

# 2018 Pinewood Derby Rules

Sewell-Eagle District

## 1. Eligibility to Race

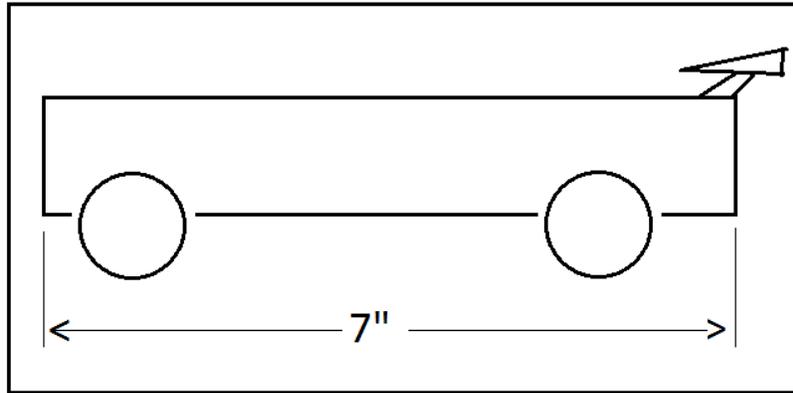
- 1.1 In order to compete in either a Pack or District race, the participant must satisfy one of the two following membership requirements.
  - Registered as a Cub Scout at some point since January 1, 2018
  - 5<sup>th</sup> Grade Cub Scout who bridged to Boy Scouts since September 1, 2017
- 1.2 The car must be built for the current Pinewood Derby Racing Season. **NO REPEATS or REPAINTS.**
- 1.3 A completed car purchased from a third party is not allowed.
- 1.4 The car may not be sent to a third party for tuning or other performance enhancements.
- 1.5 **The Scout and the car advance together.** This means that a Scout has must race the same car at the District race that he won with at the Pack level. He may opt to re-tune the car (axels, wheels, graphite, weight placement, etc.) but he may not recondition, modify, or replace the main chassis of the car.

## 2. General Race Rules

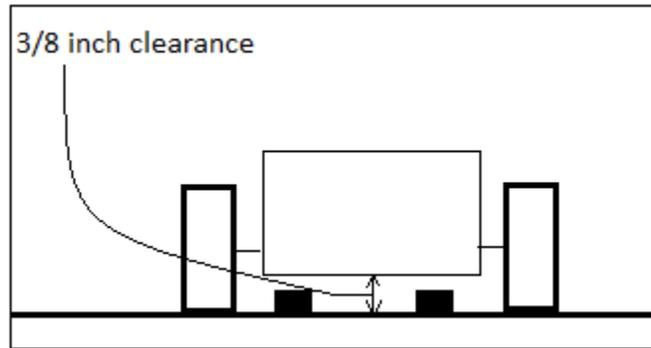
- 2.1 Good sportsmanship and behavior is expected. Race officials may ask anyone not following this, or any other, rule to leave.
- 2.2 All decisions by race officials are final with no appeal unless otherwise specified in these rules.

## 3. Car Body

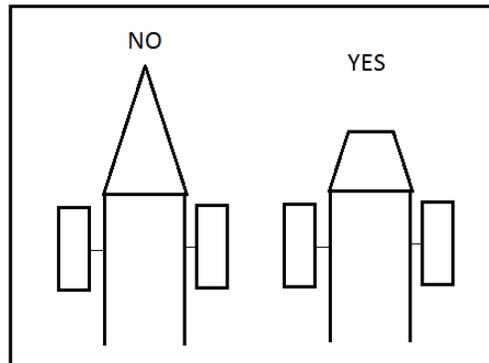
- 3.1 The main body structure (chassis) must be made of a BSA approved Pinewood Derby Kit or other BSA approved wooden block.
- 3.2 The car design may be enhanced by the addition of other stable materials such as plastic or metal. Any additions must be firmly attached and non-moving.
  - 3.2.1 Any additions must be attached or positioned in such a way so as not to exceed car size specifications.
- 3.3 Width shall not exceed 2.75 inches including wheels
- 3.4 Main body length shall not exceed 7.00 inches. Accessories may extend the length **in the rear only.**



- 3.5 Weight shall not exceed 5.0 ounces on a scale accurate to 1/10 ounce. For scales that have more than a single digit beyond the decimal point, the maximum allowed weight is 5.0500000 ounces
- 3.6 Height of completed car including accessories (if any) shall not exceed 3.0 inches.
- 3.7 Clearance: The bottom of the car (including any under-mounted weights or accessories) must be suspended by the wheels a minimum of 3/8 inch above the track/wheel contact point.



- 3.8 The front edge of the car must be at least 1/2 inch wide at the center of the car.

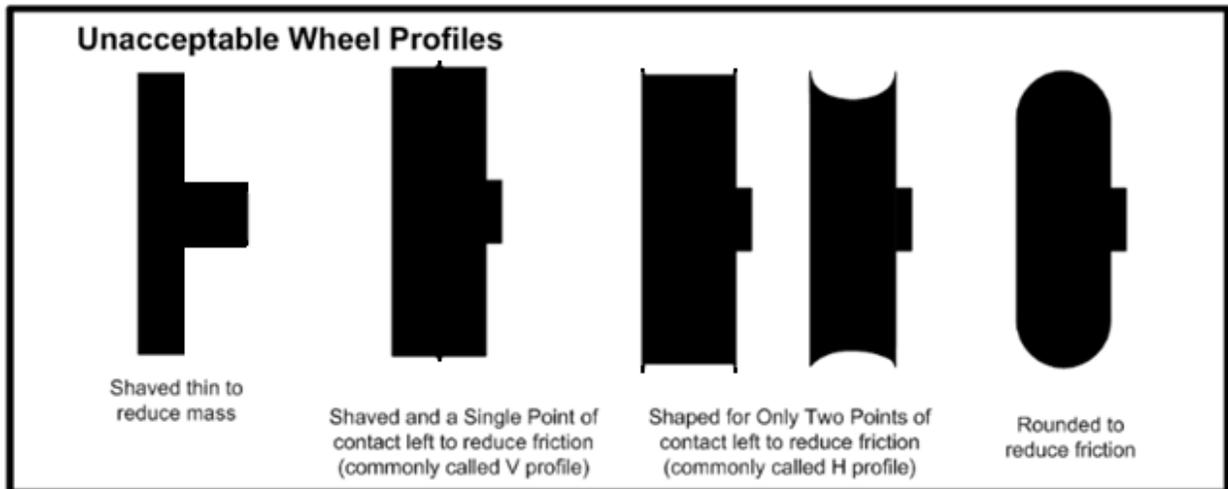
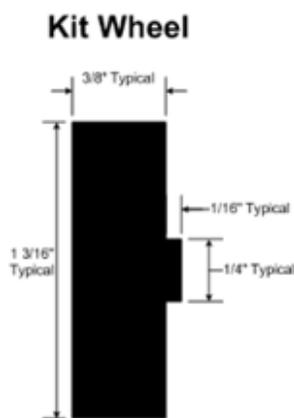


- 3.9 No portion of the car may extend past the rear edge of the starting pin when placed in the starting position.
- 3.10 The wheels are the only part of the car allowed to touch the track.

#### 4. Wheels

- 4.1 Only plastic BSA approved wheels may be used.
- 4.2. All lettering and numbering, both inside and outside of the wheel, must remain complete and be visible with the wheel on the car.
- 4.3 The fluting (small bumps on the outside edge of the tread), spokes, and other markings on the outside wheel area must remain visible.

It is typical for the fluting to become diminished during wheel preparation/polishing. Such a reduction shall be permitted provided the fluting is not fully removed around any portion of the wheel.



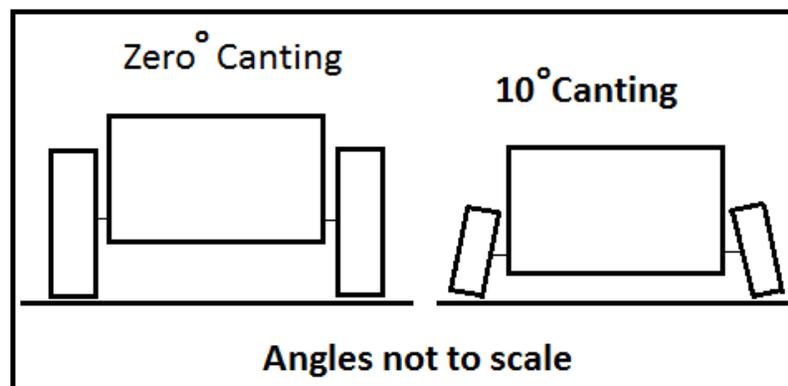
- 4.4 The wheel diameter must be no less than 1.16 inches (29mm).
- 4.5 The tread surface width must be no less than 7.5 mm.
- 4.6 The tread surface must be flat and parallel to the wheel bore. Therefore, the following modifications are prohibited:
  - A) Rounding off the tread surface.
  - B) Grooving, H cutting, or V cutting the tread surface

- 4.7 The following wheel modifications are prohibited:
- A) Removing material from the inside tread surface or the inside sidewall surface
  - B) Drilling holes in the sidewalls or tread area
  - C) Filling wheel tread with any type of material
  - D) Filling the wheel bores and re-drilling the bore
  - E) Air Damming (Filling or capping the inside of the wheel with any material)

**STOP!** Some online vendors sell aftermarket BSA wheels that have been lightened by removing material from inside the wheel surfaces. Per Rule 4.7, these wheels are **NOT** allowed and are easily recognized at inspection. Cars with these wheels will **NOT** be permitted to race. If you plan to use aftermarket wheels, confirm with the vendor that no weight is removed from the inside of the wheel.

## 5 Wheel Mounting

- 5.1 Wheelbase (the distance from the front axel to the rear axel) shall be no less than 4 3/8 inches.
- 5.2 Distance between inner wheel edges must be a minimum of 1.75 inches
- 5.3 At least 4 wheels must be attached to the **SIDES** of the car body. **Each wheel must be attached to the car's wood chassis with a legal axle.**
- 5.4 The front most and rear most wheels must be positioned across the body from one another.
- 5.5 No bearings and/or bushings are permitted.
- 5.6 Wheel Canting: Each wheel must **not** be angled more than 10° from vertical



## 6 Axels

- 6.1 Only BSA approved metal axels with a nail head are permitted. No 3rd party or aftermarket axels are allowed. (NOTE: 3<sup>rd</sup> party axels are easily identified with a magnet.)
- 6.2 One-piece axels that extend through the width of the car to support both wheels are not allowed.

## 7     **Weights**

- 7.1     Lead weights are allowed but, as a known toxic substance, it should be completely sealed, or painted over, to minimize contact with scouts. NO drilling or filing of lead is allowed at the race or check-in venue.

Given these issues, we strongly encourage you to use another material for weight. Common alternatives include zinc and tungsten. For more information, please visit <http://www.cpsc.gov/CPSCPUB/PREREL/prhtml09/09120.html>

- 7.2     Interior wheel weights are allowed as long as they allow for inspection of the interior of the wheels.
- 7.3     Undervehicle stick on weights are allowed. However, make sure that when applying them that your car remains compliant with Rule 3.7.

## 8     **Lubrication**

- 8.1     Over application of lubricant which results in dripping, marking, excessive shedding, or otherwise depositing onto the track is not allowed.

## 9     **RACE DAY!**

- 9.1     All cars must pass inspection prior to being allowed to compete.
- 9.2     Any decision regarding a car failing inspection may be appealed to the Race Director whose decision shall be final.
- 9.3     Once a car has passed inspection, only race officials may handle the cars until such time as a car's races are complete. (See exception in Rule 9.5)
- 9.4     The interior of the wheels must be able to be visually inspected. **Should the inspector not be able to verify that the wheels have not been lightened due to the presence of interior wheel weights, fenders, or for any other reason; the inspector may ask that YOU remove the wheels for inspection.**
- 9.5     In some circumstances, race officials may permit a car to be serviced by the scout with the assistance of his parent. Any car permitted such service **MUST** pass a re-inspection prior to being allowed to resume competition.

Reasons a car may be serviced mid-event include:

- A)     Car comes off of the track **AND SHOWS VISIBLE SIGNS OF DAMAGE**
  - B)     Car involved in a crash that it was not the cause of **AND SHOWS VISIBLE SIGNS OF DAMAGE**
  - C)     Car dropped by a race official
- 9.51     The race officials will not assist with the repair of a damaged car.

- 9.6 If a car either leaves the track or causes a crash that race will be re-run. If the **same** car either leaves the track again or causes a second crash, that car will be pulled from the race and the race re-run with an empty lane. The pulled car will be assigned a time of 10 seconds for that missed race.
- 9.7 If during the course of a race day, a car exits the track three times or causes three crashes, that car is disqualified from the remainder of the event. Race officials shall keep notes during the races as to crashes caused.
- 9.8 If a particular race results in a tie for any position, the tying cars will race by themselves to determine who earns the lower position finish as to those vehicles.

Example: Cars A B C D E F race and the order is A, B and C tie, D E F

A second race is run just between B and C. The result is that C beats B.

The final order of completion will be A C B D E F. It matters not if either B or C ran a faster or slower time during the second race than cars A D E F did in the first run.

- 9.9 In the event of a timer malfunction, the race shall be re-run once. If the timer malfunctions again, the race will be run a third time with the winner decided by viewing either a video or photo finish if available. If either video or photo is not available, then the winner will be determined by a race official watching the ending while positioned over the finish line. His decision is final.
- 9.10 Any rule in this section may be altered as needed by race officials provided that the changes are posted in writing at the entrance to the race forum.

## **10 General Prohibitions**

- 10.1 NO...  
Springs, starting devices, propellants, electronic or lighting devices, powders or liquids (other than axle lubrication), wet paint, oil, sticky substances, glass or excessively fragile parts, bearings and/or bushings, hubcaps covering the nail head, loose/moving objects on or in the car, air dams, or other wheel fillings.