



Pinewood Derby Rules

Tall Timbers District Pinewood Derby Chair
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In an attempt to make the Pinewood Derby fair and fun for all Cub Scouts, the following rules will apply in the district race. The purpose of the rules is to provide a reasonable and level playing field for all contestants. The most important values in Pinewood Derby competition are parent/son participation, good sportsmanship and learning how to follow rules. The footnotes at the bottom of the page help clarify any confusion about the rules. If you still have uncertainty about what is allowed, please contact the Derby Committee.

Eligibility of Contestants and Cars

Participants must be a registered and active Tiger, Wolf, Bear or Webelos Cub Scout at the time of the Pinewood Derby. In case of illness or a valid conflict, an absent scout may be represented by an authorized agent.¹ Each District Pack may submit one racer per Den in their Pack.

Race Format

Every racer will race four times, once down each lane. The winners will be determined by the fastest average of the four races using a computer timer. Each entrant will race against other racers of the same rank (Tiger, Wolf, Bear & Webelos). The top three (3) entrants from each rank will compete for the district championship.

If a car jumps off the track, the heat will be run again. If the same car jumps off the track a second time, it will automatically be given a 10 second score for the heat.

If a car leaves its lane and interferes with another car, the heat will be run again. If the same car leaves its lane a second time and interferes with another car, the interfering car will be removed from the track and the heat re-ran with the remaining cars and the interfering car automatically given a 10 second score for the heat.

Damage repair shall be allowed during the Derby at the discretion of the Race Marshal, but no modifications shall be allowed. If a car suffers a mechanical problem and a repair is not possible car will automatically be given a 10 second score for the heat.

Unscoutlike, ungentlemanly or unsportsmanlike conduct by any participant or member of the audience will be grounds for expulsion from the competition and/or race area.

Rewards and Recognition

Every participating Scout will receive a Participation Ribbon or Certificate.

Trophies will be awarded to the first, second and third place finishers by den and first, second and third place overall.

Design trophies by den and overall will also be awarded, first, second and third place by den and overall.

Inspections and Rules

Each car must pass inspection by the Official Inspection Team before it may compete. If a car does not pass inspection (too long, too heavy, altered wheel, or the like), the owner will have an opportunity to bring the car into compliance. If the car cannot be brought into compliance before race time the car will be disqualified.

No car may be altered in any way after it has been registered (this includes lubrication). After passing inspection, no car shall be re-inspected unless repaired after damage in handling or in a race.

1. **The car must have been made during the current school year in which the derby is held.**
2. Width - overall width shall not exceed 2.75".
3. Length - overall length shall not exceed 7.0".ⁱⁱ
4. Height - overall height shall not exceed 4.0".ⁱⁱⁱ
5. Weight - shall not exceed 5.0 oz. as determined by the official weigh-in scale.
6. Wheelbase cannot exceed 4.75" from center to center of each axle.^{iv}
7. Distance between wheels must be 1.75"
8. Must have .375" clearance under the car body.^v
9. No part of the car can extend beyond the starting pin of the track, which will strike the car at the center of the longitudinal axis, at the front end of the car, when placed on the starting gate of the track.^{vi}
10. Only the wheels and axles supplied with the Grand Prix kit are acceptable. Solid axles are prohibited. Wheels and axles not from the official kits are prohibited.^{vii}
11. Wheels can be sanded to remove surface imperfections, but the treads must be left flat. Wheel diameter cannot be less than 1.180". No significant amount of plastic can be removed inside or outside of wheel. Cars with overly modified wheels will be disqualified.^{viii}
12. Wheel bearings, washers, bushings and hubcaps are prohibited.^{ix}
13. The car shall not ride on any type of springs.
14. Only dry lubricant is allowed.^x
15. Any details added must be within height, length, width, and weight limits. No loose materials of any kind are allowed on the car. If anything falls off during/after a race, it stays off.
16. The car must be freewheeling with no starting device or other propulsion, such as adhesives, magnets, rubber bands, motors, jets, etc.
17. All decisions of race officials are final.

Most importantly...have fun!

ⁱ An authorized agent is defined as a sibling or a Cub Scout of similar age who is not already competing in the same set of heats.

ⁱⁱ The official BSA grand prix block of wood, out of the box, is sometimes slightly over 7" long. Be sure to check the length.

ⁱⁱⁱ This restriction is due to the height of the finish gates.

^{iv} The official kit block has pre-cut slots which are spaced between 4 3/8" & 4 1/2". If desired, these slots may be straightened up or pre-drilled before they are used. Use of the pre-cut slots, however, is not required. The cars wheelbase can be no less than 4 3/8" and no greater than 4 1/2".

v Low hanging weights must be moved to another part of the car or recess into the bottom of the car to pass the .375" clearance.

vi Some creative designs include a forked front nose that allows the front of the car to extend beyond the starting pin giving the car a "head start", which is prohibited. Likewise, a car design with an extremely sharp front end nose will have difficulty sitting on the starting pin and will also have difficulty being detected by the electronic end gate to stop the timer.

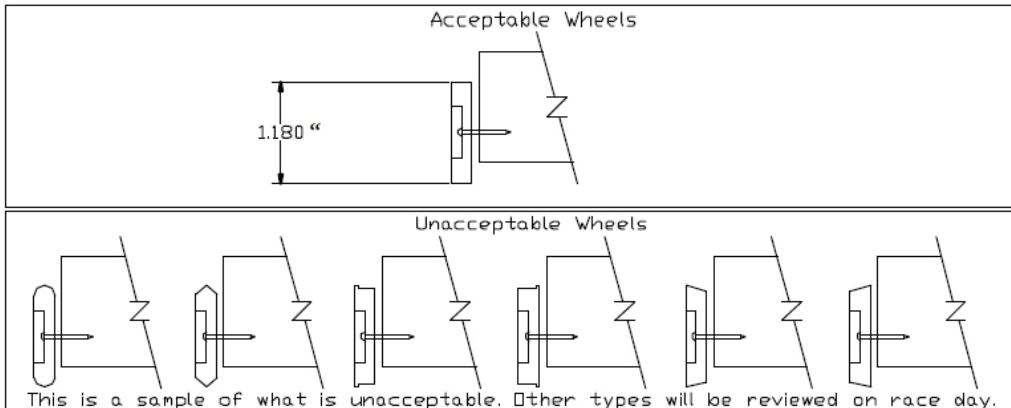
vii Wheels and axles, which have been modified by other parties also, are prohibited, even if they are from the official kit.

viii Wheels may be lightly sanded to smooth out molding imperfections on the tread area. This light sanding is the only modification allowed. Beveling, rounding, tapering, thinning, perforating, or any other significant altering of the shape or performance of the wheels or wheel hubs is prohibited. Modification of the cylindrical inner wall of the wheel, which contacts the axle, is prohibited.

There are few molding marks or seams that affect the rolling ability of the wheels. Builders are permitted to correct for minor imperfections as long as it doesn't reduce the wheel diameter or round off the edges of the wheels. Some enthusiastic participants, however, continue this correction process until the wheel no longer resembles the original. Lathes, milling machines and other machine-shop tools can really do a fine job of improving the wheel's performance. But that takes the car-building process out of the hands of the youth. It is unreasonable to assume that most Cub Scouts or even their parents will all have access to a machine shop with a lathe, milling machine and CNC routers. So it's fair to create a rule that states machining of the wheels will not be permitted.

There are companies that sell after market wheels that are machined from official BSA wheels to produce special faster versions. These wheels are not allowed.

Here are some examples of wheels that will not be permitted:



ix Wheel bearings, washers, or bushings are prohibited. This includes "wheel covers" which serve to keep the wheel hubs from contacting the car body. It also includes "hub caps", or anything else that might serve as a lubrication "well" or "tap".

x Liquid lubricants can damage the track and gum up in the wheels, and are therefor prohibited.

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