

# do's & don'ts of battery care

## The Advanced Diesel Battery

For a battery to remain in good working order, it should be maintained in a fully charged state by the vehicle's charging system. Where a battery is used as a means of alternative power, it is generally charged by means of an independent charger which supplies direct current to the battery through rectification.

An independent charger is also used to charge motor vehicle batteries that have become discharged due to faulty alternators or charging systems.

If the following hints are adhered to, a battery will provide extended and trouble free service.

### Do's:

- Store batteries in a clean and dry area (in order to prevent deterioration).
- Store batteries in a fully charged state.
- Ensure a correct polarity connection when recharging and fitting.
- Follow proper recharging schedules to prevent overcharging. Ensure charging is conducted in a well ventilated area.
- Ensure that the battery is always clean and dry, with the terminals coated in vaseline or no-oxide grease.
- Do practice stock rotation and use a first-in-first-out system at all times.

### Don'ts

- Do not top up cells with acid or tap water. Use only battery approved water.
- Do not store batteries in a discharged state.
- Do not test batteries by shorting across terminal posts with wire, spanners, etc.
- Do not allow open flames or sparks near a battery as it could explode (batteries give off flammable gases).
- Do not use a single spanner to the terminal clamp as this could damage the post lid seal. Use a spanner to the nut and a spanner to the bolt.
- Do not use the starter motor to propel the vehicle, or leave the vehicle parked with accessories switched on.

### Capacity:

is the ability of a fully charged battery or a cell to deliver a certain amount of amps for a certain period of time.

### Reserve Capacity:

reflects the number of minutes that a battery will last when discharged at 25 amps to a voltage of 10.5 (half for a 6 volt). This is used to measure the length of time a vehicle can be driven if the charging system fails.

### 20 Hour capacity (amp hour capacity):

if discharged at the discharge current, the battery voltage must not drop below 10.5 volts before 20 hours have elapsed, where the discharge current is the rated ampere hour current divided by 20. e.g. for an 085 (44 Ah), the discharge current will be 2.2 amps (44/20), and if the battery lasts only 19 hours the actual Ah capacity will be 41.8. If it lasts 21 hours, it will deliver 46.2 Ah.

### Cold cranking amps (CCA):

is the discharge current that can be applied to a battery to meet a specific requirement under specific conditions. The test is conducted at -18°C and with the cold cranking amps applied, the voltage of each cell must not drop below 1.2 volts for 30 seconds.