

Troop KS-1199

Pinewood Derby Rules

GENERAL RULES

1.1 Have Fun and Walk Worthy!

Good sportsmanship and behavior is expected during all aspects of the Pinewood Derby.

1.2 New Work

The car must be newly constructed each year and modifications to previous cars will not be accepted.

1.3 Inspection and Registration

All cars will be inspected prior to race day as discussed under Check-In. After a car passes inspection and is registered, it will be impounded and stored by the Pinewood Derby Race Committee until race day/time.

RACE CAR DESIGN REGULATIONS

2.1 Car Specifications

- Width (outside edge-to-edge of wheels): not to exceed 2 $\frac{3}{4}$ "
- Center Rail Width Clearance (minimum width between wheels) – 1 $\frac{3}{4}$ " the entire length of the car

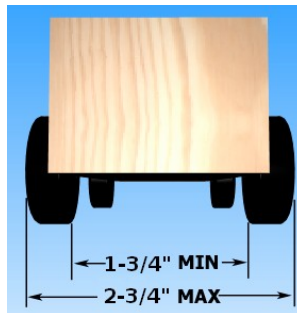


Figure 1 - Inside & Outside Wheel Specifications

- Length – not to exceed 7"
- Height – not to exceed 5"
- Wheelbase – the distance (~4 $\frac{3}{8}$ ") between axles cannot be changed
- Track Clearance - bottom clearance between car and track minimum of $\frac{3}{8}$ "

NOTE: Even though the lane strips are typically only $\frac{1}{4}$ " high, the extra clearance is to allow the car to go from the sloped portion of the track to the flat portion without dragging.

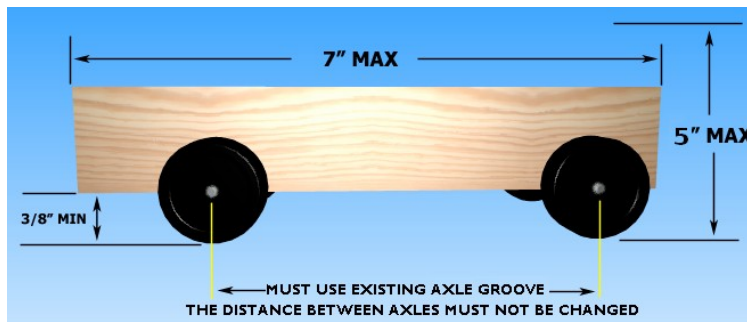


Figure 2 - Length, Height, Wheelbase & Clearance Requirements

- g) Front of Car
 - No part of the car can extend beyond the starting post
 - All cars must have sufficient material to contact the starting post (e.g., noses which curve inward or “/” shaped front ends are not allowed).
- h) Weight – not to exceed 5.0 ounces (141.75 grams). The official race scale will be considered final.

2.2 Material

- a) Race cars must be constructed for this event from the parts contained in the Pinewood Derby Kit (“Kit”) provided by the Troop. This kit includes the wooden block with precut axle slots, 4 plastic wheels and 4 metal nails to be used for axles.
- b) Materials from the kit may be supplemented but not replaced. The main body must be constructed from the wood in the kit.
- c) "ADD-ONS" are not restricted as long as they meet with the rules and regulations as specified within this document.
- d) Special paint, decals, decorations, etc. are allowed.

2.3 Weight

- a) Cars may weigh no more than five (5.00) ounces (141.75 grams) total.
- b) Weight may be added to the car and will be considered part of the car for purposes of all measurements.
 - NOTE:** *This is especially important for weights added to the underside of car. The minimum track clearance must still be met.*
- c) The car may be drilled/hollowed out if you wish to add weight.
- d) All weight must be securely fastened to the car (e.g., permanent glue, nails or screws). Loose weights are not permitted.
- e) No liquid weights are permitted.
- f) Weights must be passive (e.g., non-moveable, non-magnetic)

NOTE: *The official scale will be available during the check-in/registration process.*

HINT: *If you are using an unofficial scale to check weight, then it would be a good idea to be slightly underweight. During check-in, it is typically easier to add weight than it is to remove weight.*

2.4 Wheels and Axles

- a) The wheels provided in the kit must be used and all four wheels must touch the track.
- b) Wheels may not be cut, drilled, tapered, beveled or rounded. You may remove the seam from the wheels.

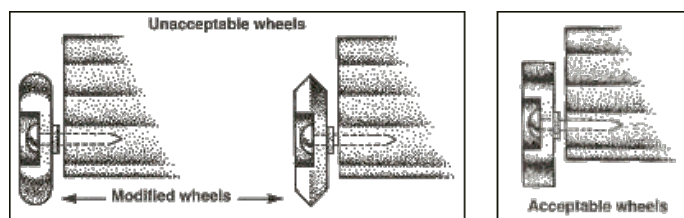


Figure 3 - Example of Modified Wheels

- c) Hubcaps/wheel covers are not allowed.
- d) The axles provided with the kit must be used. They may be polished and lubricated. If using lubrication, only dry powdered white Teflon or dry powdered graphite is permitted. No liquid lubricants will be allowed.

***HINT:** It is extremely easy to break the axle slot when setting the wheels in place. Once you have inserted your axle, use a straight screwdriver (tapping downward on the axle slot/long part of nail, not the wheel) for any final adjustments to straighten the axles. DO NOT ATTEMPT to bend the wheels into place.*

- e) Lubrication will be allowed during check-in/registration. Once inspection/registration is completed, no additional lubrication will be allowed.
- f) No wheelbase modifications and no extended wheelbases are permitted. The stock axle slot dimensions must be used.

***NOTE:** This is very important if you are making design cuts along the length of the car. You cannot cut the area with the axle groove; the axle slots must remain at their original width of the block of wood. If you are cutting close to the axles, be sure not to weaken the support necessary for inserting the axle/wheels.*

- g) Wheel bearings, washers or bushings are not permitted.

2.5 Gravity Powered

- a) The race car may not be constructed or perform in such a way the track's starting mechanism imparts momentum to the car.
- b) Cars with sticky substances on the front of the car or protrusions which may catch on the starting pin will be disqualified.
- c) The car cannot run on any type of springs or suspension.
- d) The car must be freewheeling with no starting device or external sources of power (e.g., magnets, engines, compressed air or similar). Only gravity may be used.

CHECK-IN / REGISTRATION / RACE DAY

3.1 Inspection

- a) Each car will be inspected the evening before the race during the official Check-In / Registration. Guest participants (e.g., HCA Kindergarteners/1st graders) will be permitted to check-in either during official Check-In or 30 minutes before racing begins.
- b) A car must pass inspection before it will be allowed to compete.
- c) If a car does not pass inspection, then modifications may be made in the designated Pit Area (please bring your own tools).
- d) Once the car has passed inspection, it will be checked in and impounded by the Race Committee. No further alterations are permitted.
- e) Racers should be prepared to name their cars.

3.2 Race Day

- a) Guest participants will be permitted to check-in during the official Check-In or 30 minutes before racing begins.
- b) Participants are not allowed in the Race Staging Area or Race Track Area.
- c) Participants will be able to watch their patrol heats from trackside seating next to the Race Track Area.
- d) Good sportsmanship and behavior is expected at all times from all attendees.