

Battery Care and Maintenance Guide

A mobility scooter or powerchair can make a huge difference to your everyday life. Looking after the batteries will help them last longer and save you money in the long run.

General Points

- Only use the specific battery charger designed for your make and model. 'Generic' chargers or using a charger for a different type of battery, or with the wrong power output (ampage) for the battery size could damage your battery and be dangerous.
- Never put car batteries in your mobility scooter/powerchair as they work differently (see battery types), and do not try to charge any battery with a car charger. A car battery is designed for starting the car - it needs to produce a large amount of power immediately as you turn the key and is then constantly trickle charged.
- Weather and temperature will affect performance, so you may find your mobility equipment power and/or range reduces in very cold or hot weather. Overheating and extreme cold can reduce battery effectiveness, output, lifespan and delay the recharging process. Damp or humid conditions can damage battery cells.
- The way you use your scooter or powerchair affects battery performance. For example:
 - Lots of stop-start driving drains batteries faster than smooth and steady driving.
 - Heavy loads with full baskets and bags will drain the battery faster than if you keep loads light.
 - Rough and soft terrain and going up hills will drain the battery faster than even ground.
 - Tyre pressures – if you have air-filled tyres, make sure they are kept at the correct pressure (PSI) as under-inflated tyres will make the battery work harder and use more power.
- Not looking after your batteries properly may invalidate their warranty. Smart testing equipment can tell if you have been charging batteries as per manufacturers guidance.
- If you are thinking of buying a second-hand product and the seller tells you it has new batteries on it be aware, warranties of any kind, are not transferable.
- You really do get what you pay for with batteries. Choosing a reputable, more expensive brand should save you money in the long run and mean fewer batteries are disposed of, which is better for the environment.
- DO NOT store your mobility equipment near a heat source e.g. radiator. ALWAYS ensure your mobility equipment does not block or narrow an escape route in event of a fire. If you store your mobility equipment indoors move it to a suitable unoccupied space overnight away from an escape route.

REMEMBER - Even when the battery is fully charged, the amount of power provided by the battery will vary according to its age, the type of terrain you are travelling over, the outside temperature and user weight.

Charging the batteries

- Never let them run nearly or completely flat as it will reduce battery life and performance. If this does happen, charge them as soon as possible.
- Charge SLA/AGM/GEL batteries for at least eight hours. When the charging light changes from red to green the charging cycle is still not complete so go by the length of time, not the colour of the light on the charger. Nowadays 'smart chargers' shut off automatically when fully charged so there is no danger of overcharging.
- Charge Lithium batteries for a maximum of 6 hours – do not leave a lithium charger on overnight.
- Charge the battery after every use; the battery will last longer and your product will work better if the battery is fully charged before every journey.

- If you don't use your product for a prolonged period of time e.g., over the winter or you are unwell, remember to charge it fully every two weeks to keep it in good condition. And if possible, use it as soon as you can as batteries still need to be cycled.
- Whether you use your scooter every day or occasionally bring it out of storage, always fully charge it before each use.

Storing mobility scooter batteries

- If storing your scooter for more than two weeks it is advisable to fully charge the batteries and disconnect them. Check and recharge the batteries monthly. If you cannot disconnect the batteries or remove the battery pack then charge them every two weeks and use as much as possible.
- All batteries are best stored in a cool, dry place. Where scooters and powered wheelchairs are often stored outdoors, cold and hot temperatures can damage the batteries and reduce their lifespan. If the machine is stored in a shed for example, remove the battery pack or put an old blanket over the machine/battery housing to protect from frost.
- Prolonged storage will reduce battery life, so it is not recommended.

Replacing your batteries

Only have batteries supplied and fitted by a properly trained technician who will have the necessary training and tools to do the job safely and correctly, batteries are not VAT exempt if not installed in this way. Although you will pay to have batteries fitted by a professional this may be cheaper than paying the VAT for supply only.

Battery types:

SLA (Sealed Lead Acid) - most common, the least expensive and most widely available. Ideal for use in mobility equipment due to robust qualities.

GEL - Offers better performance than SLA/AGM batteries. Prices vary, but the GEL battery sits somewhere between the SLA battery and the Lithium battery in cost. Gel batteries typically operate at around 60% power when they're new. They usually reach their full performance capacity after about 20 full discharges and charges (this is called a cycle). GEL batteries produce more cycles than SLA batteries, so they have the ability to last longer.

AGM (Absorbed Glass Mat) – These are also lead batteries and will not leak, even if broken. They have a low self-discharge meaning they can be stored for longer periods of time (although this is not recommended). Also reasonably priced.

LITHIUM - great for mobility scooters because they are lightweight. More expensive to replace and very difficult to test.

General battery safety information

Batteries contain harmful chemical compounds – if you do have to handle them, work on them or near them, always wear safety glasses and a face shield, and wash your hands afterwards.

Keep all metal objects (e.g., tools, jewellery) away from battery terminals to avoid risk of electric shock, sparks, smoke, fire, and even explosions.

Batteries produce explosive gases – keep heat sources, sparks, flames and cigarettes away from batteries.

All old batteries are considered "hazardous materials" and must be disposed of in accordance with National and Local Authority guidelines.