

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. Electrically powered wheelchairs and scooters are no exception. The batteries fitted to powered wheelchairs and scooters act as their fuel tanks and should be topped up and well maintained accordingly, for users to enjoy the full freedom and mobility they expect.

Common questions and answers

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

A. If your vehicle has gel batteries

(Most powered wheelchairs)

- Fully charge them to begin with.
- Recharge them when the battery gauge shows a low charge. Be careful not to get stranded with flat batteries!
- Recharge them once a week in any case.
- After around 20 charges, when the batteries have reached their full capacity, you should change tactics and charge them when you have finished with the vehicle for the day, then:

Once, say every two months, let the batteries discharge as you did when they were new before recharging them.

- Never allow batteries to run completely flat.

A. If your vehicle has sealed lead-acid batteries

(Most scooters)

- Fully charge them to begin with.
- Recharge them when you have finished with the vehicle for the day or if you are unable to do this, charge them once a week.
- Every two months, let the batteries discharge until the battery gauge shows a low charge.
- Never allow batteries to run completely flat.

Q. How should I charge mobility vehicle batteries?

A. Whatever type of battery your vehicle has

- Use only the automatic charger supplied with the vehicle.
- Allow the charger to complete its charge cycle, until the green “fully charged” light on the charger shows. This may take 12 hours or more in some situations.
- Leave the charger connected and turned on until you need to use the vehicle again. The charger will then keep the batteries topped up. If you prefer not to leave it turned on, the batteries will not be kept topped up, so you should instead recharge say once a week.
- 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.



Q. When will my batteries need replacing?

A. 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.

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

A. 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.
- 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.
- Gel batteries are treated differently from sealed lead-acid because when new, they only give around 60% of their potential capacity. It takes around 20 full discharges for them to reach 100%. If you do not follow the charging rules, you will not get the full capacity. If charged according to the rules, they will survive significantly longer than sealed lead-acid batteries.
- Always dispose of batteries through an approved source. Your BHTA dealer 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.
- The reason for letting batteries run low every two months is that it is often found that this can "rejuvenate" them for a while. Not everybody recognises this, but there is certainly nothing to lose by doing so.

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

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