

Pack 12 Pinewood Derby Racing Rules

Obviously, someone is going to make the fastest car, but the PURPOSE of this event is to have fun with your son as you design, build and race this car at a Cub Scout event. The saddest thing I ever saw, I and did see it, was a Cub Scout on race day, asking which car was his because he had never seen it before.

So, that being said, the first rule of Pinewood Derby is to HAVE FUN WITH YOUR SON.

The three things you must engineer to make a "fast" car are friction, weight distribution and steering. Some people spend a lot more time tweaking the cars than others, and that effort usually pays off in a faster car, and more fun because of the extra time spent with your son. To reduce grumbling and to give as many boys an even chance of winning as possible, the following rules have been developed.

Standard Rules:

- Construction of every car **MUST** have begun **AFTER** last year's races. Remember this is about the process of making AND racing.
- Only one car may be registered by any person in the Pinewood Derby. It is only fair and would take too long to allow extra cars per person.
- You must use the materials in the provided Pinewood Derby kit. You may not substitute materials from other models, whether or not BSA issued them.
- **Only dry lubricants such as graphite will be allowed for lubricating the wheels.** Oil-based and liquid lubricants foul the track. Lubricants are not allowed in the racing building because of the mess they make on tables or floors. All lubrication must take place before the car has passed inspection.
- Once the car has passed inspection, it may not be removed from the quarantine area except to race or be repaired. Adding addition lubrication between races is not allowed.
- If a repair must be completed after the car has been quarantined, it must be observed by race officials and the car must re-pass inspection before being allowed to return to quarantine and race. Additional lubrication will not be added during repair.

ALL CARS MUST PASS INSPECTION TO QUALIFY FOR THE RACE

Following are the inspection points:

1. The car weight shall not exceed **5.0 ounces**. The official race scale shall be considered final.
2. The overall length of the car shall not exceed 7 inches. This requires everyone to distribute their final weight within the same area. The center of gravity makes a difference on speed.
3. The overall width of the car shall not exceed 2 $\frac{3}{4}$ inches. This is required by the design of the race track.
4. The car must have $\frac{3}{8}$ " clearance underneath the body. This is required by the design of the race track.
5. You must use the stock wheelbase length. While you may drill your own axle seats, the distance between them must be the same as between the precut axle slots on the wood. Remember the final position of the wheels could cause disqualification for an overall length issue, depending upon axle base placement.
6. **The block of pine wood provided in the kit must be used.** It may be shaped any way that is desired as long as it does not violate any inspection points.
7. The width of the original block of wood may not be decreased where the wheels are placed. This is required by the design of the race track.
8. **All four wheels supplied with the kit must be used.** The wheels may not be cut, drilled, v-shaped, beveled or rounded. You may polish the mold seams, but the wheels should maintain their original surface area. There are two sets of BSA wheels out there and the spoke-wheels are not legal for our races. They also cannot be mounted to ride on edge.

9. There are other BSA derby kits that have high performance wheels and solid, straight axles, but they are not legal for our pack or district races. **The four axles supplied with the kit must be used.** They may be polished to remove foundry burrs.
10. Wheel bearings, washers or bushings are prohibited. The car must not ride on any type of springs. Any engineering which interferes with the official plastic wheel spinning freely against the official provided axle will be rejected.
11. The car must be freewheeling, with no starting devices or self propulsion systems.
12. No loose material of any kind may be inside or on the car. This rule was created because an enterprising engineer figured out how to set a rolling weight in an internal chamber of the car. When the car was completing the downward portion of the race and beginning to level out, the moving weight transferred additional momentum to the car by sliding down and striking it from the inside.
13. Each car must pass inspection by the official inspection committee before it will be allowed to compete. The Inspection Committee has the responsibility to disqualify those cars that do not meet these specifications.

Outlaw Class racing:

- Anyone can race in the Outlaw Class. If, for some reason, a Scouts car is disqualified for racing with his age group, he may race in the Outlaw Class.
- Aside from a design or accessory that would damage the racetrack (such as oils or dragging parts), anything goes.