

# Pack 421 2009 Pinewood Derby (PD) Rules

## I. THE CAR

- a. The car must be newly built for the current Cub Scouting year. The car should be substantially built by the Scout. Parental supervision in the construction of the car, particularly with tools that present safety concerns, is encouraged.
- b. *BODY* - The body of the car must be made from the block of wood provided in an official B.S.A. PD Kit. This Kit is available for sale at the pack meetings and official Scout Shops only.
- c. *WEIGHT* - The car weight shall not exceed 5.0 ounces. The official race scale shall be considered final.
- d. *LENGTH* - The overall length of the car shall not exceed 7 inches.
- e. *WIDTH* - The overall width of the car shall not exceed 2 3/4" inches, including wheels.
- f. *CLEARANCE BETWEEN WHEELS* - The car must have at least 1 3/4" clearance between the wheels.
- g. *CLEARANCE UNDER BODY* - The car must have 3/8" clearance underneath the body.
- h. *SLOTS* - The wheels must be placed in slots (not drilled holes) that are no less than 4 3/8" and no more than 4 1/2" apart. Slot distance will be measured at check in. Note that official PD Kits have the slots cut at 4 1/2" distance, with some slight variation. If you use the existing slots in the block of wood, you should be OK – but measure them to make sure they are within specifications before building your car in case your kit is out of specifications.
- i. *AXLES* - The axles of the car must be from the official B.S.A. PD Kit. Axles must be firmly attached to the car. The use of a flexible suspension system of any type is prohibited.
- j. *WHEELS* - The wheels of the car must be from the official B.S.A. PD Kit.
  - i. Wheels may not be altered (cut, drilled, beveled, or rounded) in any way. Mold projection defects/seams on wheel treads may be removed by sanding lightly. The wheels may not be sanded to enhance performance. If wheel sanding that will enhance performance is detected, the car will be disqualified.
  - ii. All four wheels must be attached to the car with the pins/axles provided in the kit, in the appropriate slots.
  - iii. No bearings, washers, or spacers are to be used as part of the wheel assembly.
  - iv. The official wheel width is 3/8".
  - v. The car must rest upon all four wheels, and all four wheels must touch the surface of the track during the race. Any car with one or more wheels raised will be disqualified.
- k. *DECORATIONS* - Details such as the steering wheel, driver, decals, painting, and interior detail are permissible as long as these details do not exceed the maximum length, width, and weight specifications. All pieces of the car and decorations must be securely fastened. Loose pieces that intentionally fall off during a race are not permitted. All metallic attached objects that contain lead must be covered with paint or fingernail polish.
- l. *LUBRICATION* - only graphite powder or the new B.S.A. white lube T102/polytetrafluoroethylene may be used to lubricate wheels. (Warning - other lubricants may damage the plastic wheels and keep them from turning freely.) Sticky graphite pads (stickers treated with graphite) may NOT be used anywhere on the car. The pack will NOT provide lubricants. Once the car is checked in, it may NOT be relubricated except when the wheel is damaged or becomes dislodged during a race. Graphite must be applied over a trash can.
- m. *MOTION* - The motion of the car may not be mechanically aided (motor, springs, rubber bands, etc. are prohibited). The car must be freewheeling, with no starting devices.
- n. The PD Inspection Team may disqualify any car that in their determination is not in compliance with the spirit of the PD race. The decision of the judges is final.

## II. RACE PROCEDURE

- A. Cars may be raced only by the qualifying Cub Scout. Cars may not be raced by a parent or a stand-in. Cub Scouts should be dressed in a neat, clean, Class A uniform.
- B. After the Scout has checked in, his car will be weighed, measured, and inspected to insure compliance with the above rules.
- C. A Cub Scout whose car fails any part of the inspection will be given the opportunity to make adjustments to the car. Cars will be re-weighed, measured, and inspected until they comply or until the scheduled race starting time.
- D. NO CARS WILL BE ADDED TO THE RACE AFTER THE START OF RACING, NO EXCEPTIONS. Please be sure to be on time to check in, and listen carefully for your name as the heats are called (plan bathroom breaks accordingly).
- E. After the car has passed inspection, it will be taken by a race official to the pit table to await the race. Cars may not be handled after inspection until they are scheduled to race.
- F. Cars will be protected from handling by anyone except the race officials and the car owner.
- G. No additional lubrication may be applied after check in, unless a wheel becomes detached in the course of the race. In this case, permission of a race official must be obtained before applying lubricant.
- H. Each racer will race four times. Winners will be determined by the average time run between all heats. *It is very important that parents and Akelas explain this to the boys. The boys are competing only against their own best time, not necessarily against the person in the lane next to them. For example, a boy may have his car finish before the boys in the lanes next to him during each of the four races, but still NOT receive a trophy as this race is done on an overall average time basis. It is more fair to run the race this way as it assures that the boys with the fastest times win regardless of who they lined up against on the "track." This is the same way that we run the Pack 421 Raingutter Regatta.*
- I. The scouts with lowest three average times in *each rank* (Tiger, Wolf, Bear, Webelos) will receive a trophy. There will also be 12 static trophy categories based on car appearance (such as Judges' Favorite). There will also be a perpetual trophy, called the Pinewood Cup, for the fastest den. All participants will receive a participation ribbon regardless of their standing.
- J. Boys, when called to race, will hand their car to a race official to be placed in their lane. Boys will then go to the end of the track and await their car's arrival. After each heat, the car will again be placed in the pit by a race official.
- K. Unsportsmanlike conduct by any participant or member of the audience will be grounds for expulsion from the competition and/or the race area.
- L. The decision of the judges is final.
- M. The top three racers from the Pack will be given the opportunity to represent Pack 421 and race in the Temescal B.S.A. District Pinewood Derby. At the district race, Class A uniforms are required. Pack 421 racers are required to follow all district rules, which will be provided to them prior to the race.