

# **Conejo Valley District 2014 PINEWOOD DERBY**



***CUB SCOUTS, START YOUR ENGINES!!!***

**Saturday, May 3, 2014**

at the

**Janss Marketplace**

## 2014 Conejo Valley District

### PACK CHAMPIONS' PINWOOD DERBY

#### HISTORY AND SPIRIT

Don Murphy, Cubmaster of Pack 280C, Manhattan Beach, California, conceived the Pinewood Derby over 50-years ago. The idea was to provide Cub Scouts an alternative to the Akron, Ohio “All-American Soapbox Derby” in which Cub Scouts were not old enough to race. Mr. Murphy envisioned a father and son becoming closer while working with their hands and wood to build a racer for which they both could take pride. While the competition is inherently a part of the Pinewood Derby, a boy should come to the race already feeling that he is a winner by reason of his car’s construction in collaboration with his parent. The race results should not get in the way of this sense of accomplishment.

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The following rules may be updated by the official rules on the District website. The rules posted are controlling. CAREFUL READING IS IMPORTANT TO AVOID RACE DAY DISAPPOINTMENTS.

## PINWOOD CAR CONSTRUCTION RULES

1. All cars must have been constructed to race for the current Cub Scout Program year.
2. The materials from the standard Boy Scouts of America (BSA) “Official Grand Prix Pinewood Derby” kit are to be used with one exception: A car may be made with the “NEW” BSA Pinewood Derby wheels or BSA approved Colored wheels if they are not included in the kit that was purchased. See Appendix 2.
3. Car Specifications. Added parts must fit within the specified dimensions. Cars found to be out of specification before racing starts, may at the option of the Race Stewards be registered for the Open (Unlimited) Class Division.

Maximum Weight	5 Ounces (a 5-ounce car is generally faster than a 3-ounce car)
Maximum Width	2.75” (including wheels)
Maximum Length	7”
Maximum Height	3” (track surface to top of the car)
Maximum Clearance	0.375” (bottom of the car to the bottom of the wheels)

4. Axles and wheels must be those provided in the BSA “Official Grand Prix Pinewood Derby” kit. Axles may have the flashing removed the head and the shaft can be sanded smooth and polished but not thinned. No altered axles or grooving or reshaping of the axle allowed. No aftermarket axles are allowed. No car may ride on any type of spring. BSA approved colored wheels are allowed. (refer to the Legal / Illegal Wheel & Axle Diagrams)
5. All four car wheels must touch the track and support the vehicle.
6. The wheelbase of the car (defined as the dimension from the centerline of the rear axle to the centerline of the front axle) will be between 4.25” and 4.5”. Axles will be inserted in SLOTTED axle wells and NOT DRILLED holes.
7. Dry lubricants, like graphite, are the only lubricants that are allowed. No wheel bearings, washers, bushings, hubcaps or wet lubricants permitted. All car wheels will be test-spun by the inspectors at check-in before the racing and any excess lubricant must be removed. No car may race with wet paint.
8. Wheel tread must not be altered. Burrs may be removed and lightly sanded level. No other alterations are allowed. Wheels may not be sanded or ground to a sharp edge. They may not be hollowed, tapered or drilled out.
9. No loose materials of any kind are allowed in the car construction. They may not be hollowed, tapered or drilled out.
10. 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. See Appendix 1.
11. After the race is finished, ALL OF THE WINNING CARS WILL HAVE AT LEAST ONE WHEEL AND AXLE REMOVED AT THE RACE STEWARDS’ CHOICE TO VERIFY NO ILLEGAL MODIFICATION OR PARTS. If found in violation, the car will be disqualified and the next car will move up. If you are near the top of your race class, please stay until the end, but remember the Scout Law, “A SCOUT IS TRUSTWORTHY”.
12. The Chairman of the Conejo Valley District’s Pack Champions’ Pinewood Derby will resolve any issues not covered by these rules.

Ridge Cut Wheel

"H" Cut Wheel

Concave Cut Wheel

Convex Cut Wheel

Tapered Out Cut Wheel

Tapered In Cut Wheel

Rough Surfaced Wheel

Drilled Holes in Sidewall

Drilled Holes in Tread

Cut Out Sidewall

Speed Wheel

+ Coning and Cut Down Hub

V-Point Wheel

Flash

Stock

Illegal (thinned)

Grooved or Channeled

Pocketed

Threaded

Legal (grooved, channeled, pocketed or threaded)

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

**ILLEGAL AXLE CHANNELING**

Illegal Wheel & Axle Diagrams

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.

### Legal Wheel & Axle Diagrams

(Remove flashing and polish body)

Legal Stock

Legal Sanded (up to outer edge of bumps)

## RULES OF CONDUCT

1. Only Scouts registered with the Conejo Valley District may race. Boys must be present to race.
2. This year's District Pinewood Derby Racing will be held at: Janss Marketplace on Saturday, May 3rd, 2014.
3. Each Pack may enter participants in each of the following categories: Tiger, Wolf, Bear, Webelos I and Webelos II. There will be an Open Division and/or "Parent's Race" will also be featured depending on number of Cub Scout registrants. Each Cubmaster or their designee must submit a written list of the Pack's participants to Pinewood Derby, ([kkeybold@gmail.com](mailto:kkeybold@gmail.com)). **This list must be received by the Pinewood Derby Committee no later than (April 19, 2014) to register Pack participants.**
4. Race Admission: No Charge for 2014
5. The Cubmaster's List should consist of the Pack's own earlier-held Pinewood Derby, and the cars entered should be the same cars with which the racers won their titles. There should be no modifications, outside of repairs, and changes that are absolutely necessary to bring the car into compliance with these rules.
6. Cubs must register their own car which will be impounded after inspection for the duration of the race event. No additional lubricant will be allowed after impounding.
7. Heats will be rerun in case of a tie.
8. 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.
9. If a car does not finish two consecutive races in a single heat, the car will take a loss for that heat.
10. 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!) 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.
11. When a car is called to race, a race steward will hand the car to the starter and the starter will place the car on the track. After the heat, the cub will return the car to the impound area. Any interference or touching by his parent will disqualify the car from ALL further racing.
12. The scales and other measuring devices used at race check-in supersede any other measurements.
13. Minor adjustments may be made during the check-in if necessary to bring the car into compliance with the rules of the event. The cub may be assisted in these adjustments by his parent or guardian. No Official may assist in any way with such adjustments.
14. Cars not meeting the prescribed specifications at the close of check-in will not race.
15. All of those present on race day must behave in a Scout-like manner—parents included. Parents and leaders are responsible to ensure that unsportsmanlike conduct and unruly behavior does not occur. In a rules dispute, a participant may state their case but should be ready to accept the judgment of the staff. Further heated discussion, outright argument and other un-Scout-like behavior will lead to a disqualification and a ban on further involvement of the family in question.
16. Cub Scouts are expected to wear their full Field Dress Uniform, i.e., "Class A" uniform. No Uniform, No Race.
17. Tracks are on loan from various contributing packs. They may vary in construction materials, number of lanes and design. Fairness will be maintained between racers by each division racing on the same track.
18. No car may race that would harm the tracks raced upon, even in the Open (Unlimited) and Parent's divisions.
19. All racers are expected to take whatever safety precautions necessary to protect themselves during their race (protective clothing, etc).

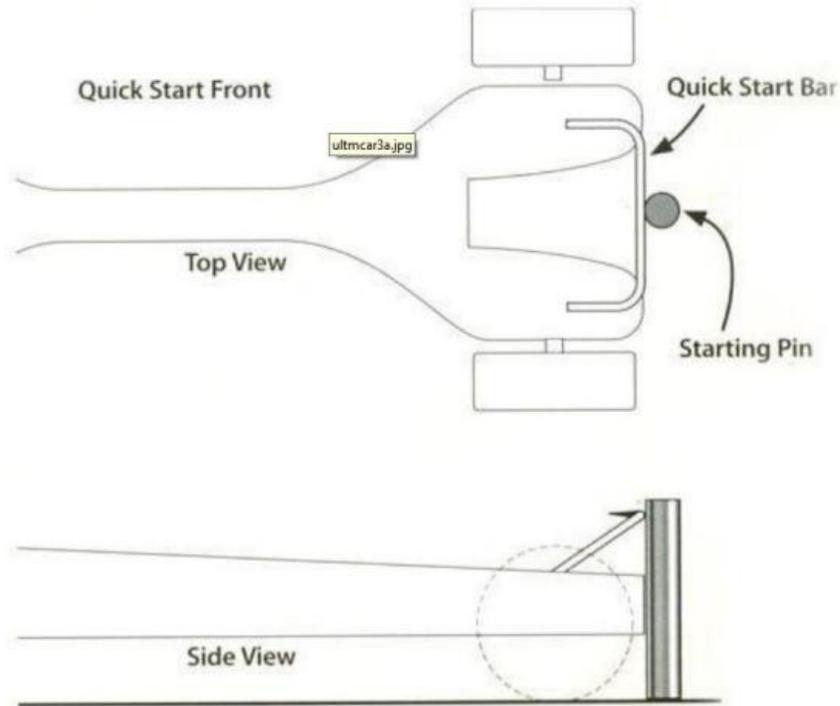
## APPENDIX 1: QUICK START DESIGN RULES

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 the 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: LET'S TALK WHEELS

The BSA has 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.

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