DNA Knowledge Base

Selecting the right battery - what does the jargon mean?

The most common battery rating is the amp-hour rating. This is a unit of measurement for battery capacity obtained by multiplying a current flow in amperes by the time in hours of discharge. As an example, a battery that can deliver 10 amps for 20 hours is a 200 amp-hour battery [10 amps x 20 hours].
Easy right? Not quite - Manufacturers use different discharge periods which can be confusing – that is, you cannot always compare one battery to the other on amp-hours only unless the hours of discharge are stated. For this reason you need to be careful using the amp-hour rating alone when selecting your battery of choice. For example, one battery rated at 75 amp-hours may not even support a load overnight and if used this way frequently will fail completely in a short period of time. Another battery also rated at 75 amp-hours may operate the same load for many days before needing recharging and will have a much longer service life. When selecting a battery, you should investigate the Cold Cranking Amps [CCA], reserve capacity and cycle life. These ratings are used to help simplify battery selection.

CCA is the maximum amperes that can be continuously removed from a battery for 30 seconds at 18°C before its voltage drops to unusable levels. For example, A 900 CCA battery can supply 900 amperes for 30 seconds at 18°C.

Reserve capacity is the measure of minutes a battery can maintain voltage under a constant 25 ampere discharge. The higher the rating, the greater capacity the battery has before it requires recharging.

Cycle life refers to the number of discharges and charges a battery should deliver in its normal service life. One cycle is a discharge from full charge to full discharge and then returned to a state of full charge.

Reserve capacity is a good measure for deep cycle batteries. Be cautious, as High CCA batteries can be made relatively cheaply as they are measured on discharge over 30 seconds only. When looking for a battery, you also need to consider the reserve capacity and cycle life to ascertain you are obtaining value for your money.

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