

Why Electric?

Last Updated Saturday, 01 December 2007

Modern electric motors and electronics have made it possible for us to design a very efficient machine that requires only about 1/20 of the energy normally used in the same size gas tractor! Yet it is still capable of pulling a 2000lbs boat and trailer around the garden.

- Most battery powered devices in use today require that the batteries be very light in order to make them easily portable. Also store enough energy for them to be able to go fast or run for a long time!

- We do have new batteries that meet these requirements but they are very expensive. The type of batteries used in the electric tractor have been used successfully in low speed vehicles for about the last 100 years. They are cheap, reliable, and very heavy.

- The very heavy feature is what makes them unsuitable for most mobile applications. If we look at the requirements for a garden tractor battery, we find:

- being heavy is a good feature in a tractor because we need to pull heavy loads. In fact, most gas tractors add wheel weights to get extra traction when pulling;

- cheap is always good;

- reliable is also good. The smart charger is a major contributor in giving the battery a long life (note older systems did not have these and the batteries were easily abused and ended prematurely in the recycle plant). Yes, these batteries have a recycle \$ value when they are traded in for new ones!

- Running for a very long time is also not a problem, because our tractor is designed to cut up to 2 acres of grass at approximately 1 acre per hour. Total run time at max battery demand (when cutting) = requires only 2 hrs.