

Battery Care & Charging

Battery practice for CEMOTO lithium-ion packs — charging, storage, temperature limits, transport and disposal.

“ **Safety first.** Lithium-ion batteries can be dangerous if mistreated. Never open, puncture, crush or short a battery. Never charge a damaged or swollen pack. Never charge with a damp socket. Charge away from children, pets and flammable materials.

Charging

Procedure

- 1. Insert the charger plug into the battery charging socket.
- 2. Insert the charger power plug into the power supply.
- 3. Charge fully: **approximately 6 hours** for 48V models, **7-8 hours** for 72V models.
- 4. Disconnect from the mains first, then from the battery.

First charge

The owner manual recommends an initial charge of **up to 12 hours** for the first charge cycle, with a maximum charge time thereafter of **8-9 hours**.

Charging rules

Rule	Reason
Use only the supplied compatible charger	Non-certified chargers are the leading cause of battery damage and void the battery warranty
Do not charge when the socket is damp	Water ingress in the charging circuit creates a short and fire risk

Rule	Reason
Use the correct power source for your market	D-series U.S. chargers use a two-prong plug
Keep away from children, pets and flammable materials	Fire safety
Charge in a dry, ventilated location	Heat and hydrogen venting must be able to dissipate
Do not leave a charging battery unattended for long periods	Fire safety
Do not charge a swollen, damaged or wet battery	Fire safety

Charging temperature

Charge at a normal ambient temperature. Extreme cold or heat permanently damages the battery. Many BMS units refuse to charge below freezing or above a high temperature threshold — if charging will not start, allow the pack to reach room temperature and retry.

Temperature and capacity

Usable battery capacity falls significantly in cold weather. CEMOTO's owner manual gives these reference figures:

Battery temperature	Approximate available capacity
14 °F	~70 %
32 °F	~80 %
70 °F	~90-95 %

This is normal lithium-ion behavior, not a fault. Expect a shorter range in winter on the same charge.

Storage and operating temperature

“ **Never** store the product frozen or at extremely high temperatures. The recommended storage temperature range quoted in the owner manual is **approximately 68 °F (20 °C) down to 45 °F (7 °C)**. Extreme temperatures will **permanently damage** the battery.

In practice, for storage:

- Keep the battery in a dry location away from freezing and away from direct sun.
- Bring the battery to room temperature before charging in cold conditions.
- Avoid leaving a fully charged pack in a hot vehicle.

Storage

Situation	Recommended action
Short-term (days)	Leave the battery on the bike, powered off, at around 40–70 % charge
Long-term (weeks to months)	Charge to approximately 50 % , remove the battery if removable, and store in a dry location within the recommended temperature range. Disconnect the battery from the bike so it does not slowly discharge
Storage off the bike	Store in a dry place, out of reach of children, away from flammable materials
Before riding again	Fully charge before use

Do not store a deeply discharged battery for an extended period — this causes irreversible capacity loss and may latch the BMS protection.

Do not leave the battery connected to the charger indefinitely.

Battery life

	Detail
Average lifespan	1 to 2 years, depending on conditions and usage
Decline pattern	Gradual capacity loss over the battery's life, accelerating with heavy use and temperature extremes
Replacement trigger	Available capacity below 70 %, as measured by the discharge meter
Warranty term	12 months (D-series)

Practices that extend battery life

- Avoid deep discharge — recharge before the pack is fully flat, and plan rides to return with reserve.

- Avoid leaving the pack at 100 % or at 0 % for long periods.
 - Store at approximately 50 % for long idle periods.
 - Charge at moderate ambient temperature.
 - Use only the supplied charger.
 - Avoid sustained high-current use (continuous hard acceleration, heavy loads) where avoidable.
 - Keep connectors clean and dry.
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Transport

Battery transport is regulated because lithium-ion cells are classified as **dangerous goods**.

Mode	Notes
Car / truck	Transport upright and secure so the pack cannot be punctured or shorted. Do not leave in a hot vehicle. Bring to room temperature before charging at your destination
Courier / parcel	Regulated. eBike batteries cannot be shipped to parcel stores or lockers — they must go to a physical address where someone can receive them. They may also be shipped separately from the bike body
Air	Heavily restricted. Check with the carrier before traveling, and never carry a damaged pack aboard an aircraft
Never	Never transport a swollen, punctured, wet or otherwise damaged pack in an enclosed passenger space

Disposal and recycling

This product contains sealed lithium-ion batteries and must be handled properly.

- **Do not** dispose of the battery pack in a fire — the pack could explode.
- **Do not** discard lithium-ion batteries in the garbage.
- **Do not** mix old and new batteries, or mix battery chemistries.
- Dispose of the battery **according to locally applicable regulations**.
- Contact your local **recycling / reuse or hazardous waste center** for more information.

Many regions require lithium-ion batteries to be returned to a designated collection point. Many retailers also accept them.

Safety warnings

Reproduced from the CEMOTO owner manual:

“ **WARNING:** Do not dispose of the battery pack in fire. The battery pack could explode.

Do not mix old and new batteries. Do not mix alkaline batteries, standard (carbon zinc) batteries, or rechargeable (nickel cadmium) batteries.

The product contains lithium-ion batteries, which must be disposed of according to locally applicable battery regulations.

Additional safety guidance:

- Never short the battery terminals.
- Never open the battery case or tamper with the seals.
- Never attempt to revive a swollen or damaged pack.
- If a battery emits an unusual smell, becomes hot, swells or vents, move it away from combustible materials and contact emergency services if there is any fire risk.
- Charge only with the supplied charger in a dry, ventilated location, away from children, pets and flammable materials.

Battery warranty exclusions

Battery warranty does **not** cover failures caused by:

- Use of non-certified chargers
- Overcharging or deep discharge
- Physical impact or water intrusion
- Seal tampering or unauthorized disassembly
- Use in non-approved devices

Covered: where the discharge meter detects less than 70 % of available capacity, or where the voltage is abnormal and the battery cannot be charged — subject to the exclusions above.

Note that an eligible battery defect will be repaired or replaced **without extending the original warranty period**, and battery replacement does not qualify for cash reimbursement.

See [Warranty](#).

Related pages

- [Charging Faults](#)
 - [Range & Performance](#)
 - [Cleaning & Storage](#)
 - [Warranty](#)
 - [Spare Parts — Chargers & Batteries](#)
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