

# Pinewood Derby Q & A

## **What are the rules?**

*The rules are exactly the same as the Blackhawk 500 (see [www.blackhawk500.org](http://www.blackhawk500.org)) with one exception: All scouts must put their name legibly on the bottom of the car (label maker, writing, etc. is acceptable). This new rule will prevent delays the day of the race.*

## **Can I buy Pinewood Derby wheels or axles online or from a store?**

*Yes, provided there is absolutely no machining, sanding, lathing or tampering of the wheels or axles. In other words, you cannot buy a modified axle or wheel. We do not want to teach our scouts that “buying” someone else’s wheels and axles is a substitute for honest work.*

## **Can I buy a pre-made car body for my scout?**

*No. Only cars made by a scout and his Akela are eligible to race!*

## **Can I modify wheels and axles with my scout?**

*Absolutely. Polished and lubricated axles go faster. Lighter wheels are generally faster than heavier ones. Note: Most post-2009 wheels are very fast right out of the box.*

## **Are “wet” lubricants (oils) legal?**

*No. Only “dry” lubricants (graphite or graphite blends) are legal to protect the track and the other cars. “Wet” lubricants (oil) will foul and stain our track.*

## **What is the difference between the new and old wheels?**

*All the kits we pass out this year will have the new wheels from the molds put in production last year. The new wheels are faster out of the box than most modified pre-2009 wheels. They are lighter (faster), and made with much better tolerances than the old wheels. There is no reason to cheat with the new wheels, and some believe this is why the BSA changed their wheel molds in 2009!*

## **Can I angle the rear or front wheels so they run on the inner or outer edge?**

*No. Unless the Blackhawk 500 changes their rules, all wheels must run “flat” to the track. Canting is not allowed.*

## **Are colored wheels allowed?**

*Yes. Colored BSA wheels come from the same molds as the black ones and are considered “from the kit” provided they are not modified by any source other than the scout and his Akela.*

**Can I have only three wheels touching the track?**

*Yes, that is allowed under the Blackhawk 500 rules. Some people believe a car with only three wheels touching the ground is faster due to less friction.*

**Can I put a spoiler on front of the car, or notch the front of the car?**

*No part of the car can extend past the front of the starting pole per the Blackhawk 500 rules.*

**Can I purchase weights on-line or from retail stores?**

*Yes. You can melt lead (be careful) with your scout, or use lead, tungsten and other materials to add weight to the car.*

**How heavy can I make the car?**

*The maximum allowed weight is 5 ounces. Note that a car that is slightly less in weight (e.g., 4.85 ounces) will have almost no measurable loss in speed. Any car over 5 ounces will have a 100% loss in speed (disqualification).*

**Can I purchase decals, special paints, accessories, etc. to decorate the car?**

*Please do! Just make sure your scout helps out decorating his car.*

**Where can I find information about building a great car?**

*There are many resources you can find on the Internet about building a fast car, and some will be posted on our Pack 1776 web site.*

**Will there be awards for creative designs?**

*YES! Awards will be given out for the most creative, the most realistic, the funniest, best paint, etc. car. The idea of the Pinewood Derby is for scouts to gain useful skills, learn new things and most importantly...have fun! Our pack believes the fastest cars shouldn't be the only "winners."*

**What tools do I need to cut the car?**

*Cars can be cut (with your scout helping) using a simple coping saw, although a jig saw or Dremel-type tool may be useful for more intricate work (if desired). You will likely need basic files, sandpaper, paint decals, lead/zinc/tungsten to weight the car, and graphite to lubricate the axles and wheel hubs.*

**What if I do not have tools or a garage to work in?**

*No problem. Most dens hold their own Pinewood workshop day. At least one dad will hold a pack Pinewood Derby workshop before the race. Lowes also holds a Pinewood workshop day.*

**What kind of track do we have?**

*Pack 1776 recently purchased an aluminum BestTrack™, which we believe is the finest and longest track in the district (see: [www.besttrack.com](http://www.besttrack.com)). The pack owns a laser timer, a remote starting gate, and excellent software that allows for pictures of the racers to be shown as their cars race. The money to purchase this track was made possible from the scouts and their Akelas who operated the Pack 1776 Cotton Candy booth at the San Ramon Art & Wind Festival. We estimate the track will last for at least 30 years without any maintenance other than a simple wipe down before race day. The extra length of this track allows for more scouts to view the race without obstruction.*

**Will the scouts have driver's licenses this year?**

*Thanks to Cubmaster Macey, all scouts will receive a picture Pinewood Derby Driver's License this year!*

**When is the official weigh-in and car impounding?**

*The weigh-in is one day before the race (Saturday January 29<sup>th</sup>).*

**What if the scout is out of town or has an important event during the weigh-in and impounding?****What if the scout is ill during the weigh-in and impounding?**

*The scout is expected to carry his own car to the weigh-in and impounding (if possible) since this is part of the Pinewood Derby experience. The Pinewood Derby Committee will, in the interest of fairness, allow a car to be measured, weighed and impounded early for unavoidable circumstances.*

# BLACKHAWK 500 PINWOOD DERBY, SUMMARY OF RULES FOR RACE DIVISION

## Registration

- Only one car may be registered per scout.
- Building of the car must have begun during the current Scouting year.
- The car must be registered, pass inspection and impounded during the registration period to compete. No further modification or lubrication of the car is allowed after impounding.

## Car specifications

- - Width: 2.75" or less (including the wheels)
  - Length: 7.00" or less
  - Height: 4.00" or less (including all trim items)
  - Under car clearance: 0.375" (3/8") or more
  - Inside wheel-to-wheel clearance: 1.75" or more
  - Axle-to-axle spacing: 4.40" +/- 0.125"
  - Car weight: 5.00 ounces or less

## Building of cars

- ALL work (including improvements to wheels, axles, and car body) must be done by the scout and the parent (Akalea). The intent is to have the scout build as much of the car as reasonably and safely as possible. The use of pre-shaped car bodies, machined wheels or axles acquired from the Internet or other sources is NOT allowed.

## Materials

- Axles, wheels and body MUST be from the materials provided in the Official Grand Prix Pinewood Derby Kit.
- Additional trim items are allowed as long total weight doesn't exceed maximum weight and size.
- No loose materials (weights, characters or trim) are permitted. Weights must not move.

## Wheels and axles

- Axle nails must be mounted parallel to the track surface. Wheels must run flat on the track surface. NO canting. Axle treatment is allowed (i.e. deburring/polishing).
- Wheel treatment is allowed (hub and tread smoothing/polishing) but it may NOT result in substantial removal of mass, or reduction in wheel width or diameter. At least 80% of the original wheel width must contact with the track surface. Wheel hub cannot be shortened or the diameter opened.
- The car must run on three or four wheels.
- Wheel hub caps, washers, inserts, sleeves, and bearings are NOT permitted.
- The car may not ride on springs or other suspension.

## Gravity powered

- The car must be powered ONLY by gravity.

### **Lubricants**

- Only dry lubricants are allowed. Lubricants may not foul the track.

*This is a summary of rules for cars in the Race Division. It is NOT intended to be a substitute for the Official Blackhawk 500 Pinewood Derby Rules, available on the website ([www.blackhawk500.org/](http://www.blackhawk500.org/)).*

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