

Get smart to benefit from battery tests

Offering a battery diagnostics, charging and maintenance service is a great way for workshops to offer added value to customers. Here, *The Technical Book* uncovers the technology behind the revenue potential

THERE are a variety of lead-acid batteries entering the average workshop; wet, calcium, GEL and AGM are just a few types that each benefit from different methods of charging. By using an advanced charger, workshops will ensure that each battery is serviced correctly without having to disconnect it from a vehicle.

WHAT IS REQUIRED FOR AN EFFECTIVE SMART BATTERY SERVICE?

First up is a 'visual service'. As described below:

- Check for cracks in the battery case and broken terminals. Either may allow leakage, which requires battery replacement.
- Check for cracked or broken cable connections and replace them as needed.
- Check for corrosion on terminals and dirt or acid on the case top. Next, clean the terminals and case top as appropriate and use a battery wire brush to tackle heavy corrosion.
- Check for a loose battery or loose cable connections then clean and tighten as needed.

'SMART service'

A 'smart' charger can be left attached to the battery without the need to remove it or supervise the charge, which could save time, money and workshop space. Typically, a smart charger will carry out the following stages:

- Desulphation – the charger will clean up the battery plates to ensure the battery isn't suffering from sulphation, the biggest battery killer.
- Bulk charging – the charger delivers its maximum current and battery voltage increases to around 14.4 Volts. When complete, the battery has accepted about 80% of the maximum charge available.
- Absorption charging – a charge is delivered to the battery at a reducing level of current, ensuring the battery is charged to maximum capacity without fear of overcharging, overheating or affecting sensitive electrical equipment.
- Analysis - the battery is tested to see if it will retain the charge or begin to self-discharge. If self-discharge is too high, charging will be discontinued and a fault mode indicated.
- Reconditioning charging – this mode is used to recover deeply discharged batteries where you might expect a high level of acid stratification. A higher than usual voltage (15.8V) is used to remove acid stratification and restore the battery to peak condition.
- Maintenance – initially, the battery will usually be maintained with a float charge but if left connected for an extended period this should ideally change to a 'pulse' maintenance mode. This 'exercises' the battery if the terminal voltage drops to a 95% state of charge. Doing this keeps the battery in good condition when it's not in use. In this mode, the charger can be connected for months at a time with total safety.



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CHARGING UP: Using an advanced 'smart' charger (top) eliminates the inconvenience of removing batteries from vehicles. Battery monitoring devices are available (above middle) that can highlight the need for battery charging. CTEK says its range of smart battery chargers (bottom) offer garages extra revenue.

Making the most from smart charging in your workshop

Modern vehicles are packed with complicated and sensitive electrical systems that constantly draw current from the battery. Here, we take a look at using this fact to your workshop's advantage...

THE HIGH power demands of modern vehicles can potentially flatten a battery in a matter of days. This isn't surprising when you realise the average car now has over 5 kilos of wire in its electrical system.

To ensure their customers maintain the battery after a service, forward thinking workshops often fit a permanent battery monitoring tool to vehicles to enable the customer to monitor their own battery charge levels, thus avoiding inconvenient battery failure. Some systems go further, providing the ability to connect the monitoring device directly to a battery charger if attention is needed.

For a workshop proactively offering battery charging and conditioning as a 'value added' service, rather than as a distress activity, the potential to increase revenue is significant and easily achievable, benefiting the workshop and ultimately the car owner too.

This is in addition to the efficiency gains already established by charging while connected to the vehicle. Ultimately, using a smart charger offers not only the potential to save time and cost but also acts as an innovative way to enhance customer service and increase service revenue.