

TROJAN DEEP-CYCLE GEL™

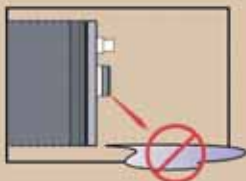
The Power of Maroon... The Convenience of Maintenance Free



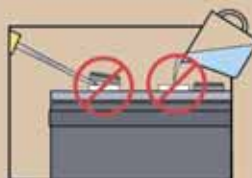
- Long lasting runtime and battery life – cycles longer and deeper than AGM
- Sealed construction – no risk of acid leaks or spills
- Never needs watering – completely maintenance free
- Ideal for use in Health and Safety-sensitive Environments (HSE): Safe for schools, hospitals, airports and office buildings



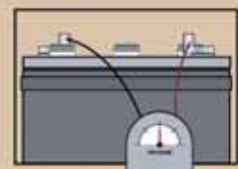
TROJAN DEEP-CYCLE GEL™ BATTERY USAGE GUIDELINES



Nonspillable certified (UN2800) - safe for air, land and sea transportation



No watering required (do not attempt to open vents)



Always use a voltage regulated temperature compensated charger



Good practice saves ££££\$\$\$\$\$

With most major buyers of aerial lifts intending to buy far fewer machines this year having already reduced purchases in 2008, the average age of most aerial lift rental fleets is set to grow.

Given that the majority of aerial lifts are powered by batteries, this ageing fleet will push battery replacement towards the top of many fleets' maintenance and repair costs.

The fact is that while batteries are a major cost for most fleets they also present a massive opportunity to save money. Most companies could halve their annual battery replacement costs with a few simple measures.

Buying the right battery

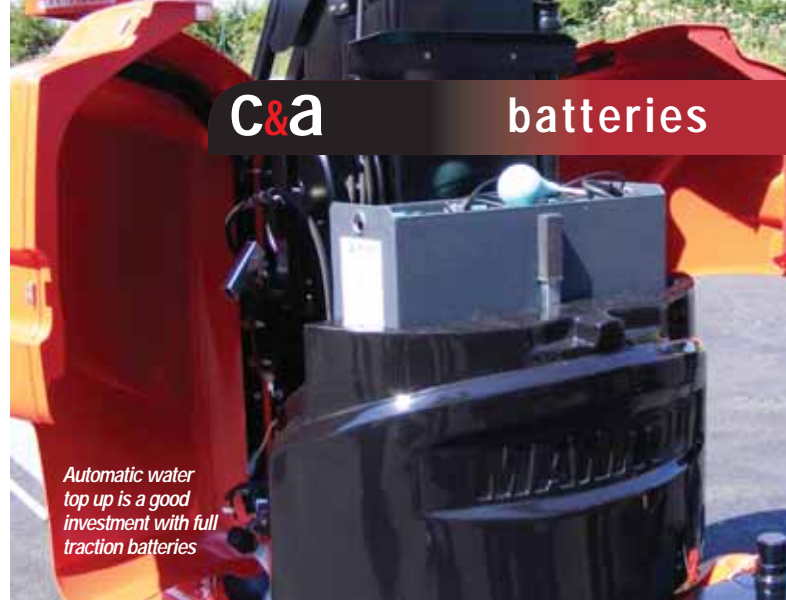
Most aerial lift fleet operators now appreciate that all batteries are not created equal. This is more true now than ever, with a flood of cheap batteries coming in from China, most of which are wholly unsuited to aerial lift applications. When it comes to the most widely used six volt 220 amp/hour deep cycle battery, most of the best models are still made in the USA, where they are produced in high volume for both aerial lifts and golf carts. The two most prominent manufacturers are Trojan with its distinctive maroon case and US Batteries with its popular quick release top-up caps. Other manufacturers include Crown and Douglas, neither of which have targeted the European access industry yet, at least in terms of the replacement market.



A typical full traction battery pack found on big scissor lifts

When it comes to full traction forklift type batteries used in larger electric powered lifts, such as the larger scissor lifts built by Holland Lift and JLG-Liftlux, the best products are more local with companies such as Exide, which sells such batteries through its motive power division under the Deta, Classic and Tudor brands, among others. The fact is that the cost of replacing such batteries is enormous and can in the worst case devastate a unit's profitability in the rental environment. It is therefore worth considering adding automatic battery monitoring and top-up equipment, because if looked after, such batteries will last a good 10 years, so replacement need not be a regular consideration.

Cheap batteries cost dearly, lasting just over a year even when looked after, compare this to two to five years for decent batteries and it becomes clear just how expensive



C&A

batteries

Automatic water top up is a good investment with full traction batteries

cheap batteries are. The table below shows the cost of cheap batteries over a five year period for a typical small scissor lift, the better batteries produce a minimum saving of £665 - that's £133 per year. For a fleet of 200 units this equates to £26,600 a year! Add in some regular maintenance to extend the good batteries life and the saving can jump to over £1,000, that's £200

per golf cart. Anecdotal evidence of a set of batteries lasting over 10 years supports this notion. Some companies argue that the high cost of labour makes it more cost effective to simply replace the batteries every two to three year, rather than maintain them regularly. However the key factors that will extend the life of a battery is to ensure it is always topped up with distilled water and regularly charged.

Cost of batteries for small scissor lifts over five years

	Cheap batteries	Quality batteries
Cost of batteries	4 x £50 each = £200	4 x £70 each = £280
Number of changes in five years	5	2
Total cost of batteries	5 x £200 = £1,000	2 x £280 = £560
Replacement Labour	£375	£150
Total cost	£1,375	£710

*Assumes cheap batteries costing £50 each replacing every year compared to good quality batteries costing £70 each replaced every two and a half years. Labour costs to order, fit and recycle £75 per battery change over. Does not include any call out costs due to battery failure on site which could easily double the change over cost.

a year on a machine that only costs around £6,500.

Look after them

Once you have chosen a decent set of batteries the next significant saving is to look after them.

It is no secret that the average life of a decent battery when fitted to a golf cart is five years. Yet when the same battery is used in the access rental industry life expectancy is halved. Why? Battery makers have looked at the installation and typical utilisation of aerial lifts compared to golf carts and abuse and lack of maintenance jumps out every time. Some say that the typical use of an aerial lift with fewer deep discharges during a typical working day, suggest that batteries in aerial lifts ought to outlast those used in

This alone can double the life of a set of good batteries, and of course you have the benefit that properly maintained batteries are less likely to let a good customer down.

Keep them charged

Lead acid batteries, like most other types, will lose their charge over the period of a few weeks and nothing destroys lead acid batteries faster than allowing them to be drained of all power. Most new lifts use some form of motor control which incorporates a low voltage cut-out, stopping the machine once the battery charge falls below 20 percent of full charge, thus avoiding the old problem of users driving them to destruction. However if the batteries are drained to 20 percent and then parked up uncharged for a



A set of Trojan batteries - standard equipment with many manufacturers



The other big supplier of batteries on new aerial lifts note the quick release filler caps.



Crown batteries are used by MEC and could soon be more widely available on the replacement market



Douglas batteries have been used by JLG in the USA



Average battery life is significantly extended through regular routine charging

week of two they will drain down close to empty and the damage is done, add to this the fact that some chargers will not work on empty batteries and you can see how unnecessary costs start to creep in. If aerial lifts are automatically put on charge at the end of the day or on return to the rental yard, this will do more than anything to boost battery life. Add in a quick fluid check and you could easily be looking at that £1,000 a unit saving over five years.

Other dangers include long delays in collecting a rental unit. If the machine is off-hired and parked up at the end of a contract and then not collected for a week, the batteries are likely to be drained. The same applies when utilisation is low and units are left sitting in the yard for extended periods. It is worth giving someone the responsibility to routinely charge machines that are standing.

This might also be something to check when buying a new machine, if a lift has been in stock for an extended period, it is worth checking if the battery has been kept charged

and if not request a new set batteries or at least a two year guarantee on them.

Trojan goes with IPS

Trojan batteries, possibly the most well recognised battery in the aerial lift business and its master distributor Energy Batteries has appointed Independent Parts & Service (IPS) as its access equipment distributor for the UK.

IPS has for the past few years sold US batteries under an agreement with its master distributor ManBat. With a majority of manufacturers now fitting Trojan batteries in their new products, and its high recognition levels, there was clearly an attraction for IPS to have the Trojan dealership. The company aims to offer same day and next day deliveries for all of its aerial lift batteries. Energy says that it can do this thanks to the fact that it has invested in substantial warehouses and delivery fleets in Scotland, Northern Ireland and at its headquarters in Corby, England. In addition the company is putting the final touches to a new network of

35 independent stockists. Energy says that it has taken care to find local owner operated dealers in order to offer a personal service with lower overheads. The two companies will also work together on extending Energy's battery recycling programme to all of its aerial lift customers.

Gel or not?

A number of battery suppliers now offer deep cycle gel batteries targeted at the aerial lift and compact crane market. The major benefits include the fact that they do not require any maintenance, are spill proof and do not gas, making them ideal for sensitive or clean applications such as hospitals or food processing facilities.

usable capacity and even good ones barely last 18 months of regular use. So unless they are needed for special applications then it is clearly not economically viable, at least until the technology improves. One thing to watch out for if you do decide to buy a gel battery is confusion with AGM - the alternative sealed battery. AGM (Absorbed Glass Mat) batteries are cheaper than gel but use a totally different technology. They are best used for standby applications and not at all suited to deep cycle applications, although at least one company has been trialing a deep cycle AGM battery.

Recycling made easy

Western Europe is already very good at recycling lead acid batteries,



This is all too often the way batteries are stored by access rental companies

However is it worth switching your whole fleet to gel? The experts say No. First of all they are 50 percent more expensive to buy than a good quality wet battery. They have less

thanks to their relatively high scrap value. Most battery organisations say that 90 percent of all such batteries are already recycled. However in recent years the rules throughout the EU have changed concerning the storage of old batteries and how they are recycled. In the UK the detail of the regulations is complicated a little by the fact that they are different in Scotland, Northern Ireland and England & Wales. However the principles remain the same and while they seem complex at first glance, can be simplified by working with a decent battery supplier or one of the large national battery recyclers such as G&P.

By now most UK rental companies will have already registered as a Hazardous Waste Producer with the



Trojan is one company now offering a deep cycle gel battery

Environment Agency, a requirement if you replace lead acid batteries, not to mention the other waste products generated by lifting equipment. If by some quirk you have not yet registered, and you need to for every location where old batteries will be stored and recycled, registration can be done on-line, over the phone or by post and currently costs £23 a year.

Batteries awaiting collection must be stored safely and only passed on to a battery collection company that is registered with the Environment Agency as a carrier of controlled waste. They will not collect unless you are registered. Selling your batteries to an itinerant scrap collector is no longer an option - you are responsible for the batteries even after they have been collected and fines can be steep for abusing the rules - up to £5,000. You could even be liable if someone breaks into your premises and steals the batteries!

Many battery suppliers or recyclers, including G&P and Energy Batteries/IPS will place one of their purpose built recycle bins at a customer's premises. These bins are

designed to meet all of the relevant regulations and once full a simple call will have it collected and replaced with a new bin. Companies must complete, sign and keep a copy of a consignment note for every scrap battery movement and pay a fee to the environment Agency for the pleasure.

Suppliers recommend that rental companies involve delivery drivers and service engineers with the recycling efforts, offering them a percentage of the scrap proceeds in order to encourage them to play an active role with the recycling process.

Use a battery bank

Most good battery distributors or major recyclers will provide you with a battery bank in which to place your old batteries while waiting collection. G&P battery recycling suggest the following tips.

• A battery bank is specific to either lead acid or non lead acid batteries. it can be dangerous to mix 'wet' car batteries with any other types of batteries.

• A battery bank must be stored in a secure area, which is not accessible to the public when the site is unattended. If the contents of the battery bank are stolen, this would mean that you are allowing Hazardous waste to be removed from your premises by an unauthorised collector and you could face prosecution.

• A battery bank should never be

tampered with, such as drilling holes in it. It is imperative that it remains leakproof.

• If it has to be outside and exposed to the rain a lid is required to prevent it filling up with water. Do not empty the water out of a container that has waste batteries in it. The water may be contaminated with battery acid and is therefore classed as hazardous waste.



A modern battery bank

IPS for replacement parts

Europe's largest supplier of powered access parts is now the official UK distributor for Trojan batteries



- Great prices
- Impressive run times
- Long-lasting reliability
- Next day delivery
- Battery collection and disposal service*
- Full Trojan battery range



Call us on +44 (0)1952 607660 for prices or order online at ipspartsonline.com

Supplying you with parts for Genie, UpRight, JLG, Niftylift, Snorkel, Skyjack, Grove, Haulotte, Pop Up

*For registered premises only. Companies have to be registered with a premises code from the environmental agency. Go online at <http://www.environment-agency.gov.uk/business/topics/waste/32180.aspx> for further details on Hazardous Waste Regulations.

IPS parts Unit 16 Hortonwood 33 Telford Shropshire TF1 7ES