

# Pack 418 Pinewood Derby Rules

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## CHANGE HISTORY

Date	Author	Change Description
1/19/2009	R. Rhodes	Maximum car height requirement incorrectly listed as 4 <sup>3</sup> / <sub>4</sub> ". In order to clear the finish gate on Dan Smith's track, the maximum height for any derby car is 4 <sup>1</sup> / <sub>8</sub> ".

# **Pack 418 Pinewood Derby Rules**

## **Section 1. ENTRY and REGISTRATION**

- 1.1 Each Cub Scout may enter only one car in the Pack's Pinewood Derby Race.
- 1.2 Each entry must pass inspection and be registered with the Official Registration Team before it may compete. The races will not begin until the inspection/registration table has closed.
- 1.3 All cars will be inspected for the items listed in the Car Specifications section. The car's owner will be informed of any noncompliance. Modifications may be made and the car submitted for inspection by returning to the end of the inspection/registration line. Cars cannot be modified after passing inspection. Any repairs to a car once the race has started will be at the discretion of the Race Committee Chairman.
- 1.4 Once a car has passed inspection, it will be immediately registered and impounded. The car owner's name will be recorded and a number will be assigned to the car. A sticker/label with the car's number will be placed in a conspicuous area on the car for easy identification during the race event.
- 1.5 Once registration is complete, the Race Official will move the car to the pit area. Cars will be handled only by the members of the Race Committee in the pit and track areas throughout the event. All owners and spectators must remain outside the pit and track area at all times, except as directed by a Race Official.
- 1.6 Appeals of any Race Committee decisions should be immediately brought to the attention of the Race Committee Chairman who will consult with the appropriate members and render a final decision.

## **Section 2. CAR SPECIFICATIONS**

### **2.1 Construction**

- 2.1.1 The car must have been constructed after September 1st of this Scout year.
- 2.1.2 The car may be constructed of wood, metal, cardboard, and/or plastic, provided that the original wood block is the dominant material used. Liquids and loose materials of any kind, in or on the car are not acceptable.
- 2.1.3 The car must have four wheels and should ride on all four wheels. No three-wheeled designs will be allowed.

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- 2.1.4 You may re-cut the axle grooves. The wheels may not extend past the front of the car.
- 2.1.5 All cars must be built by the scout registering the car. Parent or adult assistance is allowed. (Understandably, the youngest of scouts may not have the skills to do much of the construction. However, the scout should be encouraged to determine the design of the car, at minimum.)

## 2.2 Wheels & Axles

- 2.2.1 Only official Cub Scout Grand Prix Pinewood Derby wheels and axles are permitted.
- 2.2.2 Axles may be polished.
- 2.2.3 Wheels may be lightly sanded to remove the mold projections on the tread. This sanding is the only wheel modification allowed. Wheels that have been beveled, tapered, thin sanded, lathe turned, or reduced in size will not be allowed.
- 2.2.4 Wheel bearings, wheel covers, "hubcaps", washers and bushings are not allowed.
- 2.2.5 The car shall not ride on any type of springs.
- 2.2.6 The car must be freewheeling with no starting devices or other propulsion.
- 2.2.7 Only dry powder lubricants, such as graphite, may be used on the axles. Lubrication on any other part of the car is cause for disqualification.

## 2.3 Dimensions

- 2.3.1 The car width at the wheels may not be modified.
- 2.3.2 Overall width (including wheels) shall not exceed 2  $\frac{3}{4}$  inches.
- 2.3.3 The minimum wheel width for both front and rear wheels is 1  $\frac{3}{4}$ " measured on the "inside" edges of the wheels. (This is to accommodate the center rail.)
- 2.3.4 Overall length shall not exceed 7 inches.
- 2.3.5 Overall height shall not exceed 4  $\frac{1}{8}$  inches.
- 2.3.6 The minimum under-carriage clearance for the car is  $\frac{3}{8}$  inches. Any less will prevent the car from properly racing on the track.

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2.3.7 No part of the car shall extend beyond the plane of the starting pin closest to the car when the car is properly positioned on the track.

2.3.8 No "V" or "U" notched front ends will be allowed. (If the car has "headlights" they must either be painted on or recessed so they are even with the front of the car.)

## 2.4 Weight

2.4.1 All cars will be weighed using a designated 'official scale' whose reading will be considered final. The weight of any car shall not exceed 5.00 ounces (142 grams).

2.4.2 All weights must be firmly attached to the car and not able to shift with movement of the car.

2.4.3 Cars must free wheel with no stored energy or movable weights.

## Section 3. RACE EVENT ADMINISTRATION

3.1 The format of the race event will be decided by the Race Committee Chairman prior to the start of the race. Deciding factors include the number of race participants and the operational condition of the track.

3.2 A four-lane track with electronic timer will be used for the races.

3.3 Each car will race once in each lane of the track to eliminate any lane inconsistencies affecting the outcome of the race.

3.4 Only the Race Committee will be allowed access into the pit area and to track. The cars will be staged and placed on the track for each race by designated members of the race Committee.

3.5 If a car leaves the track, runs out of its lane, or interferes with another car, the race will be rerun. If the same car has trouble on the second run, the car will be disqualified from that heat. The disqualified car will be assigned a time equal to seven seconds.

3.6 In the event of a damaged car, repairs will be limited to replacement of axles/wheels that are broken/lost during the races. Time for the repairs will be determined by the Race Committee Chairman.

3.7 In the event of a tie for a 1<sup>st</sup>, 2<sup>nd</sup>, or 3<sup>rd</sup> place race time, the tied contestants will enter a race-off. Each car will race again in each of the available racing lanes on the track.

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- 3.8 If race track's electronic timer fails to properly perform, the race will be rerun. If the problem with the timer cannot be resolved, the entire event will be restarted using the following format:
- 3.8.1 The race event format will change to four semi-final races with a final championship race to determine winners by rank and the overall Pack winners:
- Semi-Final #1: Tigers – 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> place finishers
  - Semi-Final #2: Wolves - 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> place finishers
  - Semi-Final #3: Bears - 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> place finishers
  - Semi-Final #4: Webelos - 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> place finishers
  - Championship: Pack Final – 1<sup>st</sup> Place finishers in the first four heats race for overall 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> place
- 3.8.2 Judges will be assigned by the Race Committee Chairman and placed at the finish line to visually determine the 1st, 2nd, and 3rd place finishers of each heat. Judges will use the car's nose to determine results of the race.
- 3.8.3 The number of racing lanes will be reduced to three to facilitate easier judging of the race.
- 3.8.4 Race results will be recorded using a “best effort” method. Ancillary software designed to track and determine race results may be used.

### Section 4. RACE COMMITTEE

- 4.1 The Race Committee includes the Race Committee Chairman, the Registration Team, Race Officials and judges.
- 4.2 The Race Committee will decide the format of the race event and the awards to be offered at least four weeks prior to the race event. This will allow sufficient lead time to order the necessary materials and awards for the event.
- 4.3 The Race Committee has the authority to alter the race event to best serve the interests of the Pack and to remedy any logistical or technical issues encountered prior to or during the race event.
- 4.4 The Race Committee will judiciously respond to any appeals made by participants at registration or to the outcome of a race. Any car design variances or changes to the final results of a race will be considered carefully by the Race Committee and the decision rendered by the Committee will be regarded as final.

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- 4.5 The Race Committee has the authority to make any necessary rule changes to this document. Any changes must be distributed as soon as possible to all Pack members.