

# Pack 505 2023 Pinewood Derby Official Rules & Format

## 1. Location, Dates, and Times:

All events will take place at Palmetto Presbyterian Church

Friday, February 24th, Car Check-in

4:30-6:30 PM Registration and Inspection

6:30-6:45 PM Scout Judging

6:45-7:00 PM Car Design Judging

Saturday, February 25th Pinewood Derby

10:00-10:50 Lions, Tigers

11:00-11:50 Wolves, Bears

12:00-12:50 Webelos & AOL

1:00-1:50 Grand Finals

1:50-2:30 Clean Up

## 2. General Rules

The car should be substantially built by the Scout. Parental supervision is important for safety, but the Pinewood Derby is **for the Scouts**.

The car must be newly built for the current Pinewood Derby Racing Season. Previously built Pinewood Derby cars are not acceptable. NO REPEATS or REPAINTS.

A completed car purchased from a third party seller is not allowed.

\* If you lack the tools or resources to cut out a car from a stock block of wood, then you are encouraged to attend a build workshop hosted by the pack for assistance.

Cars may be raced only by the qualifying Cub Scout, who must be officially registered at Council as being a member in good standing of Pack 505, based on the official recharter roster.

Scouts are expected to attend in full uniform, and must be present to race.

Registration of all cars will be at the location and time specified above. Once the cars have passed inspection, race officials will maintain possession until the car has completed its Pinewood Derby racing.

Car paint and glue must be dry at check in.

### 3. CAR

All cars must be made from the official BSA Pinewood Derby car kit.

The motion of the car may not be mechanically aided (motor, springs, rubber bands, CO2 cartridges, etc. are prohibited). Any additions to the car body must be firmly attached, non-moving, and meet car size specifications. Please avoid using loose glitter.

#### 3.1. Dimensions

**Width:** not to exceed 2.75 inches

**Length:** not to exceed 7 inches

**Height:** not to exceed 5 inches

**Clearance:** The wheels are the only part of the car allowed to touch the track. **It is recommended that weights are not added to the bottom of the car unless they are submerged into the car body as they will interfere with the track.** The dimension between the car body bottom and the track is 3/8 inch.

**Center rail width:** Wheels must clear center guide rails, no less than 1.75 inches.

#### 3.2. Weight

**Weight:** not to exceed 5.0 ounces but no less than 3 ounces.

#### 3.3. Axles

The car axles must be from the official B.S.A. Pinewood Derby Kit.

Axles must be firmly attached to the car, but inspectors must be able to verify that the axles are not solid, therefore, do not use opaque glue, wood filler, or paint.

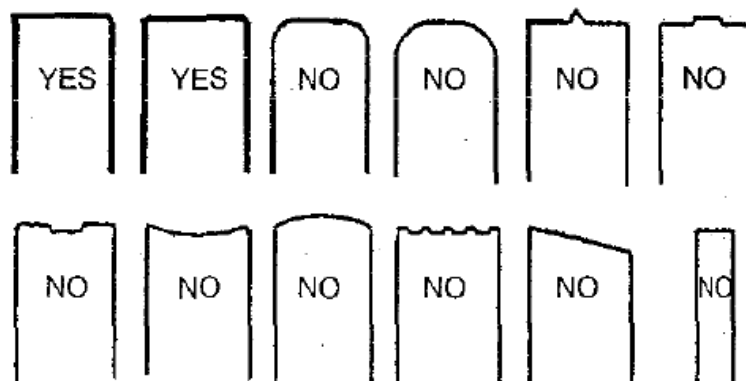
The axle grooves provided on the official wood block must be used; **extending the wheel base is not permitted.**

#### 3.4. Wheels

The car wheels must be from an official B.S.A. Pinewood Derby Kit. B.S.A Scout Pinewood Derby Car colored wheels are permitted.

Minor wheel sanding is permitted to remove burrs and mold projection defects. Grooves (H or V-style) ground into the wheels are not permitted. See image below for additional examples of wheels that will and won't pass inspection.

**Wheel Profile Illustration:**



The decorative dots on the wheel treads may not be removed.

The official wheel width is 0.34 inches.

Wheel bearings, brushings washers, spacers and springs are not permitted.

The car shall have at least four wheels and axles attached to the sides of the car body. Each wheel must be attached to the car with a legal axle.

### 3.5. Lubrication

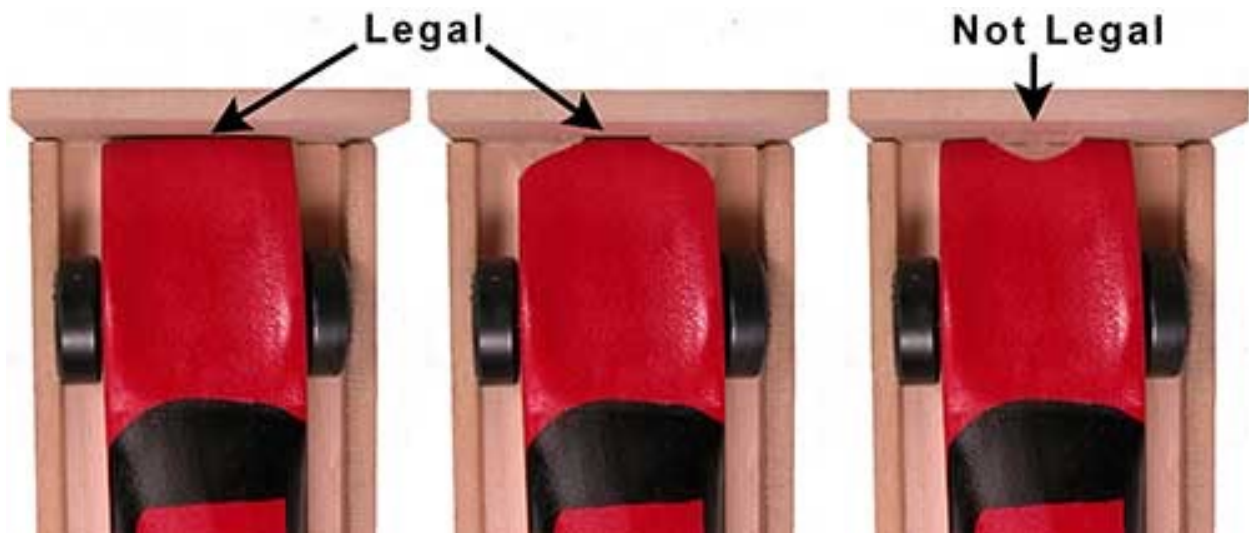
Only graphite powder may be used to lubricate wheels. No further lubrication of the wheels will be allowed after the car has been checked in.

### 3.6. Fair Start

The front of the car must have a minimum 1/2 inch wide section, flat and centered on the front so that the car may rest on the starting pin properly. "V" fronts are not permitted.

No part of the car shall extend over the top of or in front of the starting pin on the racetrack.

See the image below as an example of a car built to have such an advantage at the start.



## 4. CAR DESIGN AWARD CATEGORIES

### 4.1. Awards

One award will be awarded for each of the following car design categories:

1. Best Non-Car (things like pencils and spaceships)
2. Best Sports Theme
3. Best use of Legos
4. Best Video Game Theme
5. Best Car with a Driver
6. Best Scout Theme
7. Most Patriotic
8. Funniest
9. Most Creative use of Weight
10. Best use of Stickers or Decals
11. Best Accessories (Fenders, Spoilers, etc.)
12. Strangest Shape
13. Best Wedge
14. Best Paint Job
15. Most Artistic
16. Best Use of Color
17. Shiniest Car
18. Best Detail
19. Judges' Choice
20. Scouts Choice - VOTED FOR ONLY BY SCOUTS

### 4.2. Judging

Judging is "Open"- Any Pack 505 adult can participate. Judging will begin at time specified above.

Scouts Choice - All scouts that are present at the end of check-in will be allowed to vote in the Scouts Choice award.

### 4.3. Judge Selection

Each judge will be able to select one car for each of the categories. **A judge cannot select the same car for more than one category.** A judge may vote for their child's car if they believe it is best in a given category. Each judge can fill out only one ballot, regardless of the number of children in the Pack. Ballots will be entered via an online voting system, requiring a smartphone.

### 4.4. Tally

Ballots will be tallied automatically via electronic app. Ties will be broken by a coin flip.

## 5. RACE FORMAT

### 5.1.1. Preliminary Rounds

First, second and third place in each **rank** will move on to the Grand Finals.

The racing software will generate a racing schedule, mixing up the racers and lanes used each time. During the preliminary rounds, each car will race in four heats.

### 5.1.2. Grand Finals

The Grand Finals will be conducted using the same format as used for preliminary rounds. Trophies will be awarded for 1st , 2nd and 3rd place.

### 5.1.3. Ranking Results

Overall ranking results (1st place, 2nd place, etc) will be determined using the cumulative time of each car's three fastest heats. The slowest heat for each car will be thrown out (won't count).

### 5.1.4. Trophies

Trophies will be awarded for 1st , 2nd and 3rd place in each rank.

### 5.1.5. Tie

In the event of a tie cumulative score in the top four finishers in the preliminary rounds or in the Grand Finals, a tie-breaker round will be conducted. Only those cars that actually tied will participate.

## 5.2. Do-Overs

If one or more cars in a heat do not finish, but no car interferes with another car the track will be inspected by the judges. If a track defect is identified, the heat will be declared invalid and will be repeated after track repairs. If no track defects are identified, the heat will be declared valid and results recorded. The car(s) that did not finish will be inspected for worthiness to continue. If mechanical defects are identified, the official race mechanic will have 5 minutes to fix the car, and then racing must continue whether or not the car can be repaired. The car repair is intended to restore it to its condition at the time it was inspected.

If judges determine that one or more cars interfered with one or more other cars the track will be inspected by the judges. If a track defect is identified, the heat will be declared invalid and will be repeated after track repairs. If no track defects are identified, the heat will be declared invalid and will be repeated. The car(s) that did not finish will be inspected for worthiness to continue. If mechanical defects are identified, the official race mechanic will have 5 minutes to fix each car, and then racing must continue whether or not the cars can be repaired. The car repair is intended to restore it to its condition at the time it was inspected.

If an error is made by the starting official, the judges may declare the heat invalid and it will be repeated.

If a timer system fault is detected, the heat will be declared invalid and repeated. Previously completed heats will be reviewed to determine if they were affected by the timer system fault. Any heats determined to have been run with the timer system fault will be declared invalid and will be repeated.