#### **Week 2.1:**

This week focus on power in Watts and Horsepower and energy in W-Hr, or kW-Hrs. Use the specs for your system to complete this assignment. Include a picture of your system and its technical specifications or nameplate in your document.

* What are the electrical power requirements for the system?
  + If your specs are in HP convert it to Watts and present both both values. Show your calculations.
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**Strictly speaking, the electrical requirements come from the battery and one of the first electrical components used is the Starter Motor. I will be using specifications from this component for this assignment.**

**My research has found an average of 1.4kw for the power rating on Jeep Cherokee starter motors.**

**therefore...**

**1.4kw = 1,400w**

**1,400w (1hp/746w) = 1.8766hp**

**1.4kw = 1.9hp**

* If your system runs for 8 hours a day, 5 days a week, what is the electrical energy cost at $0.10 per kW-Hr for a month? (4 weeks)

**For the purpose of this assignment, I will be doing the calculations based off the starter motor however unrealistic the usage of this component.**

**1.4kw x 8hrs = 11.2kw-hrs (per day)**

**5 days x 4 weeks = 20 days**

**11.2kw-hrs x 20 days = 224kw-hrs**

**224kw-hrs x $0.10 = $22.40**

**Something I realized:**

**Seeing as how the battery ultimately gets its energy from the mechanics of the fuel and engine (and alternator), it seems to make this system more complex than one with a constant supply of electrical power. However, this is my best attempt. Thanks!**