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TIPS & TRICKS**
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CONSTRUCTION GUIDE

GETTING STARTED

You don't need a workshop full of tools to create a winning derby car. With just a few Dremel® tools and accessories, you can create a car that will turn heads and hopefully win some races. Remember to check the instruction sheet in your Official Grand Prix Pinewood Derby® Kit for complete rules to follow so your car passes inspection on race day.



What You'll Need:

- Any Dremel Variable Speed Rotary Tool
- Any Dremel Multi-Max™ Tool (optional) or coping saw
- Dremel Rotary Tool Accessories:
 - Sanding Accessories 407, 408, 430, 431, 432, 438, 445
 - Cleaning and Polishing Accessories 401, 414 and 421
 - Carving or Engraving Accessory 194
- EZ Lock Accessories (optional)
- Dremel Multi-Max Accessories (optional)
- Pinewood Block
- Paint / Decals

STEP 1

Choose your design

Check out the Pinewood Derby Car Designer on DremelDerby.com to create and print your design plans. Mark your design on the wood block so you know where to cut and carve.



STEP 2

Cut your block of wood

You can cut your block of wood using several methods. Coping saws can tackle this application. However, Dremel recommends using a Dremel Multi-Max. Mark your wooden block with your design to show where to cut and carve to give your car its shape. Make sure the axle holes are on the base of your design. If you choose to use the Dremel Multi-Max, sculpt the block using a wood blade to remove the largest areas first. Once it becomes difficult to cut any further, back the tool out of the block and make a quick plunge cut to remove the rest of the material. Secure your wood block into a vise before beginning. For a video displaying this and other techniques, visit DremelDerby.com.



STEP 3

Shape your block of wood

Add more detail to your design with a Dremel Rotary Tool and various accessories. Sand & Shape: Create realistic, rounded edges and sand your car smooth with a Dremel Rotary Tool and a sanding band or your choice of sandpaper.



STEP 4

Add weights

The more weight you add to the back of the car, the faster it will go. We recommend placing the weight slightly in front of the rear axle. Recess the weights into your car by carving out an area large enough to fit the weights. Trace the designated area for your weights with a pencil and carve out that area of the block using the #194 accessory. Secure the weight into place with screws or adhesive. Remember that the maximum weight to pass inspection is 5 oz. Not sure if it's 5 oz? Try taking your car to the post office — they may be able to help you weigh it.



STEP 5

Customize your car

Before adding your axles and wheels, paint and add decals to your car.



STEP 6

Add your axles and wheels

Once your paint is completely dry, it's time to add the axles and wheels. To make your car as quick as possible, polish your axles before tapping them into the grooves of the car:

- Insert a polishing wheel into your Dremel Rotary Tool.
- Turn your Dremel Rotary Tool to a low speed. Then, holding your axle firmly with a pair of pliers, polish each axle for about 15 seconds.
- Slide your wheels onto the axles and tap the axles into the grooves, leaving enough room between your wheels and the car to make sure they can still spin.



Your car is now complete and ready to race!