

# GRASS ROOTS

## TECH BARN

with: Jimmy Rivers

## FROM THE BOX TO THE STAND TO THE SCALES

In this month's installment of the "Grassroots Tech Barn," we are going to go in a bit of a different direction. We are going to cover the basic stages of kart assembly. We will inspect our new chassis, go over the factory assembly,



and follow up with getting the rest of our kart assembled in the proper fashion. The quality of our work here will be the foundation upon which all else will follow. Improper assembly, or failure to catch a problem at this point can seriously affect the performance of the kart.

Most karts are shipped in a partially assembled condition, with the axle assembly, brakes, and front end



components installed. This is the point at which we will begin our buildup.

Upon unpacking the kart, give it a good inspection. These chassis are assembled by profes-



sionals, but we want to verify everything for our own peace of mind. A prepared racer never assumes or takes anything for granted. Make sure the hubs and axle roll freely, check the operation of the brake system, and make sure the nerf bars have movement and aren't "bound up" in the frame. Get out your tools and make sure everything that is sup-



posed to be securely tightened is done so. Front end components, axle components, and the brake system need to be tight. The front bumper and nerf bars need to be secure, not tight.

Go ahead and place your rear hubs into their correct spacing, and tighten securely. Put a wrench to the bearing setscrews and the split collars on the axle, we certainly don't want it moving around. Check the caster blocks and spindles, and make sure they are tight and safety pinned. Check the bolts holding the master cylinder and caliper, and

pin them as well. Make certain the brake lines are tied up and out of the way as well. Once we have thoroughly inspected our chassis, we can start further assembly.

Begin by installing the steering tube, and follow by hooking up the tie rods and mounting the toe lock. Check your owner's manual to see which tie rod goes on top and



bottom, as this can affect the ackerman, or turning rate. Usually the correct placement will be the one that has the rods in the most level condition. Once everything is in position, start tightening everything, making sure the steering does not bind or have any tight spots. If you experience any tightness, go back until it is found and corrected. Mount the

steering wheel to the steering hub, cotter pin or safety wire the bolts, and attach to the steering shaft with a castle nut and a cotter pin. If you are using a steering wheel mounted tach mount, be sure to attach it at this time.

Now is the time to mount the seat. We will go deeper into seat mounting in another issue. The main point is to make sure the seat is in the proper position and that it is not in a bind. Before mounting the



body, I preset my toe. I use the term preset, because it is just that, I will go back over it once I start scaling the kart. It is a much easier task to mount the body correctly and centered with the front end aligned.

Once we have the body mounted, our kart is mostly assembled. Go back over and check your work again, we don't want to miss anything. Make sure all steering and brake components are cotter pinned or safety wired. Now we can do our finish work and get ready for the scales and then the track.

Like always, take your time and use good judgement. Refer to your owner's manual as needed, and always get assistance if you aren't sure. Good luck, see you next month!

## Front Wheel Hubs Featuring Ceramic Hybrid Bearings

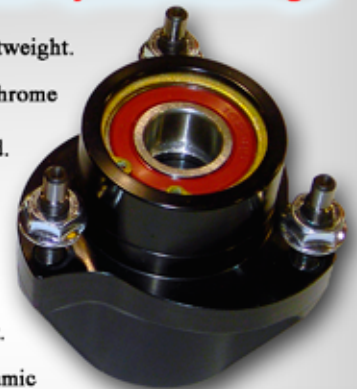
Extremely free spinning and lightweight.

Ceramic Hybrid Bearings have chrome steel races, ZrO2 ceramic balls, nylon cages and are oil lubricated.

Bearings are installed by HAND and are secured in place with snap rings. This eliminates additional drag caused by a pressfit and allows easy removal for maintenance and replacement.

Complete assembly includes ceramic bearings, starter studs, nuts, spacer and snap rings.

2 Sizes available. Direct replacement for most front hubs. Replacement ceramic bearings available for your current hubs.



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