

How to Construct Backblade/Scraperblade Counterweights

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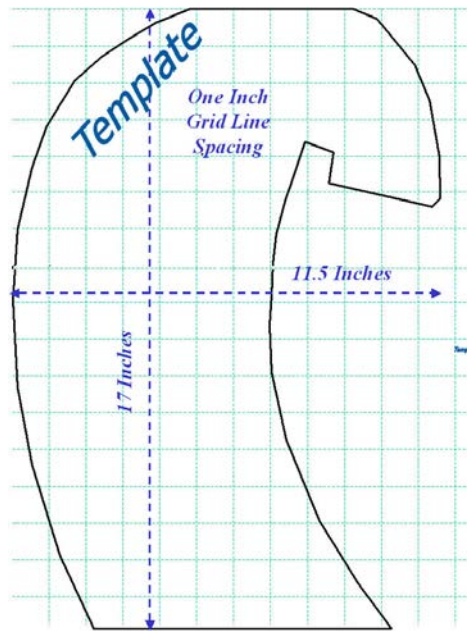
Here is a simple way gain traction at the rear of your tractor by simply constructing some counterweights to hang on your back-blade. It is as easy as building some forms using the template included below. Fill the forms with pre-mixed bags of concrete (e.g., Quikrete), and insert some



bent reinforcement rods for handles and to reinforce the “hooks” that fit over the top edge of the blade and the tough part of the job is done.

The 12 inch wide weights shown in the figure run roughly 120 pounds each. The instructions include estimates for the number of bags of concrete required to build weights that are 10 inches and 8 inches wide that weigh roughly 100 pounds and 80 pounds respectively. I’ve coated the weights with a surface bond cement product so as to make them look a little more finished. With care, you can get a nice smooth finish by tapping the forms with a hammer bringing the cement to the form’s surface and eliminating air pockets that might otherwise be trapped.

Step One in the process is to transfer the template below to $\frac{3}{4}$ inch plywood and cut three parts for two counterweights. Note: *I cut out 7 parts to make 6 weights not knowing how many I would actually need . As it turned out I only use two.* Having a couple of spares on hand isn't a bad idea though.



Step two is planning the form size. First determine the weight you want the individual units to be. Be sure and make them light enough to carry by yourself. Here is a chart that describes the weight of the units as a function of their width. The number are rough estimates

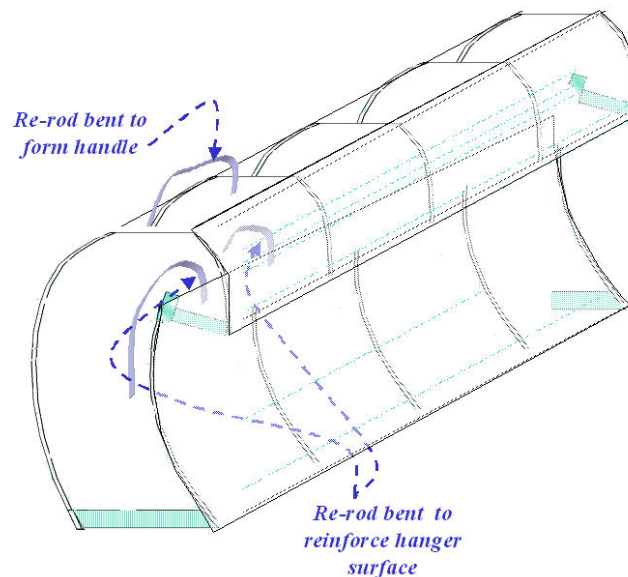
Width of Weight	Weight (rounded off)	80# Bags of Quikrete
Inches	In Pounds	Number of Bags
12	120	1.5
10	100	1.2
8	80	1

The figures in the table are rough estimates based upon the template being between 125 and 127.5 in²

Step 3 is the construction of the forms. It is a good idea to make one form that will accommodate as many weights as you will plan to use. Again, it's not a bad idea to have a couple of spares. Note: *I used masonite and connected it to the 3/4 inch plywood forms using drywall screws at about a 2 inch spacing to get the masonite to wrap against the form. Where the radius of curvature was tight, I used 1 1/2 in strips of 1/2 inch plywood and butted them so as to prevent concrete from oozing out.*

Were I to do it again I would use 1/4 inch luan plywood that has been soaked in water so as to more easily wrap the skin to the form. You probably ought to first score the luan so that it is even more pliable. Masonite is a bit brittle and will break. Done properly, you may succeed in wrapping the entire surface without resorting to the use of the plywood strips.

Build a Single Form for as many
Weights as You Plan To Build



Step 4 is bending the re-rod. Use 1/2 inch reinforcement rod to create handles. It also adds strength to the units. Each handle will use about 40 inches of re-rod. As you pour the forms place them into the concrete. Ensure that enough protrudes so that you can get a grip on it. Note *I failed to embed reinforcement rod into the hanger surface area. Consequently I managed to break the hanger where the 3/4 inch scrap creates the hanger's notch that fits over the top of the scraper blade!* Accordingly I recommend that you bend some re-rod fairly tightly and, as you pour the concrete, embed the two "hooks" such that they are positioned to strengthen the hanger's surface.

Step 5 is pouring the concrete and, as I said above, embedding the re-rod pieces to add strength. Be sure and leave the top part open for the pour. You may want to support the form with braces before you start pouring concrete. Once cured you can use the units "as is" or you may want to coat them as I had done with a stucco or surface bond cement.

Good Luck, Conrad



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