



Pinewood Derby Rules

Qualify: In order to qualify for the District Pinewood Derby, the Scout's car must have placed 1st, 2nd, or 3rd in their division (Lion, Tiger, Wolf, Bear, Webelos, AOL) during their Pack Pinewood Derby.

Overall: All cars must be built for the current Pinewood Derby Racing Season. NO REPEATS or REPAINTS! One car per Cub Scout. Cars must be tuned or aligned by the racer, adult supervision encouraged. Cars may not be sent to third party facilities for tuning or other performance enhancements.

Body: The main body structure must be made of wood. The official BSA Pinewood Derby kit must be used. If the builder lacks the resources to cut out a car from a stock block of wood, attendance at a workshop (den/pack/district/council) is strongly encouraged. Cars that were purchased completed may not be used.

Car Specifications:

1. Width – Car must not exceed 2 $\frac{3}{4}$ inches
2. Length – Car must not exceed 7 inches
3. Weight – Car must not exceed 5.0 ounces
4. Height – Car must not exceed 3 inches
5. Clearances –
 - a. Center Rail Width – Car must clear center guide rails, no less than 1 $\frac{3}{4}$ inches minimum.
 - b. Bottom – no less than $\frac{3}{8}$ inches from track surface between center rail width.
 - c. Other –

- i. Fender flairs with less clearance are acceptable as long as the center rail width clearance is maintained.
 - ii. Weights are preferred to be inset in the body or on top of the car to aid in a safe stop at the end of the track.
 - iii. NO part of the car or attachment to any car, which is metal, pointed, sharp, and/or jagged, may be capable of contacting any part of the track.
- 6. Wheelbase – The wheelbase may not be modified. Axles must be placed in slots provided.
- 7. Front End –
 - a. Width – The front end must be at least a ½ inch wide in the middle
 - b. Other – No part of the car body, wheels or attachments may protrude in front of the starting peg.
- 8. Other – The car design may be enhanced by the addition of other stable materials such as plastic or metal. Any additions must be firmly attached and meet Car Size Requirements.
 - a. Prohibited Items.
 - i. Springs
 - ii. Starting devices or propellants
 - iii. Electronic or lighting devices that interfere with race electronics
 - iv. Liquids, wet paint, oil, stick substances, or powders of any kind (other than axel lubrication)
 - v. Glass or excessively fragile parts
 - vi. Bearings, bushings, sleeves, hubcaps or inserts attached to or in contact with the axle, body or wheels.
 - vii. Loose objects on car
 - vii. Magnets
- 9. Wheels –
 - a. Use only Official Scout Grand Prix wheels.
 - i. All lettering/numbering, both inside and outside, must remain complete and be visible. The fluting and other BSA markings on the outside wheel area must remain visible. Outer wheel surface may be sanded, shaved, or polished to remove surface imperfections, mold casting burrs, and correct off center wheel bores. Outer wheel surface must not be reshaped in any way in an attempt to minimize tread contact or alter aerodynamics. Tread surface must be flat and parallel to the wheel bore. Tread width may not be less than 7.5mm. You may add material such as glue, fingernail polish, or tape to the inside of the wheel to aid in balancing of the wheel, but no material may be removed from the inside surfaces. Minimum diameter of the wheel is 1.16" to maintain the ridges on the outer edge

- ii. Wheel bore treatment is allowed including polishing and/or tapping. Wheel bores may not be filled and re-drilled to alter bore diameter or to achieve better fit with axle
- b. The following wheel modifications are PROHIBITED:
 - i. Rounding of tread surface/wheel edges
 - ii. Grooving, H-cutting, V-cutting also known as “peaking”.
 - iii. Altering of wheel profile
 - iv. Narrowing of the tread surface, other than truing inside tread edge
 - v. Drilling sidewalls
 - vi. Hollowing, sanding, or otherwise removing or modifying material from inside the wheel
 - vii. Filling of any wheel surface with any type of material.
- c. There must be at least 4 wheels on the car.
 - i. Each wheel must be mounted on an axle, on the outside of the car, in the vertical position. Each wheel must be attached directly to the wood car body by an axle and spin freely. No part of the wheel may overlap the center guide rail. The two rear wheels and two front wheels must be positioned directly across the body from each other. Staggered wheel bases are not allowed.
 - ii. Note: lightened after-market modified wheels are available but are not allowed. These wheels are easily recognizable and cars outfitted with such wheels will not be allowed race.
- d. Only the wheels are permitted to touch the track. No other part or attachment may come in contact or be capable of coming in contact with the track.

10. Axles –

- a. BSA Nail type axles are required with an overall diameter of no less than .084 inches for each wheel. Polishing is permitted as long as the diameter is not reduced.
- b. Grooves are NOT allowed to be cut into the axles.
- c. Axles must not be connected to any device that mechanically alters rotation or spin.
- d. Axles must be mounted into the wood sections of the car in the slots provided
- e. Only dry-powdered type lubricants may be used.

11. Weights –

- a. Any weight added to the car must be fixed. No loose weight or material (ie, lead shot, fishing weights) may be used.

12. Inspection – Each car must pass inspection by the Official Inspection Committee before it may compete. The Inspectors will disqualify any car not meeting these rules. Any adult or scout may appeal the findings of the inspectors to the Race Committee Chair, whose

decision is final. After acceptance only race officials and registered racers will handle the cars.

- a. Cars may be disqualified if they do not meet requirements
- b. Cars may be altered during the pre-race inspection period to meet inspection standards.
- c. All winning cars will be re-inspected after the race. Axles will be pulled from the cars. Cars found in violation of any rule will be disqualified.

13. Repairs – Repairs will be permitted if the damage is caused by collision with another vehicle or object. Race officials must authorize and approve of any repairs to be done after the inspection period has closed. The Cub Scout is in charge of all repairs, guidance is allowed and highly encouraged. Car repairs should be completed quickly and before the next heat is to start. If absolutely necessary, that heat may be delayed to later in the race.

14. Behavior – in keeping with the Cub Scout Promise, Cub Scout Law and Cub Scout Oath, good sportsmanship and behavior is expected. Any Cub Scout or parent that fails to adhere to this policy will be asked to leave by Race Officials.

15. Questions – All race questions should be submitted to the Race Officials. Race Officials can be reached at adam.riedel@scouting.org