



### Care when using a battery charger rather than a battery conditioner

A recent member survey by the Federation of British Historic Vehicle Clubs (FBHVC) revealed the average annual mileage of the respondents' historic vehicles is 1,200 miles. The typical annual mileage for a modern classic like an MG V8 is probably around 2,000 to 2,500 miles so clearly they spend considerable time parked up, often in a lay-up over the Winter months. Many classic car enthusiasts keep their vehicle connected to a modern battery conditioner to maintain the battery charge level and condition whilst others do periodic charges of the battery using a battery charger. Here Nic Houslip highlights the differences between a battery conditioner and a more traditional battery charger and the care you need to take with a charger.

#### Battery conditioners

A battery conditioner as we know it will have limited charge current (usually 1 or 2 amps) and an electronic system that senses when the battery is fully charged and then it switches from charging to monitoring the battery condition and voltage. It's a smart battery charging and conditioning solution that could remain connected indefinitely to the battery without over-charging it so providing a simple "plug n play" solution for good battery maintenance. The **two leading brands are CTEK and Accumate**. Once the battery is charged, most good quality conditioners automatically switch to a **conditioning mode** to maintain the battery at optimum performance levels.

#### Battery chargers

A battery charger will have a higher charging rate – for example up to 12 amps. More recent chargers may have an electronic circuit inside that senses the battery voltage and reduces the charge current as the fully charged voltage is reached. When leaving a battery charger connected for an extended period there is a concern over a potentially unsafe situation if the battery had one short circuit cell. In such a case, however much the charger tried it could never



drive the battery terminal voltage up to the charged potential of about 14.6 Volts, and it would then continue to charge at maximum. At this point the charger may overheat if left on continuously. A 12 amp charge rate is quite a heavy current and any doubtful connections might be a source of overheating and possible ignition.

Do also regularly clean the top of the battery and around the terminals and the connectors because an accumulation of road dust and other muck can cause leakage reducing the charge in the battery during an extended period when the car is parked up.

**If you continue using a long cherished battery charger** then do take care to avoid a live connection to your battery for lengthy periods and instead adopt a regular "connect-charge-disconnect" routine. If you still have the original type of 6V battery you will need to check the liquid electrolyte regularly and top up when necessary with distilled water. The battery requires liquid in to work, leaving it on a battery conditioner like a CTEK or whatever doesn't remove the need to check the level regularly and top up with distilled water. There is always some loss of water as part of the chemical reaction that makes the battery work.

**If you want a "connect and forget" battery maintenance device** then a modern battery conditioner is the answer. It might also be time to think of a [12V battery upgrade](#) with the newer gel technology if you haven't taken that step already.

See [RAC guide](#) to battery conditioners and trickle chargers.

#### Avoiding damage to a battery when charging

Chris Hunt Cooke found an explanation of charging technology on the [Electropeadia](#) website and says "I see why 'burp' charging is so called as it gets rid of gas bubbles that have formed!" The website notes more batteries are damaged by bad charging techniques than all other causes combined.