

Technical Notes

Charging Times with Truecharge

Truecharge

512-0056-01-01 Rev 1

Q: How long will the Truecharge battery charger take to charge up my bank of batteries?

Charging time will depend on the size of the Truecharge battery charger, the size of your battery and how deeply it is discharged. The following equation gives an approximate charging time:

$$\text{Charging time} = \frac{\text{CAP} \times \text{DOD}}{\text{CC} \times 80}$$

Where:

Charging Time = Battery recharge time in hours

CAP = Battery capacity in amp hours (Ah)

DOD = Battery depth of discharge in % (A fully discharged battery has 100% DOD)

CC = Charge current, the rated current output of the charger in amperes

Examples:

The one battery is a Group 27 size with a rated capacity of 82 Ah. It is 80% discharged (for example, DOD = 80). Approximate charging time with a Truecharge 20 will be:

$$\frac{82 \times 80}{20 \times 80} = 4 \text{ hours}$$

The battery bank consists of two 8D batteries in parallel with a rated capacity of 200 amp hours each. The bank is 50% discharged (for example, DOD = 50). Approximate charging time with a Truecharge 40 will be:

$$\frac{(2 \times 200) \times 50}{40 \times 80} = 6.25 \text{ hours}$$

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