



## Pinewood Pro Derby Car kit

### 1. Prepping

To prepare the car body, we suggest doing a light sanding with a fine sandpaper (220 grit or higher) to smooth the rough surfaces on your car. Next, we suggest painting the car with a **wood sealer/primer**. Any primer paint will work. This seals the wood. Priming the wood gives your car a nice smooth surface before painting.

### 2. Painting and Decorating

You can paint your car with any acrylic paint. We suggest brush on paint (rather than spray paint) if working with a child so they can do the painting. Spray paints are fast but difficult for a child to apply. When the paint is dry, you can apply stickers or decals. Lastly, we suggest coating the car with a clear gloss sealer to protect the paint job.

### 3. Lubricate your Axles (Graphite NOT included, sold separately)

Squirt graphite into both sides of the wheel bore where the axle goes through. Insert the axle and spin the wheel to work in the graphite. **Repeat this several times and do it on all four wheels/axles.** Get as much graphite as possible on your axles and inside the wheel bore. This process reduces friction where the wheel rotates on the axle and is the **single most important thing to make your car fast.**

**Safety Note:** Graphite is messy! It is best to wear light gloves. When applying graphite, be sure to do it over newspaper and in a safe area away from food and where children play. Wash your hands thoroughly when finished.

### 4. Install the Axles and Wheels

Your axles slots are pre-drilled to make it easier to insert your wheels and axles. Please make sure you leave about a credit card thickness spacing between the wheel and the car body. We do recommend using our PRO Wheel Spacer Gauge tool to get exact spacing. Type B005ZUN0CK into the Amazon search bar to locate this tool. Place the blue wheel spacer against the car body and slide your axles/wheels into the axle slot (for more speed raise the front left wheel – see below). Be sure to push the axle all the way in until the wheel is snug against the wheel spacer.

### 5. Speed Option - Raise one wheel for extra speed!

**Read your rules!** If your rules say, “*All four wheels must touch the track*”, then you can not raise a wheel. If you are allowed to raise a wheel, your car includes an extra axle hole above the front left axle slot. Insert the front left axle into the top axle hole...**your car will actually roll fine on 3 wheels!** Raising one wheel will make your car faster because it takes less energy to spin 3 wheels than it does to spin 4 wheels.

### 6. Add Weights

This kit does not come with weights however we carry all types of weights. (tungsten canopy, Tungsten Cylinders, Tungsten Cubes, Tungsten Putty, Zinc weights, and even Flexible weights you can cut with a scissors.) To determine how much weight you will need, place your car body, axles, and wheels onto a scale. Add weight to the scale until it reaches 4.9oz. This leaves .1oz for stickers, paint, etc. Your car can not exceed 5.0 oz

**Speed Tip:** When placing your weight, the center of gravity (where car balances on your finger) should be 1” in front of the rear axles.

**That’s it...Your car is ready to race!**

Visit [www.pinewoodpro.com](http://www.pinewoodpro.com) for all your pinewood derby supplies, Winning Secrets and to share your story.

**Questions?** Call 203-400-3713 or email [info@pinewoodpro.com](mailto:info@pinewoodpro.com)