

SAMOSET COUNCIL PINEWOOD DERBY RULES AND REGULATIONS - 2024

ALL CARS MUST PASS INSPECTION TO QUALIFY FOR THE RACE

These rules and regulations will be adopted by all Pack and District level Pinewood Derby races within Samoset Council.

To ensure that the Samoset Council race is representative of all Cub Scouts it will allow all qualifying Scouts to compete on an equal racing field, there will be a single category Pinewood Derby race at the District/Council Championship.

Open Scouts Stock Series (Graphite lubricant)

All costs associated with the championship race will be covered by the District/Council.

Scouts will need to cover the cost of the pinewood derby car kit.

*Concessions will be available at the Races.

Competition in the Samoset Council Championship Cup Pinewood Derby is open to all 2024 Cub Scout Pinewood Derby District Finalists. These finalists are Cub Scouts that finished in the top 10 in their respective Pack Derby. The youth must be a registered Cub Scout at some point from January 1st, 2024. Scouts that began the calendar year as a Webelos II Scout and have since transitioned to a Troop are eligible to compete.

A Scout may enter 1 car for the Open Scout Race.

Check-in

ALL participating Scouts must be in uniform.

Good sportsmanship and behavior is expected from ALL Scouts, guests, and family members.

ALL Scouts will have fun, listen, and obey the Race Leader.

Each car entered in a race must pass through inspection by the Samoset Council Inspection Committee on race day, where it will be evaluated for basic specifications. Participants will have the opportunity to make adjustments to bring their car into compliance prior to the start of the race should modifications be needed. Modifications must be completed 10 minutes prior to the start of the first race heat or the car cannot run. Any lubrication must be applied prior to final inspection. After a car has passed inspection, it will be placed in a designated staging location. It will remain there until all races have been completed. Only Samoset Council Race Officials will handle the car until the final Award Ceremony has been completed. Officials have the Right to disqualify any car, which does not meet all of the stated rules and specifications. The Officials decision is final. If a Samoset Council Race Official makes a ruling and you wish to appeal it, a majority of Officials will be assembled and based on majority rule the decision will be upheld or overturned.

Basic Car Specifications

Dimensions and weights

- Cars must have been built during the 2024 Pinewood Derby racing season using an Official BSA Pinewood Derby Kit.
- Width, including wheels and axles, must not exceed $2\frac{3}{4}$ inches.
- Total length shall not exceed 7 inches.
- Weight shall not exceed 5.0 ounces (141.75 grams) measured on a scale accurate to 1/10th of an ounce. Overweight cars must be reduced to running weight or below before they can be entered. The official race scale shall be considered final.
- Cars must clear the center rail of the track, which is $1\frac{5}{8}$ inches wide by $\frac{1}{4}$ inch tall along the entire length of the car. Minimum clearance between the bottom of the car and the bottom of the wheels shall be $\approx 3/8$ of an inch to avoid contact with the track's center guide strip. Defining feature is that the bottom of the car does not contact the center rail of the track.
- No part of the car may protrude beyond the starting pin. The front edge of the car must be at least $1/2$ inch wide at the center of the car.
- Any details added must be within length, width, and weight limits.
- All cars must have a wheelbase no less than 4 inches and no greater than 5 inches with the two rear wheels being positioned directly across the body from one another and the two front wheels being positioned directly across the body from one another. Maximum allowable wheelbase shall not allow any portion of the wheels to extend beyond the front or rear of the car.
- No part of the car or any attachment to the car may be capable of coming into contact with the track other than the wheels.
- The car must be built for the current Pinewood Derby Racing Season. NO REPEATS or REPAINTS.
- A completed car purchased from a third party is not allowed.
- The car may not be sent to third party facilities for tuning or other performance enhancements.
- Fenders: Fenders or other body parts may extend below $3/8$ inch from the track surface.
*Remember the guide rail width so the fenders do not rub.
- Weights: To aid in a safe stop at the end of the track, we recommend that you insert weight inside the body or place it on the top of the car. Avoid placing thick (over $1/8$ ") weight on the bottom of the car as that may destabilize the car on the stop section.
- The youth advances, not their specific car. Feel free to retune your car or even build a whole new one! Many build a car for DESIGN at the Pack or District level and then build a new car for SPEED at the Council level.
- If you lack the tools or resources to cut out a car from a stock block of wood, then we encourage you to attend a workshop hosted by your den, pack, district, or council. Alternatively, you may purchase a pre-shaped block and assemble it with approved wheels and axles. Remember, building and tuning a car WITH the adult is a major part of the Pinewood Derby.

Examples of Prohibited Items which CANNOT be used:

- Magnets, springs or suspension systems of any type.
- Starting devices, finish line devices, propellants, or propulsion systems

- Wet paint, or Sticky substances
- Glass or excessively fragile parts
- Electronic or lighting devices (if lights are on the car they must be turned off)
- No Bearings or Solid one-piece rod style axles
- Axles and wheels attached to any device that mechanically alters rotation or spin.
- Loose objects on car. All weight must be securely fastened or embedded in the car.

Wheels

- Use only Official BSA Wheels; colored wheels are permitted.
- All lettering and numbering, both inside and outside, must remain complete and be visible. No wheel covers, inside or outside, may be used.
- The fluting and other BSA markings on the outside wheel area must remain visible.
- Outer wheel surface (tread area only) may be lightly sanded, shaved, or polished to remove minor surface imperfections, mold casting burrs, and correct off center wheel bores; but total wheel diameter may not be reduced below 1.170 inches. Outer wheel surface must not be reshaped or have the contour changed in any way in an attempt to minimize tread contact or alter aerodynamics.
- Coning the hubs and truing the inside tread edge is allowed, as long as overall wheel width is not reduced below 0.36 inches.
- Minimum outside diameter of wheel must be equal to or greater than 1.170 inch, in order to maintain the ridges on the outer edge.
- The weight of the wheel shall not be increased or decreased except where limited amounts of material are removed from the tread or inside tread edge to remove minor imperfections. No material such as glue, fingernail polish, or tape, may be added to the inside of the wheel increasing its weight.
- Wheel Bore treatment is allowed including polishing and/or tapping. Wheel bores may not be filled and re- drilled to alter bore diameter or to achieve better fit with the axle (no material may be added to the wheels).
- Each wheel must be mounted on an axle, on the outside of the car, on the side of the car.
- There must be at least four wheels on the car, however it is not required that all four wheels make contact with the track surface - one wheel may be lifted from the track surface.
- Judges reserve the right to measure the wheel with calipers to verify dimensional compliance with official wheel size restrictions.

Axles

- Nail type axles are to be used. You may or may not choose to use those found in the Official Pinewood Derby kit.
- BSA axles may be polished, deburred, grooved and lubricated. The only lubricant that may be used is powdered graphite. Inspectors may use magnets to ensure BSA factory axles are present.
- Factory axle slots must be visible, slots may be trued or straightened. Axles can be mounted by drilling axle holes or inserted into the factory or custom slots on car. If axle holes are drilled, a $\frac{1}{4}$

inch “visibility hole” should be drilled from the bottom of the car at the tip of the nail axle. This will allow inspectors to verify nail axles are being used.

- Modifications to the Axles are allowed that include straightening, sanding, polishing, canting, grooving, and beveling as long as the Diameter of the Axle is not reduced. The Diameter may not be less than 0.084 inches (2.13mm).

Miscellaneous Rules

- If a car suffers a mechanical problem during a race (i.e loses an axle, breaks a wheel, etc…), the participant and/or a designated adult will have up to five minutes to fix the car. The race will NOT be rerun, nor can ongoing races be delayed.
- If a car leaves the track during a race, the heat will be rerun. If the same car leaves the track a second time during, the car will be judged last place in that heat.
- If a car leaves its lane, Race Officials, at their discretion, may inspect the track and, if a track fault is found which may have caused the initial violation, the Race Officials, at their discretion, may order the heat to be rerun after the track is repaired.
- In the event of Starter interference, the heat will be re-staged and rerun.
- The track’s electronic timers will record finishing times for all cars in each heat. In the event of technical difficulties, the Finish Line Judges will determine the order of finish.
- In the event of a mid-race timer failure, the Official Race Committee will determine the best approach to racing based on the circumstances. All decisions of the Official Race Committee are final.
- Only Track Officials will be permitted in the track area.
- Track Officials are responsible for the proper conduct of the races. Good sportsmanship and behavior is expected for all attendees. Race Officials may ask anyone not following this rule to leave.
- Please make note that all decisions of the Official Race Committee are final.

Race Methodology

- Each car will race once in each lane. Each race is timed with electronic equipment. In the event the equipment fails, the heat(s) will be re-run.
- The accumulation of the race times will determine the standings for each racer.
- Racing Rounds for class category will be created based on attendance, check-in and inspection order, and other event and logistic factors.
- In the Samoset Council Championship Cup Pinewood Derby race, the top 10 fastest cars from the entire race receive trophies. 1st place Lions, Tigers, Wolves, Bears, Webelos I’s, & Webelos II’s will receive trophies or medals. 2nd and 3rd place in each Den will receive a medal. **The overall first place winner will be crowned the Samoset Council (or District) Champion.**
- The Trophy Ceremony will be at the conclusion of the day’s events.
- Additional Awards:
 - Best Design

RACE DAY

- Each car must pass inspection by the Official Inspection Committee before it may compete. The inspectors will disqualify any car not meeting these rules. Any adult or scout may appeal the findings of the Inspectors to the Race Committee, a majority of Officials will be assembled and based on majority rule the decision will be upheld or overturned.
- Every effort will be made to do the inspection without any altering of the car. If we can't verify that the wheels have not been lightened due to interior wheel weights, air dams, fenders, or other reasons, we will ask YOU to take the wheels off for inspection.
- After a car has passed inspection, only race officials may handle the car.
- After check-in, adjustments are not allowed. Car repairs during the race are not allowed unless authorized by the race officials.
- Once a car has PASSED inspection before the race, the car will not be re-inspected after the race unless there is probable cause to question the type of lubrication used. If the officials decide that further investigation is required the car will then have wheels removed after the race is concluded. If there is an illegal lubrication found that car will then be placed into the last race position of that specific race.
- Good sportsmanship and behavior is expected. Race officials may ask anyone not following this rule to leave. Typically, race officials will authorize a car repair if it was involved in a collision with another car or object. However, the decision to allow a repair is left entirely to the discretion of the race officials. Depending on the race officials, they may offer to assist with the repairs if needed.

**** Area/District Derbies ****

Same regulations apply.

Additional awards for top finishers in each Den level.