Get wise to getting more from your battery

A guide to maximising the performance and lifespan of batteries for powered mobility equipment

No vehicle performs to its full potential without an efficient fuel system. The batteries fitted to electrically powered wheelchairs and scooters act as their fuel tanks and should be charged up and well maintained accordingly for users to enjoy the full freedom and mobility they expect.

Common questions and answers

When should I charge mobility vehicle batteries in order to get the most out of them?

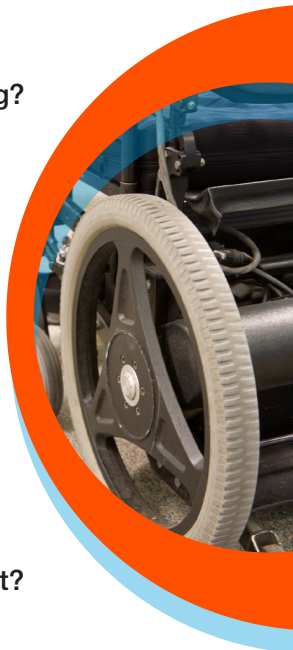
- Fully charge them to begin with.
- Charge daily and for as long as possible, even on days with low usage.
- The charger supplied with your mobility device should fully charge your batteries overnight. Overcharging is not a problem with today's smart chargers as they are voltage limited and shut off automatically. Sealed VRLA Gel and AGM batteries do not exhibit a "use it or lose it" capacity-robbing effect known as "memory".
- Chronic undercharging is a common cause of premature battery failure. Charging for a minimum of 8 hours each night is the standard recommendation for proper battery function. To further enhance battery life, it is recommended that a 12-hour charge be performed at least once or twice each month.
- Never allow batteries to run completely flat.

Do batteries have a break-in period?

Gel battery performance improves once the battery has been cycled (discharged and recharged) 15-20 times. This break-in period is necessary to fully activate the battery for maximum performance and longevity. Thus, range and running time of your mobility device could initially increase with use.

How should I charge mobility vehicle batteries?

- Use the equipment manufacturer's automatic charger for all routine charging.
- Never use an automotive or wet-type charger on Sealed VRLA Gel or AGM batteries as doing so will damage your battery.
- Depth of discharge affects cycle life. The harder a battery has to work, the shorter its life expectancy. Longer use typically means longer recharge times.
- Do not leave the charger switched off whilst connected to the vehicle – some chargers will allow batteries to drain quite quickly if you do this. Always disconnect the charger from the mains when disconnected from the vehicle.



When will my batteries need replacing?

Occasionally, depending on many factors, batteries will need replacing after 12 months. More commonly, they will still be going strong after two or more years. As they grow older, their capacity reduces. It is time to replace them when you find that the battery gauge on your vehicle shows a low state of charge after your day's use.

What are the factors that can affect range on powered mobility equipment?

Weight of the vehicle or user, ambient temperature, state of battery charge, tyre pressure and terrain can all affect the range of a battery. If the temperature ranges outside of our yearly averages, i.e. above 35 degrees Celsius and below freezing, this will affect the range of the battery. If the battery's "state of charge" is low, then consequently the battery capacity will be low.

You also need to know that:

- Most gel and sealed batteries can be transported by aeroplane, your battery or wheelchair supplier can provide an IATA Certificate to prove this but most airlines will know this. Alternatively, the battery may be marked on top with a sticker explaining it is IATA approved.

- If you are storing your vehicle for a long period, you should fully charge the batteries and disconnect them from the vehicle so that they will only drain their charge naturally.

- You can bend the rules of when and how to charge your batteries occasionally without reducing the life of your batteries – if the battery gauge shows that they are low and you want to go out, by all means give them a short charge so you can go out. Just don't make a habit of it!

- These batteries will not spill if overturned and need no maintenance.

- You cannot harm your vehicle by charging its batteries wrongly. You will only reduce the life of the batteries.

- Always refer to the manufacturers owners manual/ handbook when referring to these guidance notes.

- The cost of fully charging batteries is minimal, only pence. The cost of leaving them connected long-term is even lower.

- Connecting your own lights or other items to your batteries may well ruin them, especially if they are 12 volt.

- Always dispose of batteries through an approved source. Your BHTA retailer will do this when supplying new ones.

- You must not use a car-type charger for these batteries: it would permanently damage them. The charger supplied with the vehicle is designed for the purpose.

Please note: The advice in this leaflet does not cover wet (old type, open-cell) batteries. They are very rare these days.

We acknowledge the help and assistance by Matthew Major (MK Battery) in compiling this advisory leaflet.

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