

Homemade Tiedowns

...That Work!

BY JOE NORMS

WALK AROUND ANY FLY-IN and you'll see all kinds of approaches to tying down an aircraft. Some are elaborate; others are quite simple. Some tiedowns screw into the ground; some are driven in. Ask the owners what's best and you'll get as many opinions as there are styles of tiedowns. I've tried most of them at one point or another and have come to the conclusion that the simple, homemade system described in this article is at the top of the heap, especially when you consider cost versus performance.

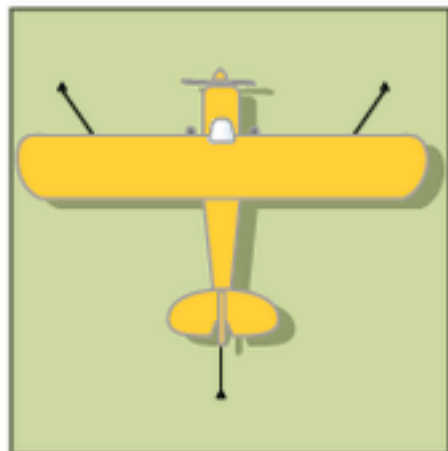
These tiedown plans were originally published by Joe Dickey about 20 years ago. They were also featured in an article in EAA's Vintage Aircraft Association's magazine, *Vintage Airplane*, in June 2003. I built two sets 15 years ago, and they continue to serve me well. The total cost was a trip to the scrap metal container, a few dollars for hardware, and about an hour of my time. I have taken these tiedowns all over the country and have secured my airplanes in all sorts of weather. I've used them in clay, sand, and rocky soil. They have always been easy to put in and to remove, and they don't take up much room in the baggage compartment. You'd have to look hard to find a better bang for your buck in all of aviation!

To remove, I've had the best luck with a claw hammer and a block of wood to pry against. Some have suggested using a length of light rope with a loop on one end. Put the loop around the head of the stake and wrap the rope around the hammer handle to pull the stakes. I have found the claw hammer method to be easier and more reliable, but you can experiment to find a removal method that works best for you.

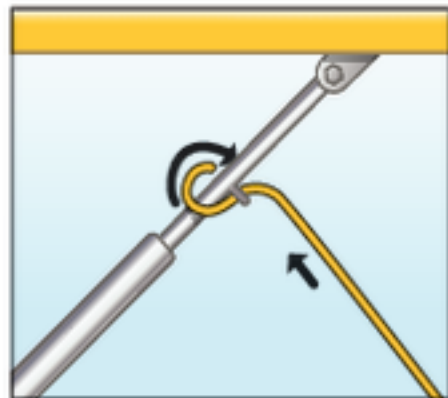
The dimensions on the plans are nominal. If necessary, you can adjust them slightly to fit the hardware you have on hand. I built mine to these plans, and they have worked out well. These tiedowns—and a good set of ropes—will serve you well.



Scrap metal and a few other materials will produce tiedowns that may last you a lifetime.



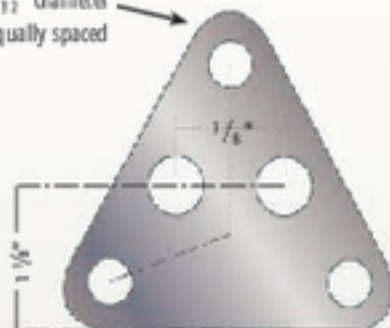
Spread tiedowns so pull is not straight up! You'll need longer ropes, but angling the tiedown points will increase their resistance to being pulled out of the ground.



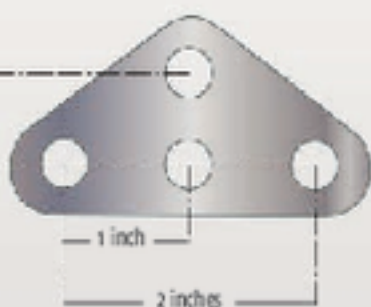
On airplanes with welded tiedown rings, thread rope through the ring, around the strut and back. Use the ring only to keep rope from slipping down.

Tiedown plates, made from $\frac{1}{8}$ " steel

Wing Plate: 2 required

 $\frac{9}{16}$ " diameter
equally spaced

Tail Plate: 1 required

 $\frac{11}{16}$ "
diameter $\frac{9}{16}$ "
diameter

Base Plate Assembly

 $\frac{1}{4}$ inch "U" bolt

Tighten nuts and hammer
the end of the threads to
peen them over and lock
the nut in place.

90° Point – sharper points
blunt too easily

18" minimum
length



Anchor Pins: 8 required

Make from $\frac{1}{4}$ " steel rod thread top to suit
hardware used. Run bottom nut snug to
bottom of threads.

Add washer (needed to pull pin) and
tighten top nut. Peen over to lock.

Drive pins in angled
toward center.

