



# Verticutter Setup Tool -

Mark Melanson

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Contributed by EricKulaas

After years of using those different thickness bars that come with verticutter units to set the depth of cut, and thinking to myself that there just had to be a better way, I finally had an idea come to me one day no too long ago for building something that would make the task easier and more precise.

In the past, when asked to set the units up for a specific purpose by our superintendent, it was always a trial and error situation depending on where we were at with the H.O.C. on our greens, how long since the last time they were verticut, etc. It basically always came down to a "let's try the medium bar, and if that's not good enough, we'll bring it back in and try a medium bar plus a thin bar, or maybe a thick bar." I always found this method to be a less than desirable method of doing it, but put up with it for lack of any better way.

My idea is based on a flat table principle. I figured if I could have a flat table that had some kind of section in the center of it that would move up and down with some type of precision measurement, that would do the trick. Does anybody make such a thing? Of course not. So I sat down and made a few crude drawings on a piece of paper and decided to try to fabricate something myself.

The material for the tool consists of nothing more than some square tubing of a couple different sizes, some flat bar, a couple of small pieces of angle iron and square stock, 1/4" threaded rod, two universal 1" dial gauges, two generic compression springs from the local hardware store, and two 1/4" bolts. Put all these materials together with a little bit of cutting, grinding, drilling, threading and welding, and the total cost of building the tool worked out to be somewhere around \$200.00CDN, including my labor.

I built the tool to work with our Toro model 04493 units, as these are the only ones we have. However, I seen no reason why it could be not adapted to work for other brands of verticutters. These particular Toro units (according to the manual) have an operating range of 1/4" above ground to 5/8" below ground, with standard blades in "new" condition. I designed the tool so that I would be able to accurately measure the height anywhere within that range.

During fabrication, I built the frame of the tool on a flat table so that it would be as true as possible, so as to eliminate as much room for error as I could. I was not concerned with making it so that it would be accurate to within .001", but more so that it would be as accurate as

possible given the fact that the blades aren't going to wear evenly, there may be different amounts of thatch on the turf from time to time, and a number of other determining factors that make this measurement not as critical as say setting the H.O.C. on a greens mower. Basically, I wanted to give myself a number to reference the height to from each use of the verticutters to the next, depending on what was being asked of the units to do. What I ended up with was something that did this and even gave me additional capabilities.

For one, I can now tell how "cone shaped" the blade set is from one end to the other, and set the units up accordingly to try to equal out the wear from one end to the other. Also, now that I have a reference number



from one use to the next, I'm able to set the height of the units up to exactly where they need to be, while taking into account any difference in the H.O.C. in the grass. As an example, if we set the verticutters up to cut at a depth of 0.312" while our greens H.O.C. is 0.25", I know that later in the season when our greens H.O.C. is at 0.156", then to get the same depth of cut out of the verticutters, I will adjust them to 0.218" (0.094" lower H.O.C. = 0.094" higher verticutter setting).

All in all, I wasn't 100% sure while building the tool that it would work out satisfactorily, but now that I have had the opportunity to test it out a few times, I'm glad I took the time to build it. I'll consider it a prototype since it was the first one I built, and I already see how I could make a couple of small improvements to it. It definitely eliminates a lot of the guess work that was present before in setting up the units. And, it's built sturdy and rugged enough, that if I need to go out onto the course to reset the units, I'm able to set it right on the tailgate or box of a vehicle and use it just like I was in the shop.