

DIY Go Karts

Simplified Building Plans For Go Karts and Mini Bikes



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Rear Wheel Drive - Fixed Axle

How to Build a Go Kart Drive Assembly

The rear drive assembly shown uses a fixed axle instead of a live axle. This will maximize handling at the expense of traction on loose surfaces.

[\[What's the difference between live axles and fixed axles?\]](#)

Parts Needed

The rear axle is easily fabricated from 3/4" thick-wall pipe or 1" thickwall round tubing and threaded bolts sized for your bearing. Bearings are generally 5/8" or 3/4" ID. The bolts are available from any hardware store. Check your hubs to find the right length to buy.

Prep

Most bolts have raised lettering on the end. Prep your bolt by grinding any raised lettering from the head. Cut the axle to length and make a very straight cut, ideally using a chop saw. If cutting by hand, you make use a carpenter's square to get it as close as possible.

Getting the bolts square is a difficult job, but you'll need to get it right or face exacerbated tire wear.

Start by putting the bolt of the axle and eyeballing the straightness — use the framing member as a known straightedge (Fig. 1). Then get your square and make sure it's straight from multiple angles (Fig. 2).

Ensure that your square can sit flush and the tack welds don't get in the way. Tack your bolt from multiple sides before finish welding — applying too much heat to one side without tacking will result in heat distortion.

Sprocket Drive System

The drive system for a single wheel drive kart with fixed axle is the simplest to deal with and the least expensive.

The parts involved in this set up are:

- double flanged hub
- your wheel/tire
- sprocket
- brake drum
- brake band

All these parts are bolted together, and you get your drive assembly (Fig. 3-4). Many parts houses sell this as a complete set. There are [other choices for brakes](#), as well.

Use a spacer to ensure the opposite rear wheel rides at the same distance from the frame as the drive wheel.



Fig. 1



Fig. 2



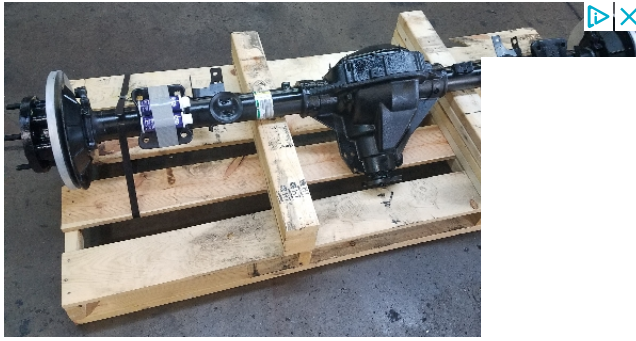
Fig. 3



Fig. 4



Fig. 5



National Differential

Differential assemblies from Hub to Hub!

National Differential



Fig. 6

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