

Pack 631 Pinewood Derby Rules and Guidelines

The purpose of the Pinewood Derby is to help the Cub Scout build a team relationship with their parent or helper, experience the sense of accomplishment and the excitement of competition, learn Win/Lose good sportsmanship, and to have fun. The model cars are made of wood to specified dimensions, created, carved, assembled, and decorated by Cub Scouts under the guidance of the parents or helpers. The cars are gravity powered and run down a special track.

All cars must be built for the current Pinewood Derby Racing Season. No repeats, repaints or re-using axles. Scouts should be as involved as their age and maturity allow. Your scout gains nothing if dad, mom, grandpa or the neighbor does everything or parts of the car the scout could have done himself with some teaching and supervision. Remember the scout motto is "Do your best".

Car Specs and Rules

A) General Rules

- a. Essential Materials - All cars entered shall be constructed from Official BSA Pinewood Derby Kit material. The car body, wheels and axles must be from an official BSA Pinewood Derby kit. This includes colored wheels and kits sold by Revell Inc. under license by the Boy Scouts of America. If you purchase bodies, wheels or axles from non-BSA sources, you must ensure that the parts originated from an official BSA kit.
- b. Competitor Categories - Cub Scouts will compete with others in the same "Cub Scout Year." Plus one Non-Scout Child Division for friends, siblings and family members under 18 and one Adult division.
- c. New Work – Construction of entries must not have begun before the previous year's Pinewood Derby Race.

B) Car Specifications

- a. Width – Not to exceed 2 ¾ inches
- b. Length – Not to exceed 7 inches
- c. Weight – Not to exceed 5.0 ounces as determined on the official scale during race day inspection.
- d. Height – Not to exceed 3 1/2 0inches.
- e. Wheelbase – No less than 4 inches from front to rear wheels.
- f. Clearances
 - i. Center Rail Width – Must straddle center rail with width no less than 1 ¾ inches.
 - ii. Bottom – Center rail is 3/8 inch high. Cars with bottom mounted weights should clear this height. Nothing attached to car should come in contact with the track. Should not exceed 1 inch in height so it will rest against the starting peg.

C) Body

- a. The car body must not have any moving parts.
- b. The race car may not be constructed or treated in such a way that the track's starting mechanism imparts momentum to the car. (For instance, this provision disqualifies cars with sticky substances on the front of the car and protrusions which may catch on the starting pin.)
- c. Front End – All cars will be released from a starting peg that the front of the car will rest against.
- d. The car nose must not be pointed or forked.
- e. No part of the car can protrude past the starting pin.
- f. Weight and attachments may be added to the car and will be considered part of the car for purposes of all measurements. All weights and attachments must be securely fastened to the car by permanent glue, nails or screws.

- D) **Wheels** – Only official wheels are permitted on the derby cars. These are either from the official pinewood derby kit or official replacement wheels.
- a. All lettering or numbering on the inside and outside of the wheel should remain complete and visible. The fluting and other BSA markings on the outside of the wheel area should remain visible.
 - b. There must be four wheels on the car but all four wheels are not required to make contact with the track.
 - c. Each wheel must be mounted directly to the wood of the car with an axle and spin freely.
 - d. Two rear wheels and two front wheels must be mounted directly across from each other. Staggered wheel bases are not allowed.
 - e. The outer wheel surface and the wheel bore may be sanded, or polished to remove surface imperfections and remove burrs.
 - f. Coning the hub is allowed.
 - g. Truing the inside edge of the wheel is allowed.
 - h. Adding glue, tape or fingernail polish to the inside of the wheel aid in balancing the wheel allowed.
 - i. The outer wheel surface may not be reshaped to minimize tread contact or alter the aerodynamics of the wheel.
 - j. No material may be removed from the inside surfaces.
 - k. Wheel bores may not be filled and re-drilled.
 - l. The following modifications are PROHIBITED!
 - i. Any non BSA wheel.
 - ii. Rounding of tread surface or wheel edges.
 - iii. Grooving, H cutting or V cutting
 - iv. Altering wheel profile
 - v. Narrowing the tread surface other than truing inside tread edge.
 - vi. Drilling sidewalls
 - vii. Hollowing, sanding or otherwise removing or altering the inside of the wheel.
 - viii. Filling any wheel surface with any type of material other than balancing the wheel.
- E) **Axles** – Only BSA nails are allowed.
- a. Polishing and removing burrs is allowed.
 - b. Filing grooves into the axle is not allowed.
 - c. Nothing is allowed on the axle except for the wheel and a lubricant.
 - d. The axle must be mounted into the wood section of the car.
 - e. Drilled holes or slotted holes may be used when mounting the axle.
- F) **Lubricants**
- a. Graphite lubrication is common. Other lubricants are allowed.
 - b. ALL lubricants cannot leak or foul the track. ALL excess MUST be removed.
 - c. All lubricants must be dry at the time of inspection/racing.
 - d. Lubricants may not be applied to the exterior of the wheels.

Race Day Rules

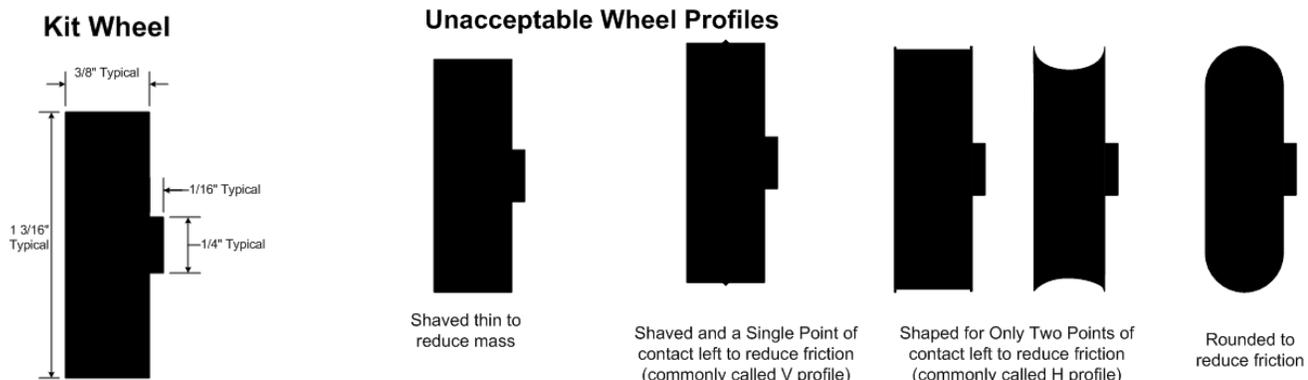
Track officials are responsible for the proper conduct of the races. Decisions of track officials on questions of rules interpretations and procedure may be appealed to the Derby Chairman. Decisions of track officials on questions of fact may not be appealed beyond the Track Official. Scouts AND PARENTS should also be familiar with these rules.

- A) Inspection Gages** - All inspections will be conducted by one team at a special inspection area using scales and gages approved by the Derby Chairman.

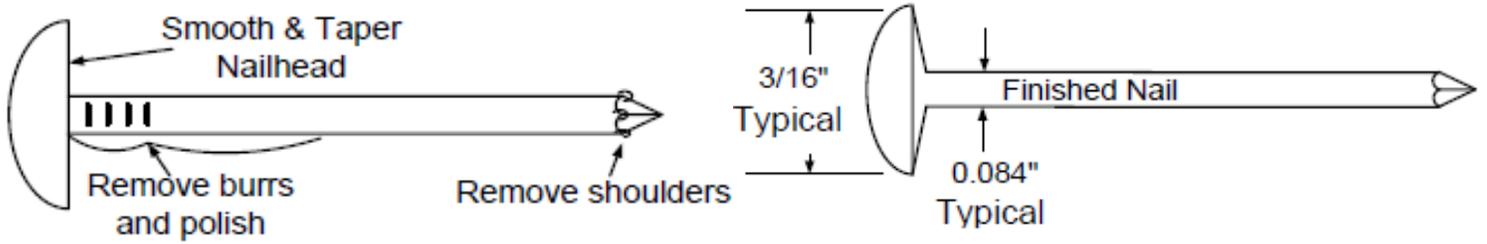
- B) Impounding** - Once the car has passed inspection and received its number sticker, the inspection team will place his car on the table provided. No further handling of the car by anyone other than the race officials, lubrication, or improvements to that car will be allowed.
- C) Car Handling Responsibility** - A track official shall be responsible to stage the cars at the starting line, to retrieve the cars at the finish line (after the race has been called) and return the cars to the pit after their heat is finished.
- D) Lane Assignment** - Lane assignment for each heat shall be determined by computer.
- E) Car Repair** - If, during the race, a wheel falls off or the car becomes otherwise damaged, then the SCOUT may to the best of his ability perform repairs. Any weights or cosmetic accessories that fall off are not considered damage to a car. The SCOUT may seek advice for repairing the car, but may receive no other assistance. If a car is damaged due to track fault or due to fault of another car or SCOUT, then the Track Official, at his sole discretion, may allow additional repair assistance.
- F) Car Interference** - If, during a race heat, a car leaves its lane and, in so doing, interferes with another racer, then that heat will be re-run. If, during the re-run heat, the same car leaves its lane and, in so doing, interferes with another racer, then the heat will be re-run without the interfering car, and the interfering car will be given a time of 5.00 seconds.
- G) Car Leaves Lane** - If, during a race heat, a car leaves its lane but proceeds down the track in a manner that does not interfere with its opponent, then the race will be called normally.
- H) Car Leaves Track** - If, during a race heat, a car leaves the track without interfering with its opponent, it shall be considered to have ended its heat at that point and the car will be given a time of 5.00 seconds.
- I) Track Fault** - If a car leaves its lane, at his sole discretion, the Track Official may inspect the track and, if a track fault is found which probably caused the initial violation, the Track Official may order the race heat to be re-run after the track is repaired.
- J) Not Finishing** - If, during a race heat, a car does not reach the finish line on the track, a time of 5.00 seconds will be given to that car.
- K) Call to Race** - Competitors will be called to race by a racing official. Scouts are strongly encouraged to be present to watch their car race.
- L) Appeals** - The Cub Scout or racer must make all questions of rules interpretations, procedure and fact to the track officials promptly.
- M) Opponent Assignment** - Scouts will be grouped with opponents decided by the computer. The race is based on cumulative time. The computer will attempt to provide the best variety of opponents in an effort to race against as many opponents as possible.

Pictures and Notes

Wheels must be Official BSA. You may not modify the size, shape, dimensions, or weight of the wheels in any way. Original "tread marks" must remain intact and clearly visible. You may polish the wheel and the inside bore. Polishing the wheel correctly will increase the speed of the car. See Car Specs and Rules Section D for more information.



Axle imperfections can be removed and axles may be polished. Removing burrs and polishing the axle correctly will increase the speed of the car. See Car Specs and Rules Section E for more information.



Minimum and Maximum Car Specifications

See Car Specs and Rules for more information.

