

2018 Pacifica District Pinewood Derby Entry Rules

Below you will find the rules, specifications, and basic information on how the race is run. You will receive more detailed information and building instructions inside each model car kit.

1. Only registered Cub Scouts who are active in their unit may participate in the official race. The scout must be present to race.
2. Each Pack may enter one participant in each of the following categories: Lion, Tiger, Wolf, Bear, Webelos, Arrow of Light & OPEN Adult & OPEN Youth. Each Cubmaster, or his designee, must submit a written list of his pack's participant prior to race day.
3. The OPEN Youth class is for siblings and other youth who want to participate but mainly it is to allow for scouts whose cars do not meet the rules for some reason. This will allow them to compete still even though their car may not quite meet the rules. Cars that do not meet the standard rules will be allowed to race and will not be excluded from standings.
4. The OPEN adult class is open to any adult racer associated with a unit in the district. OPEN class rules for the adult class are not flexible for competition – these cars must meet the same rules as the scout cars. Cars that do not meet specifications will be allowed to race but excluded from standings.
5. The list of Racers should be e-mailed to pacificapinewoodderby@gmail.com by April 14th, 2018
Walk-ons will be accepted but will be charged a 'day of the race' fee.
6. The Registration List should consist of the winners of that Pack's own earlier-held Pinewood Derby; the cars entered should be the very same cars with which the racers that won their titles. There shall be no modifications, outside of repairs, and those absolutely necessary to bring the car into compliance with these rules.
7. After the car is registered, the race officials will maintain possession of the cars until the race.
8. Before the race begins, the race officials will have all the cars placed on tables by rank and/or den. No one may touch the cars until they are called to race.
9. If a race car breaks during the race, repairs only may be made, under race official supervision.
NO MODIFICATIONS OR LUBRICATION MAY BE APPLIED AFTER REGISTRATION.
10. The scouts will race by rank (Tigers will race Tigers, Wolves will race Wolves, etc.).
11. Scouts must be present and **wearing their most complete field uniform** to race their cars.
12. Scouts will be called forward by rank to race in groups of 4, racing groups are randomized but each racer will have an opportunity to race on each lane in use on the track.

13. The car with the fastest time will be declared the first-place winner for his rank.
14. If any car leaves the track during the race a “no contest” will be declared and the race will be rerun. If the same car leaves the track on the rerun that car will “take a loss” for that heat.
15. If any car is damaged during a race, that heat will be rerun five minutes later. The Cub and his parent or guardian may repair the car during this **five minute period** with a race steward looking on. No spare parts may be used, and no additional lubricant will be allowed. (Bring Super Glue and a Repair Kit!) The race steward may require that such car be re-inspected and measured before racing. If a car is not ready after the **five-minute period**, it will “take a loss” for that heat. No Official may assist in the repairs in any way.
16. When a car is called to race, a race steward will hand the car to the Cub for placement on the track. Each Cub will hand his car to the track technician. **ANY INTERFERENCE OR TOUCHING BY THE PARENT OR GUARDIAN WILL DISQUALIFY THE CAR FROM ALL FURTHER RACING!**
17. Winners at each level, as well as overall winners will be determined in a fair manner consistent with the values of scouting.
18. A final “race off” among the winners from each rank will be held to determine the overall District champion. The rank winners will race at least 3 times on different lanes and the fastest time will determine overall District Champion.
19. Ties are rare but do happen occasionally, due to their rarity ties will simply be ties. There is no need or requirement for a race off. If another trophy needs to be awarded – then we will procure another trophy and present the trophies at the next District Round Table.
20. Parents are responsible for monitoring themselves as well as their children during the race.
21. Cars not meeting the prescribed specifications either in the main category or open class at the close of check-in **WILL NOT RACE.**
22. All of those present on race day will be expected to behave in a Scout-like manner. Parents and leaders are responsible to ensure that unsportsmanlike conduct and unruly behavior does not occur. Also, any unruly behavior by Adults, Parents, Guardians, or any other representative of the Pack, can disqualify a Scout to race. It is our responsibility to provide a great example for our Scouts and demonstrate good sportsmanship and camaraderie.

The District Leadership reserves the right to change the procedures and rules as necessary, and District Leadership has the final decision-making authority on all issues.

2018 – Pacifica District Pinewood Derby Car Rules

1. **ONLY** materials from the standard Boy Scouts of America “Official Grand Prix Pinewood Derby” kit are to be used.

*****NOTE: Aftermarket non-official kits with solid axles + hubcaps & non-official wheels (sold at Michaels, etc) will not be allowed to compete.**

2. Axles and wheels must be those provided in the “Official Grand Prix Pinewood Derby” kit. No aftermarket or non-official “race” wheels will be allowed. See the Diagram on the last page which details illegal vs legal wheel & axle preparations. Please do not purchase wheels from anywhere for your car. If there is something wrong with the wheels or axles provided in your kit, replacement wheels can be obtained through your Pack or failing that contact pacificapinewoodderby@gmail.com. This is to ensure a fair race, if there is a question about a car’s axles – inspection staff may require a randomly chosen wheel to be removed for further inspection.

3. **Wheel tread must not be altered or reduced. Burrs may be removed and lightly sanded only. No other alterations are allowed. Wheels and/or hubs may not be altered, sanded or ground to a sharp edge. They may not be hollowed, tapered or drilled out.** No loose materials of any kind are allowed in the car construction. The pinewood of the car may be hollowed and weights can be added to the allowable overall car weight limit provided they are secured and immobile. It is **highly** recommended to not place weights on the bottom of the car as they may interfere with the cars transition from the downhill to the straightaway on the track.

4. **All four car wheels must touch the track at the same time, and support the vehicle. Axles must be installed straight so that as much of the flat section of the wheel is in contact with the track as possible. Angled wheels are not allowed. Freewheeling wheels are not allowed. While we understand it is challenging to get this right and we not looking for perfection – wheels that have no resistance when at least three are touching flat on the track will need to be fixed before they can be checked in.**

5. The wheelbase of the car (defined as the dimension from the centerline of the rear axle to the centerline of the front axle) must be between 4.25” and 4.5”

6. **Dry lubricants – Specifically graphite - are the only lubricants that are allowed.** This is mainly to protect the track from caustic chemicals which may damage it.

7. No wheel bearings, washers, bushings, hubcaps or wet lubricants are permitted. The car shall not ride on springs. All car wheels will be test-spun by the inspectors and any excess lubricant must be removed.

8. Cars must be free-wheeling with no starting or propulsion devices of any kind allowed. Cars will start by gravity from a standstill position. No cars containing magnets or magnetized parts will be allowed to race. The entire car’s structure must be behind the starting line when resting on the starting dowel. **Inverted V bumpers and other designs that allow part of the car to extend beyond the starting point will be disqualified.**

9. Details, such as steering wheel and driver are permissible as long as these details do not exceed the maximum length, width, height and weight specifications, and are securely attached to the car.

10. Each car must pass inspection by the official inspection committee before it may compete.
11. If the car fails the inspection, time will be given to make the necessary adjustments.
12. The official inspection committee's scale and measurements are final.
13. The District Race Coordinators shall resolve any issues not covered by these rules.

14. Car Specifications:

A. Maximum Weight: 5.0 ounces

B. Maximum Width (including wheels): 2.75"

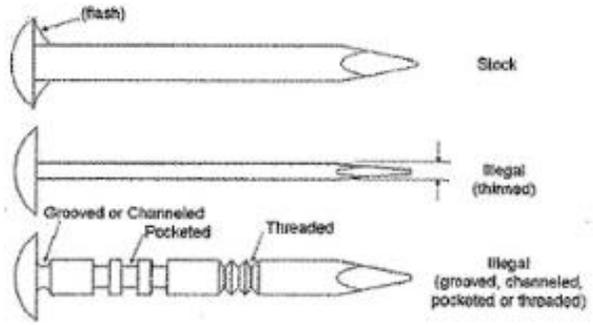
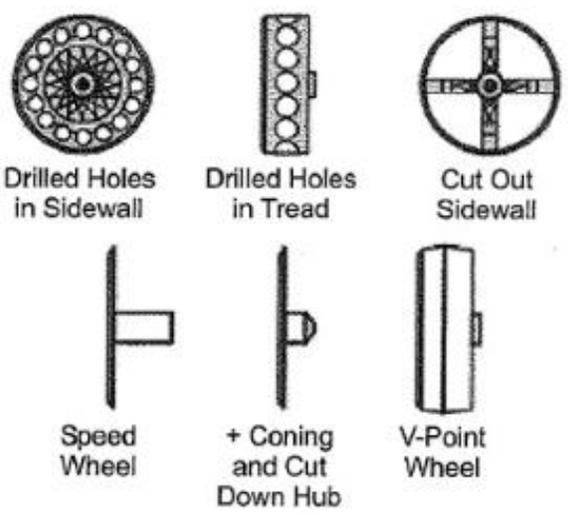
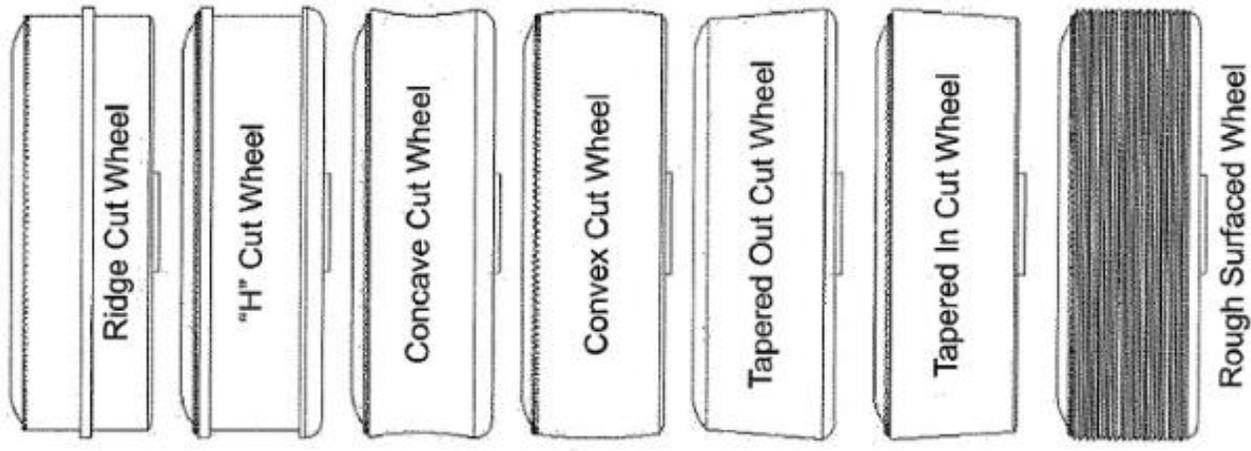
C. Maximum Length: 7.00"

D. Maximum Height: 3.00" (track surface to top of car); This is mainly to make sure the car does not impact the top of the laser gate timer at the end of the track. This rule is mildly flexible so long as the car can clear the laser gate.

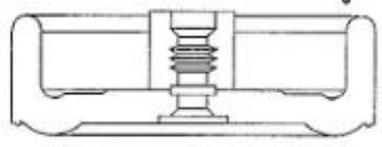
E. Minimum Clearance: 0.375" (bottom of the car to the bottom of the wheels)

Please note that the track has a center guide rail that sits between the right and left wheels under the car so if making the car narrower be careful in moving the right and left wheels too much closer together has a risk that it won't fit on the track.

F. Cars must be able to sit against the starting gate in a way that does not provide them with a starting advantage. Cars that have overly angled front designs or designs that promote them leaving the gate earlier than the other cars on the track are prohibited. Please see the graphic in Appendix 1, the District Race Coordinators have final say in regards to questionable designs.



NO MATERIAL MAY BE REMOVED FROM THE INSIDE OF THE WHEELS.

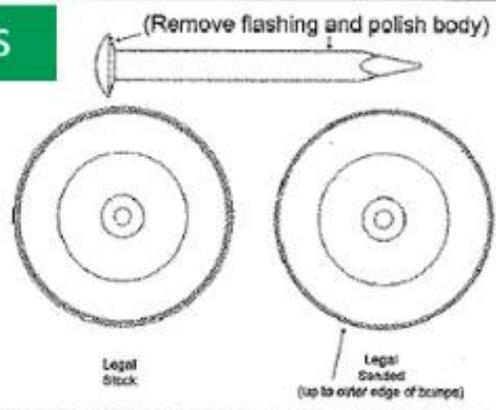
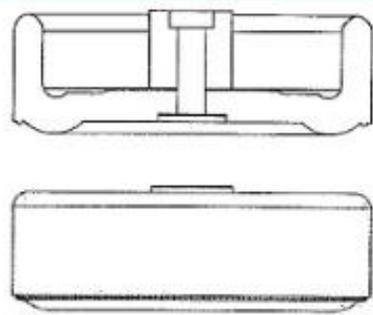


ILLEGAL AXLE CHANNELING

Do not over think this process. Lightly sand the wheel to remove the injection spot and retain the beading pattern around the outer edge of the wheel. This race is for the Boys! (KISMIF) Keep It Simple Make It Fun.

Illegal wheel and axle diagrams

Legal wheel and axle diagrams

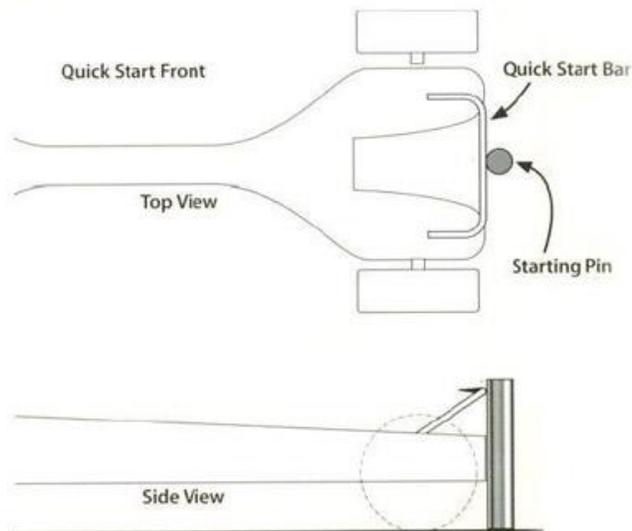


Quick Start Fronts (QSF) on Pinewood Derby Cars are prohibited.

QSF Defined:

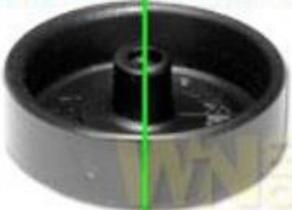
Usually a notch or channel cut on the front, forward facing edge of a racing car intended to release the car earlier when the Starting Pin drops at the start of a race; more often than not, incorporating a Quick Start Bar positioned above the channel which rests against the Starting Pin at the start of the race. This will not be reconsidered as a "Decoration."

Prohibited Construction:



Appendix 2

The BSA has finally retired the old 1999 wheel molds and released the **NEW 2009 WHEEL MOLDS** for the Official Pinewood Derby wheels. It seems they took the opportunity to make some major changes to the wheel design. Let's look at a few of the new 2009 mold features for comparison to the 1999 mold features.

<i>1999 Wheel Mold</i>	1999 2009	<i>2009 Wheel Mold</i>
Wheel Weight: 3.6g		Wheel Weight: 2.6g
Mold Sprue Mark: (1mark) Outer Tread Surface		Mold Sprue Mark: 3 marks) Inner Rim Face
Hub Face: Flat		Hub Face: Coned
Bore Diameter: .093" - .098"		Bore Diameter: .094" - .098"
Rotational Inertia: 5.16g/cm ²		Rotational Inertia: 3.66g/cm ²
Wheel Diameter: 1.187" - 1.192"		Wheel Diameter: 1.184" - 1.187"
Outer Hub Face: Single Step Recess		Outer Hub Face: Double Step Recess