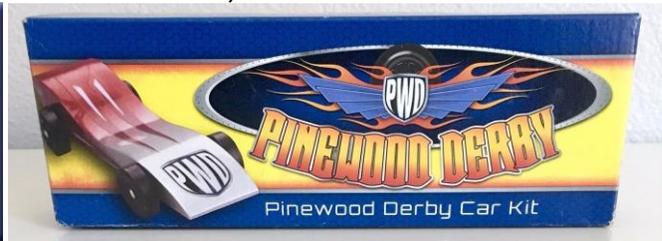


LONG TRAIL DISTRICT PINWOOD DERBY CAR DESIGN & CONSTRUCTION RULES

General “RULES OF THE ROAD”

1. NEW - All Pinewood Derby cars must be newly built in the current Cub Scouting year.
2. MATERIALS - Cars must be built using the materials in the Official “Grand Prix” BSA Pinewood Derby Racing Car Kit (catalog number 17006) see below



(These are the same kits, only the old and new version of the packaging)

Hobby shop parts and online items such as Derby Dust, Revell, Pine Pro, Pinecar precut car bodies, axles, wheels, axle tubes, bearings and springs are strictly prohibited. As a rule of thumb, if it is sold at the Scout Shop for the Green Mountain Council, it may be used in the construction of the vehicle. If not, then not.

3. SCOUT BUILT - The car should be built mainly by the Scout. It is understood that Scouts at different age levels will have different skills and abilities. The spirit of the Derby is that the Scouts build the cars and parents/adult helpers offer advice and supervision. While it may be necessary for the parent/adult helper to operate a power tool or saw, the Scout is required to do the majority of the car building.
4. In an effort to ensure fairness to all participants, any Pinewood Derby Car that does not comply or meet the design and construction rules may be disqualified from racing before, during or after the race.
5. ALL CARS MUST BE REGISTERED BEFORE RACEDAY. It is recommended that a Scout Leader, parent, adult contact a race official to have them weighed and measured. Any changes in weight, length, width, etc...may be done if the vehicle does not meet requirements. Weight may be added up to the maximum weight at time of inspection.
6. Once a vehicle has been inspected it will be “quarantined” in a safe, dry location until race day. On race day vehicles will remain in quarantine to prevent any damage.

Vehicles may not be altered, including adding weight or graphite after registered by the race official. This is the best way to keep things fair, as well as having kids picking up other cars and dropping them. It has happened and it was devastating. This also protects the car from damage between the Pack race and the District race.

7. There are many things that can be purchased online, wheels, axles, blocks, etc... Here is a good rule to follow: IF THE BLOCKS, AXLES AND WHEELS ARE NOT SOLD AT THE GREEN MOUNTAIN COUNCIL SCOUT SHOP as part of their normal inventory, it is not allowed.
8. Cars will be returned to the owner at the end of the event, or once the vehicle has been eliminated from its respective division.
9. "STICKY NOSE" - The race car may not be constructed or treated in such a way that the track's starting mechanism imparts momentum to the car. (For instance, this provision disqualifies cars with sticky substances on the front of the car and protrusions which may catch on the starting pin.)

SIZE AND SHAPE

1. The pine wood block in the official kit may be shaped in any way desired as long as it follows the Car Design and size requirements.
2. **Overall length cannot exceed 7 inches.** This includes tailpipes, bumpers, flags, and decorations.
3. **Overall width cannot exceed 2³/₄ (2.75) inches.** Full body and wheel wells allowed providing it does not extend over the width limits or interferes with another vehicle or operation of the track.
4. **Overall height cannot exceed 4 inches** (To fit under the top of electronic timer/Finish Line). This includes decorations, flags, passengers, or any height extension.
5. **Underside clearance of at least 1/4 (0.25) inches.** This is important so the vehicle passing over the finish line won't damage the electronic finger.
6. **Inside wheel-to-wheel distance of at least 1³/₄ (1.75) inches** is recommended, so that the car will run on the racetrack.

7. Adequate clearance is the responsibility of the racecar builder. Some issues can be corrected during weigh-in inspections, but ground clearance cannot.
8. **The front of the car must have a minimum of a 1/2" flat surface in the center** to be placed against the starting mechanism (i.e., it cannot have a cutout notch, point or round head).
9. The distance between the front of the front wheels and rear of the back wheels will stay within the 7 inch length limit.

WEIGHT

1. Cars cannot weigh over 5.000 ounces (141.75 grams), as determined at the time of weigh-in and registration, using the "official scale" and judged by a member of the race staff. Only 1 scale will be used to weigh and certify every vehicle. It will be calibrated before each inspection. **25 US Quarters weighs 5.00 ounces.** It is suggested that other scales used at Pack events are calibrated to 25 US Quarters. Canadian Quarters weigh less, so make sure they are all US coins. Some scales might be off by as much as 0.1 ounce and that makes it tough when having to shave off a little weight on the day of inspection.
2. Weight may be added to the car and will be considered part of the car for purposes of all measurements. "Weight" is considered to be any material on the car that is not provided in the kit.
3. The car may be hollowed out and built up to the maximum weight by the addition of wood, plastic or metal only, provided the materials are securely built into the body or firmly affixed to it. No liquids or loose materials of any kind are permitted in or on the car.
4. All weight must be securely fastened to the car, (e.g. by permanent glue, nails, duct tape or screws) but not by "sticky substances" such as tack spray or double sided sticky tape.
5. Weights shall be passive, (i.e. non-moveable, non-magnetic, non-electric, non-sticky, etc.)

WHEELS

1. Wheels must either be the Official B.S.A. wheels provided in the Pinewood Derby Kit or the new multi-colored Official BSA Pinewood Derby wheels that are available online at the Green Mountain Council Scout Shop.

2. The new colored wheels (pictured to the right) are available in the following colors: Ragin' Red, Screamin' Yellow, Outrageous Orange, and Blazin' Blue. Other Non-BSA wheels, such as the black spoked wheels that are available from Derby Dust, Revel, Pine Pro, PineCar and any other company are not allowed. Just because a wheel says "BSA" or "Official" does not make it "BSA Official". Don't get caught in a tricky word play online.



3. Except as specified by rules #3 and #4 below, removal of ANY material from the wheel sidewalls, or face, whether on the inside or outside, is not allowed. The outside wheel sidewalls and face must remain intact. All wheels must have the "BSA" and "Pinewood Derby" words on the sidewall completely intact. The picture of the wheel to the right is what the judges will expect to see on the cars. Anything else will result in disqualification.
4. Truing the wheels round by sanding or lathing is allowed. Wheel treatment (hub and tread smoothing and polishing), however, may not result in substantial removal of mass or in reducing the wheel width or thickness from the original kit wheels.
5. The mold mark (burr) may be removed from the wheels.
6. The wheels may not be cut, drilled, beveled or rounded. The portion of the wheel surface that contacts the track must remain parallel to the axle.
7. U, H, V or any other type of grooving of the wheel treads is prohibited.
8. Wheels must be able to come into direct contact with the body of the car. No pads, bearings, wax, lubricant (other than powdered graphite) or other materials or devices. As a test, if the vehicle is tipped on its side and the wheels touch the body, you're good.
9. All cars must have four wheels.
10. The wheels do not have to be placed in the slots provided. Wheelbase may be extended as long as it stays within the 7 inch length requirement.
11. Hubcaps and/or any wheel coverings are not permitted.

AXLES

1. **Axles (nails) must be the Official B.S.A. axles** provided in the Grand Prix Pinewood Derby Kit. No replacement or substitute axles are allowed.
2. Solid, full length axles are not permitted (i.e., axles that go completely from one wheel to the wheel on the other side).
3. **Machined axles with cut grooves, slots or other similar modifications are not permitted.**
4. Bearings, washers, pads and/or bushings on the wheels or axles are prohibited.
5. Springs or suspensions of any kind are prohibited.
6. **Axles must be set to allow the wheels treads to be flat on the track, they cannot be angled.**
7. The axles may be straightened and removal of the imperfections, such as pinch marks and mold ridges, by filing, sanding and polishing is allowed.
8. **Only dry-lubricants are allowed.** Petroleum-based lubricants are not allowed. Powdered Graphite is the most popular. Graphite will not be used after the vehicle has been registered and quarantined
9. Sometimes axles get loose over the course of several races. This makes the car slower and increases the chance of jumping the lane. In turn a car jumping a lane can crash into other cars and cause damage. To prevent wheel wobble, axles need to be secured to the car. Hot glue works best.

DECORATIONS

1. Moveable (i.e., loose) parts are not permitted.
2. Added design features are permitted if they comply with all other Car Design and Construction Rules.
3. Cars must be clean and dry. (No wet glue, paint or lubricant).
4. No part of the car may extend beyond the starting mechanism of the racetrack.

5. LED lights may only be used for decorative purposes. They may be tested at the inspection to make sure they work. They will remain off until race day. When checking in the Scout should ask a race official to turn on the lights. They will remain on for the remainder of the event. Once the vehicle has been turned over to the Scout, he/she may turn them off.

REGISTRATION

1. Each car must have the Scout's name, Rank, and Pack Number written on the bottom of the car. This will help identify the respective race divisions.
2. ***No cars will be accepted or registered on Race Day.*** One year there were 34 cars dropped off at a race official's door step the NIGHT BEFORE and he found them when he came home at 10:00pm. They were accepted, weighed, measured and raced the next day. The race official was a little tired, but the show must go on.
3. A registration form will be sent out. Please fill it in with the requested information.
4. Each scout should give his/her car a nickname. We have had cars named; Flash, Lightening, Turtle Bomb, Screaming Ghost, Red Rocket, Mustang, and Pokey. It makes the race more exciting when calling a race.
5. After the Pack event, many Scouts and Leaders have boxed their cars up to protect them from damage. They will be brought to be weighed and measured and be kept safe and sound until the day of the District Event.