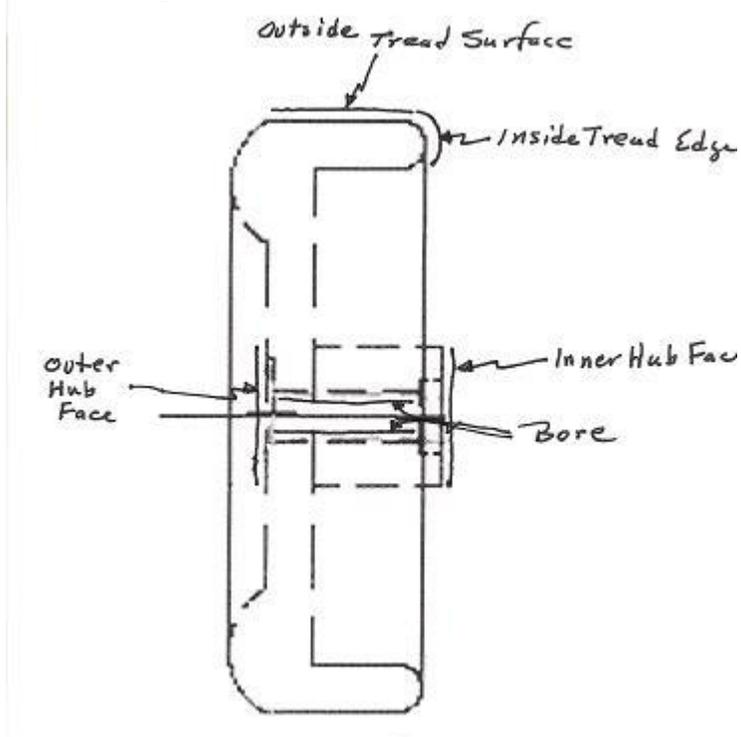


2017 Pinewood Derby FAQ!

ALL cars, including those entered for design, must fit into the garage gauge at the inspection line. NO oversize cars will be passed this year.

Can you clarify the parts of the wheels that can be worked?

Rule T-6 lists the places in the wheel (wheel bore, hub faces, outside tread surface and inside tread edges that might rub the guide rails) which may be worked (e.g. sanded, cut, polished, drilled)



**** No Wheel Weights are allowed.**

I noticed that rule G-7 there is a one trophy per car per event rule. What does this mean?

Your Derby has two events, the Race event and the Design event. Within the design event, there are two categories, Best Workmanship and Most Unusual. A car can only win in one of the design categories.

I heard about a "super slick" lubricant that I want to use on my wheels. Is that allowed?

Yes, but all cars must apply graphite in the inspection line.

What can I expect at a Derby run as a 15th Burlington?

You can expect that the registration and inspection procedure will be as usual. The race will look different. There will be up to 7 tracks running during the preliminaries and finalist selection. A track at one end will be designated as the Gold Track and the other end will be the Silver Track. At the start of the race time, either 7 or 10 boys will be lined up at a track. When racing begins the boys will draw for lanes. When the boys race, the winner of the heat will move one track towards the Gold, the 2nd place racer will remain on the current track and the 3rd place finisher will move one track towards the Silver Track. The boys will never be more than 3 races away from their next race. There will be no sitting down and no parking cars between races. The boys will spend 45-60 minutes in the Preliminary Race. During the Finalist Selection race, the boys will continue to race but the winner of each heat will move towards the Gold Track, there will be no Silver-ward movement. Finalists will be selected by winning at the Gold Track. At the end of the Finalist Selection Race, all Scouts still on the racing tracks will be dismissed after a good day's racing!

The Finals Race will be run as a timed event. Each boy will race on each track, rankings will be awarded based on cumulative times.

Is it legal to mount the wheels with the BSA Pinewood Derby lettering and spokes facing the car?

The rules do not preclude this.

Can the step on the hub face be removed?

Yes.

I was a 5th-grade Webelos, but crossed-over into a Boy Scout troop before the District Race. Can I still enter my car in the District Pinewood Derby?

Yes, absolutely! Make sure that your former Cubmaster knows that you intend to race. If you are a 5th grade Boy Scout and participated in your Pack's Derby, you are eligible to participate in the District Derby.

My son is a Tiger Scout. Do I have to be with him while he is racing?

Yes! Tiger Partners should remain nearby throughout the races.

Oops! My car is much lighter than 5 ounces. Can I add weight on race day?

Yes, provided that rules, especially rule T-5, are satisfied. For instance, you may securely attach a penny (nickel, dime, quarter, washer, chunk of lead, etc) to the top of the car using "super-glue", but not with tape or "spray tack". Of course, after the change, the car must still pass inspection. Be extra careful about adding weight to the underside of the car. This could cause the car to drag on the center guide rail if the 3/8" underbody clearance were not present.

My wheels and axles from last year performed really well. Can I use them in this year's car?

No. See rule "G-4. New Work" under "GENERAL rules".

Regarding rule T-3, how will the judge recognize the nail as being from the kit?

By looking at the nail head and, if it is visible in the slot, the nail point. The shape and texture of the nail head is the key indicator, so it should not be polished or changed substantially.

What can I do if the inspection judge says that my wheels are illegally crowned? (See rule T-6)

The Cub Scout may appeal to the inspection chairman, and to the event chairman. If the appeals are denied, the Cub Scout and his assistant may replace the wheels or decline to race. Wheel kits will be available for sale at the main registration table.

I think that my wheels last year might have been illegal, but the inspection judges let me race. Does that mean that if I do the wheels exactly the same way this year, then I will have no problem with them at inspection?

The results from last year's inspection don't determine the results of this year's inspection. Perhaps the inspection judge was not trained as well as the team this year, or perhaps the inspection judge just made a mistake last year. We will be trying to assure that all inspection judges will be well trained this year and that they will do their jobs consistently and in strict accordance with the current rules.

A national supplier of pinewood derby stuff sells "performance axles and wheels". Can I use those instead of the wheels and axles from the kit?

No. The performance wheels can be recognized by a slight indentation across the tread profile. That indentation is not a legal profile. Legal profile requires that the tread be straight across. (Reference: Rule T-6.)

The axles can be recognized by an indentation on the outer face of the axle head. Reference: "G-1. Essential Materials" under "GENERAL rules" and rule T-3.

My front wheels extend beyond the front of my car. Is this permitted?

No. See rule T-10.

My car has a hole in the middle. Can I stage it at the starting line so that the starting pin goes up through the center of the car?

No. It would not be recommended anyway since, even with the head start, it will not perform as well. (Would you believe more than two car lengths slower?)

My car has only 5/16" clearance between the body and the bottom of the wheels. If my car leaves the track because of a "high spot", will a rerun be allowed?

Probably not. If the "high spot" is less than 3/8", then the track is proper in that respect (see rule R-3), and the car "is at fault" because it ignored the guidance in rule T-4.

(Continuing from last question)

Then, can I change my car to correct the problem?

The track chairman may allow this "improvement", provided that the Cub Scout can perform the changes in accordance with rule C-5.

I must arrive late for the race because of a ball game. Can my brother (or friend, or parent) check my car in for me?

No. You must choose which activity to participate in. See "G-3. Attendance" under "GENERAL rules". Late arrivals will be inspected and inserted into the racing with losses recorded for missed rounds.

My Cubmaster (or Dad, or Grandfather) built a car when he was a Cub Scout. Can he race it in the Leader's Race?

No, but he can show it and race it in the Classic Car event.

Do I have to put the axles in the slots of the original block?

No. Rule T-3 requires that the axles be held by the wood of the car body. The slots are for your convenience if you choose to use them. You may cut your own slots for the axles. You may drill holes for the axles. Whatever you do, watch out for the underbody clearance, and assure that you have at least 3/8".

When I set my car on a flat surface, one of the wheels does not touch. Is this okay?

Yes. Not all of the wheels must touch. This can be advantageous in some cases, and disadvantageous in others.

My car was weighed at the XXXX High Precision Laboratory and found to be 4.999995 ounces. On race day they told me that my car was "too heavy" and that I must reduce its weight before it will be allowed to race. This isn't fair.

A number of factors come into play in this. First, wood is "not stable". For instance, it can absorb moisture from the air. Thus, its weight can change slightly from day to day. Since you were so close to the limit at that time, it is reasonable to believe that you are now over the limit.

Secondly, if the race official must take your word for compliance, then they must take everyone's word for compliance. So, there would be no need for inspection. Remember, not everyone is as honest as you are!

Third, five ounces is what the official scale says is five ounces. Every effort will be made to assure that the scale is accurate and that a reliable 5-ounce standard is available to verify the scale's accuracy. The important thing is that everyone races according to the same standard.

There are colored wheels available from BSA outside the Official Pinewood Derby Car Kit. Are they legal?

Official BSA wheels are available in two kits. You may purchase wheels in the Official BSA Pinewood Derby Car Kit or in the Official BSA Pinewood Derby Replacement Wheels and Axles Kit. The wheels in the Official BSA Pinewood Derby Replacement Wheels and Axles Kit can be purchased in 5 colors.

On close inspection, the wheels that are "fresh out of the BSA box" do not appear to be "flat across the tread" as required in the rules. Can they be raced "out of the box, as is?" Or must the tread be "flattened" in order to satisfy the district rules?

Wheels can be raced "as is", exactly as supplied by BSA, "fresh out of the BSA box." If the wheels are "worked", then they must conform to the rules. (The inspection judge can tell the difference!)

Must my axles be level? Is it okay to angle them up or down? [Some builders believe that angling the ends of the axles up so that the wheels stay at the ends of the axles and ride on the inside edge of the tread is advantageous.]

Axles do not need to be level. (Read the next question and answer carefully before using this.)

I have not been able to sand the wheels so that they are perfectly cylindrical. The tread has a slightly conic shape. There is a small, but visible, gap when the wheel treads are measured for parallel. [Some builders believe that angling the tread (so that the wheel diameter is larger on one edge than on the other) and causing the wheel to ride on one edge is advantageous.]

The inspector will determine if the conical shape is used to cause the wheel to ride on its edge by looking at how the wheel rests on the test track section. If the wheel still sits flat on the track, then the conical shape is not excessive. (Note that angling the axles as described in the previous question may cause your car to fail this secondary test.)

I weighed my car in the pit/exception area and it was under 5 oz, but on the scale in the check in line it is overweight. Doesn't the pit scale weight count?

No, the pit scale weight does not count. The official weight for a car is the weight taken on the check in line scale.

If the pit scale does not count, then what use is it?

The purpose of the pit scale is to help you get really close to the official weight. To help assure that you are using a properly calibrated scale and using it correctly, we will provide a reference that has been weighed on the official scale. Pit scale results will still not be "official", but you should expect to be within a couple hundredths of an ounce of the official weight. (One racer used an inch-long bead of hot glue on the top of his car to add about 0.05 ounces to his car. It would have been easily trimmed with a knife if the car turned out to be a bit over the limit.)

I can't arrive until after my age group has started racing. What can I do?

Arrive when you can. Tell the person at the registration desk that you are a late arrival. You still have to go through inspection, and you will not get any special treatment there, such as being put at the front of the line. When inspection is completed satisfactorily, you may go to your race area. Tell the chairman at your track that you are a late arrival. If your group has already completed (or nearly completed) any rounds, then you will receive a loss for those rounds, and will be inserted into the score group accordingly. Unless you miss 5 rounds, you are still in the hunt for the 1st place trophy.

There are body designs that are cut in such a way that effectively creates a suspension by isolating (or at least attempting to isolate) the wheel motion from the main body mass. Does this violate the rule "T-11. Body: the car body may have no moving parts"?

Wood, itself, has some inherent "springiness." How "springy" depends on the length, width and thickness of the spans of wood. Creating artificially long spans by cutting patterns into the wood of the car body can be done with some patience and commonly available, inexpensive hand tools. Cross-grain spans can be reinforced by gluing additional wood with perpendicular grain to sandwich the weak cross-grain as is done commercial plywood. These are skills and knowledge within reach of most boys of Cub Scout age and are permitted. Addition of other materials or mechanisms to enhance the "springiness" of the wood is not in the spirit of "what can you accomplish with the wood" and are, therefore, not permitted. There seems no obvious dividing line between "a little bit springy" and "too springy." The rules allow addition of material that is not included in the kit box. These additions are permitted in order to increase the total car weight up to five ounces, but are not permitted to increase the flexibility of the car body. Fastening washers, lead, and quarters to the car to increase its weight is okay. Fastening springs to the car to increase its flexibility is not okay. If steps are taken to increase the springiness of the car, leave the bare wood of the car exposed on the underside of the car to allow judges to verify source of the springiness.

In addition, if the added body mass is mounted in a method that flexibly connects it to the body so that its' displacement is less than that of the body when the wheels translate upward when encountering "track roughness", does this violate the rule "T-5 Weights and Attachment: ... All weight must be securely fastened to the car ... Weights shall be passive, i.e. non-moveable..."?

Adding damping material is akin to adding springs. The wood of the car body has its own natural damping, so damping itself cannot be prohibited. Adding material (other than glue and solid passive weight) to the wood of the body to increase damping is not permitted.

While I was sanding the wheel treads, I also sanded the "tread marks" that the judges would use to tell if too much diameter had been removed. Can I still race?

There must be some of each of the original tread marks on the car at inspection.

The wheel diameter must be at least 1.155 inches and tread width not narrower than new wheels. The judge will try to avoid damage to the wheels from the steel caliper used to measure, but no guarantees and no complaints will be accepted.

Can I paint or coat the wheel?

Coating and painting racing wheels is not allowed. The reason is that the judge needs to be able to see and feel wheel features without that interference. Incidental material that might get on a wheel, such as graphite, should be wiped off as thoroughly as possible. Similarly a spot of paint or glue on the interior of the wheel, applied to balance the wheel, is allowed so long as the printing on the wheel interior is not obscured. See Rule T-6

Background: Almost every wheel gets graphite spilled on it somewhere. When wiped off, it leaves a film that does not obscure sight or feel. Some builders may attempt to balance a wheel by applying a spot of self-adhesive such as nail polish to the interior rim of the wheel. This is "in the spirit" and should not be cause for disqualification so long as it does not obscure sight of internal markings on the wheel. A tread coating might change the hardness of the tread or increase the diameter of the wheel. That would be "making the wheel into something different" and is not "in the spirit."

Can I paint or coat the axles?

Do not paint or coat the outer face of the axle. The judge needs to be able to see the axle head without interference.

**More Questions? Contact Kimberly Morrison at
Kimberly.Morrison@Scouting.org or 309-376-6136 ext. 120**