been on fire. Inspect the battery and charger before and after each use.
- Never block your exit from your home or a room with a charging lithium-ion battery. Always ensure there's a safe way to exit your home if there's an issue with a lithium-ion battery.
- Never try to modify or service your e-bike and bike's battery system. Batteries are part of a larger system with an e-bike. It's not just the battery but also the sensors, motor, controller, and other components. Altering a component within the system can impact the system's safety, which can result in severe injury or death. Charge the battery only with the charger that was supplied with the e-bike or the spare/replacement charger supplied by an official dealer.
- Never use a battery if it shows signs of physical or mechanical damage, such as a change of shape, discoloration of the battery's shell, leaking, odor, a sign of corrosion, odd noises, loose or damaged wires, and known conditions of use or misuse. Do not drop or subject the battery & charger to any big shocks. Damaged batteries require special handling for disposal and recycling. Refer to Call2Recycle.org for more information.
- Never place an e-bike lithium-ion battery in the trash; it is illegal. Do not put discarded batteries into piles. To dispose of lithium-ion batteries properly, take them to a battery recycling location or contact your local waste management service provider for disposal instructions.

Transport

- When transporting your electric bike and its battery, it should not be left on the bike. The battery must be removed and placed inside your vehicle. It's also important not to leave the battery inside a hot vehicle. These temperatures and weather conditions can result in poor charging ability and possibly cause a fire, explosion, injury, or death.
- Shipping an e-bike or e-bike battery must be done by a qualified shipper who follows stringent hazardous cargo rules. Major shipping carriers can assist you with the guidelines and cost. Never ship an e-bike or e-bike battery without proper labeling and handling.

Fire & Emergencies

- Fire extinguishers do not work on lithium-ion battery fires. If you observe a lithium-ion battery fire, leave the area, close the door, and CALL 911 immediately.
- Damaged or unstable batteries and improper charging, storage, or disposal can cause the batteries to overheat, leading to an explosive, aggressive fire that spreads rapidly, can reignite, and is challenging to extinguish.
- Lithium-Ion battery fires are very dangerous. Water may not prevent a battery from burning and spreading. Battery cells are known to explode and quickly spread to another battery. It can spread to other devices.
- These batteries may continue to generate heat even when there is no visible sign of fire. Once the heat reaches a certain level, fire may reignite on the battery and surrounding area.
- The reignition of lithium-ion batteries is common. Lithium-Ion batteries are known to unexpectedly reignite (without warning) for minutes, hours, and even days after all visible fire is extinguished. Lithium-Ion batteries can enter an uncontrollable, self-heating state. This can result in the release of gas, cause fire, and possibly explosion.

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