

## WHY IS ONE WORTH MORE THEN THE OTHERS?

There appear to be three tail wheels on the market that are made with good ground handling and longevity in mind. These two attributes make them about twice as expensive as the rest of the offerings. One of them is made by White Rose Engineering and will be referred to as WRE, the second will be called Product #1 or P1 and the third will be referred to as Clone of Product #1 or CP1 because that best describes it. All three are pictured below.



WRE  
2.5 ounces



P1  
3.1 ounces



CP1  
3.2 ounces

As previously stated all three of these are good products but the WRL product costs around ten bucks more, why is this? Here is what differentiates the WRL product from the other two;

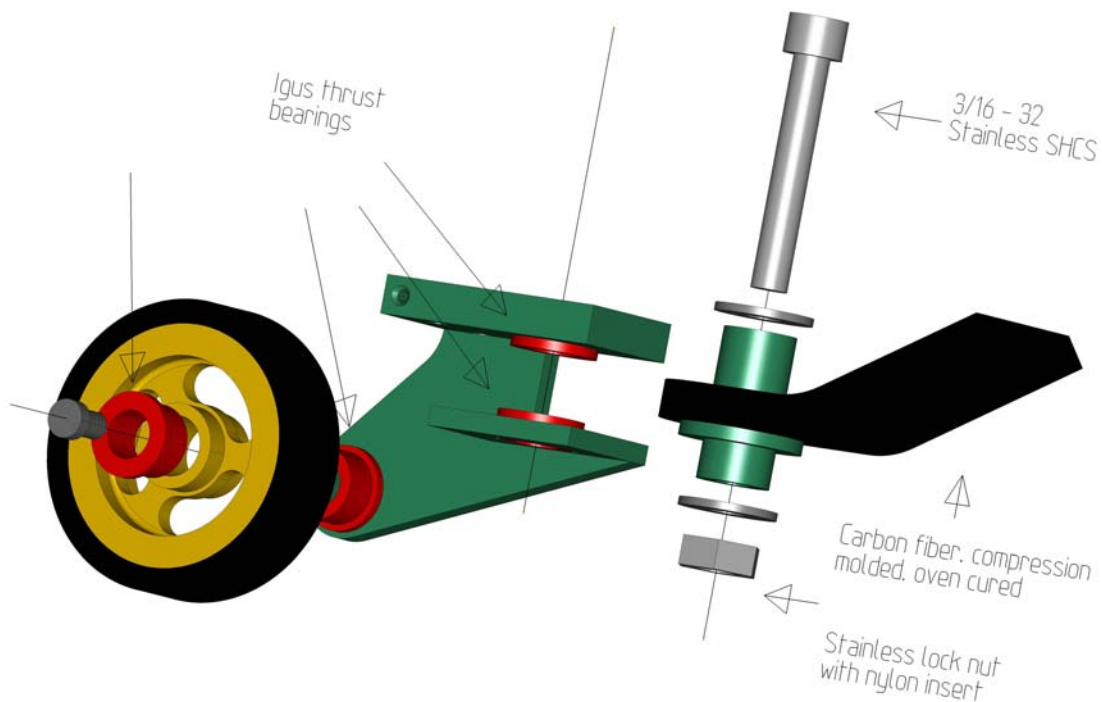
1. Four Igus\* thrust bushings, two in the tail wheel itself and two in the yoke or carriage, are used to isolate both of them from the shafts they rotate on. The other two products' use metal to metal on both of these rotating surfaces which is not a good practice if long life and tolerance maintenance is to be achieved. When the metal to metal pounds itself out you have no choice but to replace the relatively expensive parts. Unfortunately, our two cycle engine's vibration frequencies are great at pounding most anything to death. The bushings are a couple of bucks and can be replaced very easily.
2. We make our own tailwheels, one with a soft rubber tire and one with a hard urethane tire molded onto a very light spoked hub. Both wheels are CNC machined to close tolerances and have the fore mentioned 3/8" diameter Igus\* bushings pressed into them. WRL utilizes a 3/8" diameter tail wheel axle to maximize the bearing surface which minimizes the wear. P1 and CP1 utilize a 1/8" diameter axle with no replaceable bushings.
3. With the WRE tailwheel the surfaces that the bushings rotate on are either steel or coated with a hard anodizing. Once again, wear is minimized and the wear that does occur is isolated to the replaceable bushings rather than onto expensive metal replacement parts.
4. WRE's carbon fiber springs are made in compression molds and are oven cured. They will not delaminate as the springs that are laid up by hand in layers inevitable do. Our large carbon fiber spring will support 100 lbs hung on it for 48 hours without breaking. If you can see layers in the edge of your tail wheel spring it will delaminate eventually.

5. WRE's tailwheel comes ready to accept either the spring steering method or the direct drive (tiller arm) steering method, it's your choice. P1 markets two separate tailwheels, one for each steering method. This is fine as long as you don't decide to change methods in the future. CP1 only provides for the spring steering method. Our steering arm is removable if not used, theirs is not.

6. All our fasteners are stainless steel to prevent rust and corrosion. Theirs are not.

7. We offer both a carbon fiber spring and a 1/4" diameter titanium wire spring.

8. We support both the bottom and the top of the yoke pivot shaft, double shear construction. Theirs is single shear construction.



\* Igus bushings are tribologically optimized material compounds designed for low wear and long life.

Please visit our web site at [www.whiteroseeng.com](http://www.whiteroseeng.com)