

Turbo Jig ULTIMATE Instructions

The Turbo Jig is designed to establish a solid foundation for the rear wheels, front to back and side to side alignment of a Derby car. There are many variables involved that can effect the precision of the alignment such as proper clamping of the body, the size and quality of the wheels, wheel bores, axles, axle bend etc.

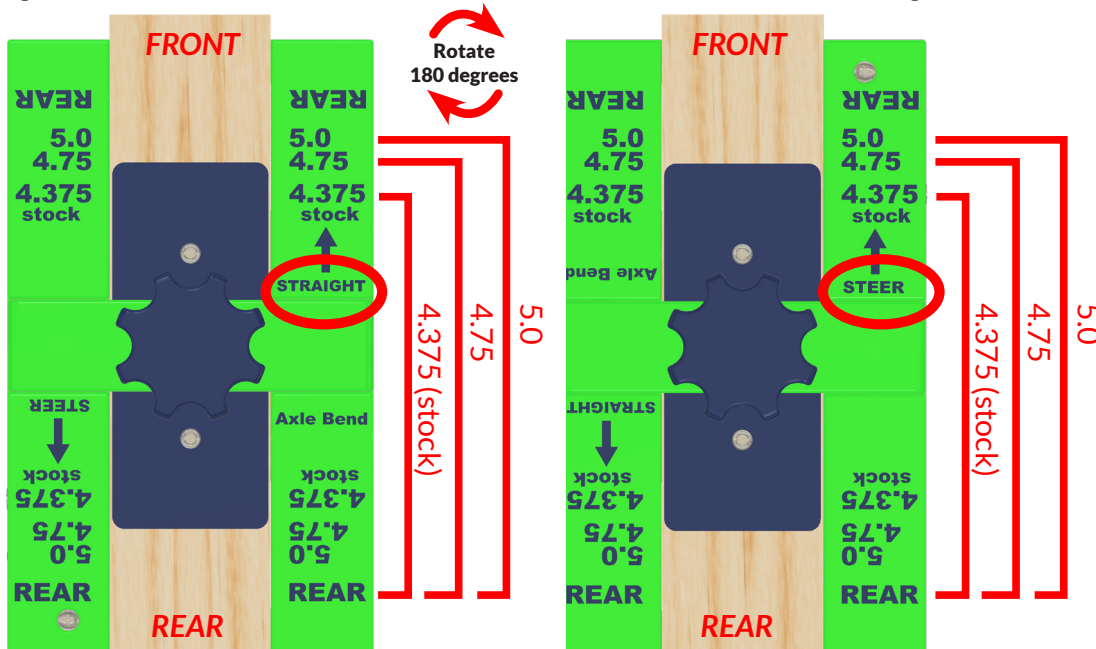
1 Insert drill bit into one of the rear holes and align the tip with the indicator mark. This gives the correct depth for drilling the axle hole. **STOP** The drill bit **MUST** move smoothly through the drill bushings. Please use the drill bit provided with the jig, or a #43 bit that has been sanded until it moves smoothly through the bushing. Failure to do so can cause damage to the jig.



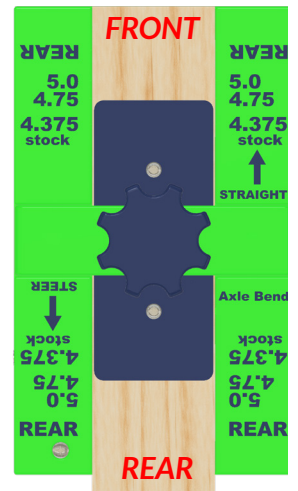
2 Mark the wood block where axle holes are to be located. Align these marks with the corresponding lines on the jig. **STOP** The wood block must not be forced into the jig. This can lead to misaligned holes or damage to the jig. If the block is too wide, sand it until it fits. The wood block **MUST** sit flat in the jig in order for the holes to be drilled at the correct heights for proper alignment. Please make sure to clean away any debris from the jig pocket before clamping the block in place. Alternatively, placing the block in the jig and aligning the rear of the body with the rear of the jig will place the rear axle holes 5/8s (0.625) inches from the rear of the car. If rules determine that the axles holes must be in the same location as the existing slots in the block, the front of the car should be aligned with the front of the jig. Determine your steer method (straight holes with bent axle, or steer drilled into the car) and arrange the jig accordingly. Turn the clamp knob to secure the block in place. **STOP** Please use only enough clamping force to hold the wood block in the jig. Too much force can skew the wood or with enough pressure, flex the jig resulting in misaligned axle holes. Drill the rear and front holes.

Straight front holes, use bent axle to steer

Steer built into front holes, use straight axle



For axle holes that are in the stock location and stock wheel-base, align the FRONT of the body with the FRONT of the jig

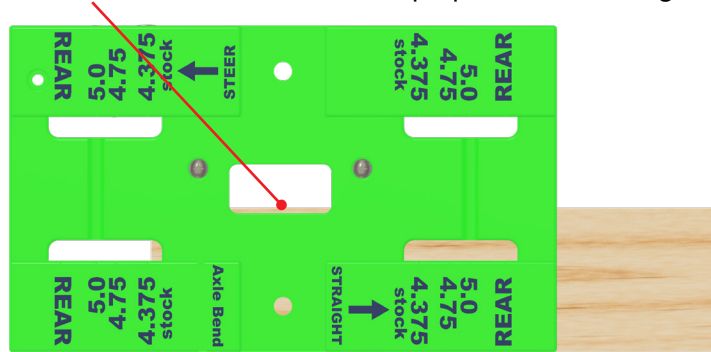


3 If using a bent axle for steering, utilize preferred bending method (the Turbo Bender is a good option) to bend the axle until fits into the axle bend gauge. This ensures that the front of the car will be level with the rear. Please note, if using the built in steer, practically none of the stock axles are straight. This will affect how much the car steers. It is advisable to still check the steer of the car when using built-in steer, even with aftermarket axles. Rotating the steer wheel axle, AND the rear axles will change how much the car steers.



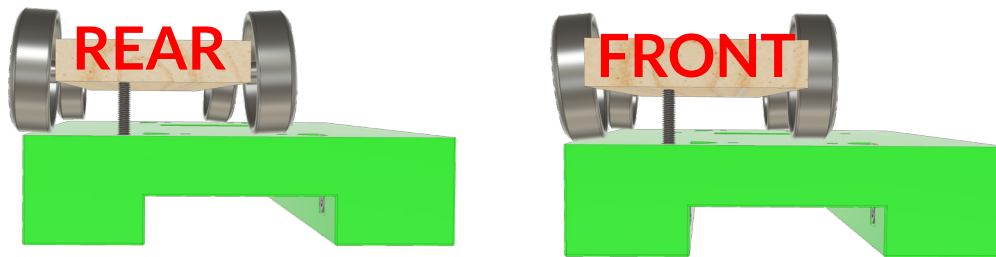
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In order to mark the portion of the car body that needs to be cut away from the front wheel area, arrange the jig horizontally on a flat surface. Turning the clamp so the plate is out of the way allows access to this feature without needing to remove the clamp. Place the wood block behind it and mark with a pencil. This is the amount of material that needs to be removed to ensure proper side to side alignment.



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Verify front to back alignment by extending the bolt near the "REAR" bushing until it touches the bottom of the car between the rear wheels. Rotate the car 180 degrees, the bolt should touch/rub the car between the front wheels the same. Tweak the bend of the axle to fine tune alignment if needed.



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Verify side to side alignment by fully extending the two bolts located near the middle hole. Place the car so the left side of the body rests against the two bolts. The front steering wheel should barely touch the side of the jig. Tweak the alignment by sanding the body to bring the wheel in, or adding washers or other material (super glue, wood etc.) to bring it out.

