



Battery replacement and 12V conversion

Peter Spurrs found his CTEK battery conditioner indicated that the twin 6V batteries were not holding their charge.

The fault indication recurred and to make sure the conditioner wasn't at fault, I substituted my second CTEK with the same result. The first port of call was the [detailed Index](#) to the V8NOTES. There is a wealth of information in the Notes – have a look. The main ones are Notes 240, 250, 329, 330, 357, 364 and 390.

General opinion was that 6V batteries are a niche product, are more expensive and are technically less well developed than the 12V equivalent. A quick look around the internet showed that there are now some interesting and powerful 6V units available, allowing owners who want to stay as close to original as possible a simple and effective solution. My preference was to convert to a single 12V battery with a high CCA ([Cold Cranking Amps](#)) rating to make starting as easy as possible. Capacity of the battery in Amp Hours was less of a concern. Most of the time, the car is attached to the CTEK; and multiple short journeys with headlights and the heated rear window switched on don't feature in this car's life.

Choice of batteries

The choice of batteries is large. I decided to go for a brand I had heard of with a reasonable guarantee. I chose the EA530 Exide Premium Car Battery 079TE, supplied by Tayna Batteries ([EA530 Exide Premium Car Battery 079TE - Exide Car Batteries \(tayna.co.uk\)](#)) at £44.99 plus £7.98 shipping. I have no link with the company, I just found them on line. The price was good and delivery was quick. They will also ship the battery "wet", where many companies will not.

The EA530 has the following vital statistics: 207x175x190mm (LxWxH), CCA 540A, 53 Ah and 4-year guarantee. Where the footprint is more than about 175mm square, 190mm is the tallest battery which can be fitted into the battery cradle aperture. The aperture is very marginally over 190mm, so that when the battery is inserted 'nose down' it just fits. I have also checked that the battery can be removed. A lower profile battery would be a more convenient proposal. The Bosch batteries it replaces have a CCA of 330A – so 540A is a marked increase.

12V battery positioning

Following the advice from the V8NOTES, I decided to mount the battery in the nearside battery cradle, mainly because the fuel pump intrudes into the other one.

Removing the old batteries

It's straightforward as long as the earth leads are disconnected first to prevent short circuits. Most waste disposal sites have a dedicated area for dead lead acid batteries.

The starting current is enormous, requiring good clean contacts. The three clamps were easy to remove – just unscrew. The 'top hat' however, seemed to be moulded onto the cable. Rather than spend time with a junior hacksaw, I cut off the top hat itself with bolt

cutters, the remaining insulation was easy to remove with a Stanley knife.



A Dremel with a fine wire attachment made the clamp clean up very easy. When cleaned, the original cable clamps proved to be in good condition and were reused.



The original **earth lead** is mounted in the nearside cradle and merely needed to be cleaned (and shortened in my case, it was twice as long as necessary). Also clean the connection to the body to ensure a good earth in case any corrosion has built up



The **starter lead (+ve)** is in the offside cradle. To connect it with the positive terminal, I used the cable which originally connected the two 6V batteries in series. One end became the positive terminal, whilst the other was connected directly to the starter lead. Given the electrical load the connection has to handle, I used a dedicated connector ([Battery Cable In-line Connector for cable up to 50mm² D046601 | Electrical Car Services](#)). Again, no personal connection, just an internet supplier. Once connected, the heat shrink cover was shrunk into place.

Fitting the new 12V battery in the nearside cradle

To accommodate the longer battery (207mm vs 175mm), the cradle's front retaining bracket needed to be flattened. There being no space to use a mallet, locking pliers were used.



Protective paint was then applied to the whole area.



Fitting the battery

The battery must be tipped up when fitting, it is therefore essential to reinsert the transport plugs to avoid spillage of the electrolyte. Leaving the terminal covers in place is advisable too. The chance of a short circuit is ever-present, whilst damage to the terminals is a distinct possibility.



As the battery is longer than the aperture, the only way to get it into the cradle is 'nose down', levelling the battery when it is in the cradle. The battery weighs 13.4Kg and the ergonomics are awful; a makeshift strap comes in useful.



The retaining bracket normally fits across the end of the battery to accommodate the terminals. For this installation the bracket has to be fitted across the top. The 079TE is sufficiently tall that it is only necessary to shorten the threaded ends of the rods (the "J" peg battery holders) by about $\frac{3}{4}$ " to avoid fouling the top access cover to

the battery compartment. With more squat batteries, it may also be necessary to extend the thread or shorten the rod.

Reconnecting the battery is the reverse of disconnection – connect the positive terminal first followed by the earth. A cover for the positive terminal was sourced from the internet to provide additional short circuit protection.



To complete the job, I bought a battery box for the offside battery compartment to provide additional storage. The tow rope, jump leads and spare bulbs have been relocated, liberating much needed space in the spare wheel well.