



2023



PINEWOOD DERBY
OFFICIAL RULES



Please honor the tradition of our derby and help your Scout build their car.





Welcome to the Jersey Shore Council 2023 Pinewood Derby Rules and Regulations. Please remember the Pinewood Derby is meant to be a team effort in which the Scout helps build their car.

A Cub Scout Gives Goodwill. Good sportsmanship is expected of all Scouts, responsible parents, and other representatives of the participating packs. All Race Officials have the authority to immediately disqualify a Scout should his behavior, or the behavior of his responsible adult, or the behavior of any representative of his pack is deemed either verbally or physically disruptive, abusive, or inconsistent with the Scout Oath and Law. Behavior-based disqualifications may not be appealed. Everyone should keep in mind the larger goal of Cub Scouts is setting the example of good citizenship and character, demonstrating kindness and courtesy at all times.

We ask each Pack to adopt these rules and regulations for their own Packs Pinewood Derby Race. In this way your Pack Pinewood Derby, your District Pinewood Derby and Council Extreme Pinewood Derby will all use the same rules.

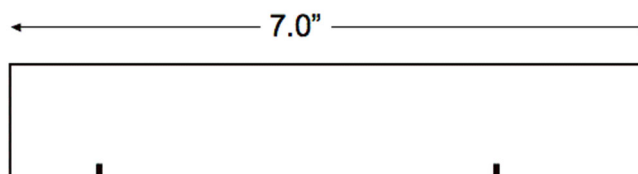


General:

- Competition in the Pinewood Derby is open to all Scouts registered as of January 1, 2023.
- Cars must be built with the materials furnished in the **NEW Official BSA Pinewood Derby Car Kit**, or the Official BSA Replacement Parts Kit. This includes the pinewood block, axles, and wheels (including official BSA colored wheels). With the exception of decorative and construction items (weights, glue, lubricants, finishing materials), only materials from the official kits may be used. Separately purchased items (contoured pinewood bodies, machined wheels, and single-piece axles) are specifically prohibited.
NOTE: BSA National changed the design of the wheels and axles in 2009. The Official Pinewood Derby kit must be purchased from the Scout Shop at the Clayton Service Center, the National Scout Shop or an official BSA Distributor. Other brands, such as Pine Car, have different axle spacing and different size parts and will be disqualified. Pre-cut cars from official BSA distributors must comply with design specifications listed below.
 - A new car must be built each year BY THE SCOUT who is racing. Cars made in prior Scout years are strictly prohibited.
 - Only one car per Scout can be entered in the Scout race.
 - Use of the new Official BSA pre-cut (contoured) body kits, although not illegal, is strongly discouraged because it does not align with the goals of this event.
 - **The same car without modifications must be used for the Pack, District and Council races.**

Dimensions and weights:

- Width, including wheels and axles, must not exceed **2 3/4 inches (6.99cm)** or it may interfere with the car next to it.
- Length shall not exceed **7 inches (17.78cm)**. **NOTE: Verify wood block length before starting to cut out your car, as some blocks are actually slightly longer than 7 inches.**

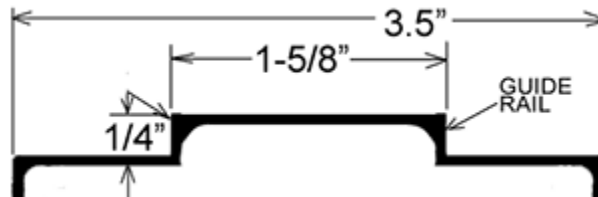




BOY SCOUTS OF AMERICA

JERSEY SHORE COUNCIL

- Cars must clear the center rail of the track, which is **1 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 $\frac{3}{8}$ of an inch to avoid contact with the tracks center guide strip. It is recommended that weights on the bottom of the car be inset so they are flush with the bottom of the wood block.
- Minimum width between wheels shall be **1-3/4** inches so the car will clear the center guide rail.



- Maximum height of the car shall not exceed **5-1/2** inches or it may not clear the finish line.
- Weight shall not exceed **5.00 oz.** (141.75 grams). Overweight cars must be reduced to running weight or below before they can be entered. The readings on the official race scale shall be considered final and all decisions made by race day officials are final. All Packs and Districts must have a 5oz tare weight for calibration purposes before inspections can begin at any event.
- No part of the car may protrude beyond the starting line mechanism. The front edge of the car must not be more than **1** inch above the wheel lane of the track and be at least $\frac{1}{4}$ inch wide at the center of the car. The nose of the car cannot come to a sharp point.



- Any details such as steering wheel, driver, spoiler, decals, painting, and interior details added must be within length, width, and weight limits.
- No loose materials of any kind shall be permitted in or on the car. All weights shall be attached with screws, nails, glue, etc. – tape is not permitted.
- 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.

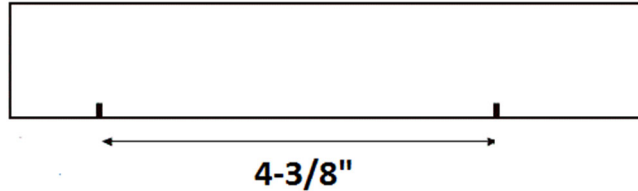
Axles and Suspension:

- BSA nail type axles only
- Axles may be polished, de-burred, straightened, bent and lubricated.





- No grooved axles are allowed
- Only powdered graphite lubricant is permitted. No Oil lubricants, even those that dry after application.
- Cars shall be lubricated before inspection. **No Racers/Parents will be allowed to have lubricants in the building or at any race site.**
- One-piece axles that extend through the width of the car to support both wheels are not permitted.
- It is NOT required for 4 wheels to touch the track
- Axles may be relocated from the original axle slot locations, but the original wheel base (distance between the axles) shall be maintained at **4-3/8** inches. The wheel base may not be staggered and/or extended.



Wheels:

- Use only Official BSA Wheels; colored Official BSA Wheels are permitted.
- Wheels may not be run in reversed position.
- Each wheel must be attached by an axle.
- All lettering and numbering, both inside and outside, must remain complete and be visible.
- 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 (29.72mm). 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.
- Minimum outside diameter of wheel must be equal to or greater than **1.170** inch (29.72mm), in order to maintain the ridges on the outer edge.
- Tread surface must be flat and parallel to the wheel bore.
- No material may be removed from the inside wheel surfaces at any point.
- Wheel Bore treatment is allowed but limited to polishing. 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).
- Coning the inner hubs and truing the inside tread edge is allowed, as long as overall wheel width is not reduced below **0.36** inches (9.14 mm). Coning the outer hubs and truing is allowed as well but no other modifications to the outer hub will be allowed at all.
- 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.
- There must be at least four (4) wheels on the car, however it is not required that all four (4) wheels make contact with the track surface. One (1) wheel may be lifted from the track surface.
- Non-Dominant/Lifted wheels must meet wheel specifications set forth above.
- **Derby officials and/or Judges reserve the right to measure the wheel with calipers to verify dimensional compliance with official wheel size restrictions. If found in non-compliance a racer may replace their wheels with spare stock wheels that race officials will have on hand.**

As a point of reference, this is an image of Official BSA wheels/axles purchased at an official BSA retailer.





The following diagram offers wheel measurements & examples of disqualifying wheel modifications.

BSA PINEWOOD DERBY WHEEL RULES
CLARIFICATION OF DISQUALIFYING / ALTERED WHEELS

No alteration, narrowing, lathe cutting, or re-shaping of wheels (inside or outside) is allowed!!!!

	ROUNDED WHEEL FAIL	"V" WHEEL FAIL	CUPPED WHEEL FAIL	REDUCED DIAMETER FAIL	
"H" WHEEL FAIL	RIBBED WHEEL FAIL	SPEED WHEEL FAIL	SLANTED OUT FAIL	SLANTED IN FAIL	KNIFE EDGE FAIL

NO LIGHTENING OF THE WHEEL IS ALLOWED

LIGHT SANDING OF WHEEL TREAD TO REMOVE IRREGULARITIES IS PERMISSABLE. WHEEL TREAD MUST BE FLAT!

MINIMUM WHEEL DIAMETER ALLOWABLE IS 1.170 INCHES.
 MINIMUM WHEEL WEIGHT OF EACH WHEEL IS 2.45 GRAMS.



- **Note:** There are after-market modified wheels available that have been **LIGHTENED**.
- This is usually done by turning the wheels on a lathe and removing material from the inside of the wheel.
- These wheels are **NOT** allowed and can be **EASILY RECOGNIZED** at inspection.

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
- No Bearings or Solid one-piece rod style axles
- Axles and wheels attached to any device that mechanically alters rotation or spin.
- Air shields, wheel well covers or any other device that covers the hollow area of the wheel
- Hubcaps and/or Stickers on wheels.
- Loose objects on car. All weight must be securely fastened or embedded in the car.
- No live ammunition allowed.
- Washers between the wheels and car body



Race Operations and Miscellaneous Rules:

- **All Cars MUST pass inspection before being allowed to race based on these rules and regulations.**
- All lubrication of wheels must take place prior to inspection/check in
- An approved inspected car will then be checked in and not be touched by anyone but race officials. Once all division races are completed, cars will be released by Race Officials to the scouts who participated.
- Cars will be checked in before every event at the Pack, District and Council Races to check for rule compliance. **Just because a car passed at one event does not mean it will automatically pass at the next event.**
- Officials have the Right to Disqualify Any Car, that cannot be brought into compliance by the time registration ends for that rank or does not meet all of the stated rules and specifications set forth herein. The Race Officials Decision is Final.
- You have the right to an appeal. If a Race Official makes a ruling and you wish to appeal it – **ALL** Officials will be assembled and based on majority rule the decision will be upheld or overturned. This appealed decision is FINAL and no more appeals allowed.
- Race officials shall have a copy of these rules during the entire event to assist in settling said disputes and they will make all final decisions based on fairness to ALL scouts.
- **Un-sportsmanlike conduct or behavior (including verbal or physical threats) by any race participant or member of the audience may be grounds for expulsion from the competition and/or the race area.**

During Races:

- Full CLASS “A” uniform, as determined by their Pack and/or District, is recommended for all racers.
- Individual Unit and/or District race format is at the discretion of sponsoring Unit. (Example: double elimination, best time, bracket style racing, Perfect N)
- Racers will be grouped by Cub Scout Rank at the time of their units PWD race. (i.e. AOL who crossover to Boy Scouts may still race at the District PWD as AOL)
- Each race is timed with electronic equipment.
- In the event the equipment fails, the race(s) will be re-run.
- If a car interferes with another car during a heat, that heat shall be rerun. If the same car causes interference a second time, a third heat shall be rerun without the interfering car. Race Officials should use their best judgement to be fair if problems with the track itself are causing issues with races.
- If a car jumps the track and does not interfere with another car, and finishes the race it will not be re-run.
- If an item affixed to a car falls off during a race, and in the opinion of the race official the car is still able to race, repairs will not be allowed.
- If a car suffers a mechanical problem *during/after* a heat (loses on axle, breaks a wheel, etc.) or is unable to finish, the participant or a designated adult will be allowed **5** minutes to make the repair under the supervision of a race official. The heat will be rerun (if during) - Only ONCE.
 - No weight can be added to the car as part of the repair action. If the car is unfit to race after the 5-minute period, or becomes disabled after further racing, it will be disqualified and taken out of the race.
 - No other modifications are allowed – such as re-lubing; only the repair to the item(s) can be performed.
- If a car suffers a mechanical problem at any time other than a heat (accidentally dropped, mishandled etc.), the race team will have up until their next scheduled heat to repair the car, but no less than **5** minutes.
- In the Event of a Tie, a run-off race will be run.





- Any car that is discovered to be illegal during the competition by a Race Official will be disqualified from competition.

After the Races

- The following Awards will be presented. (Awards could vary by unit/district/council)
 - 1st – 3rd Lion
 - 1st – 3rd Tiger
 - 1st – 3rd Wolf
 - 1st – 3rd Bear
 - 1st – 3rd Webelos
 - 1st – 3rd Arrow of Light
 - 1st – 3rd Overall
 - Best In show, scout division only. Voted on by the scouts.



Do not deviate from official rules and regulations at Pack and/or District events. Cars that are allowed to deviate are not guaranteed to pass at District or Council events. That means, only cars which meet these rules and regulations shall be allowed to race.

General Rule: If you are unclear about anything set forth herein, seek clarification of the rules prior to race day. If the rules don't specifically address something you would like to do, please seek permission ahead of time. Questions can be submitted to Stephen Sluka ssluka@trpack1.com for review by all District Derby officials. The goal is not to have to disqualify any Scouts on race day.

We do ask, all questions, complaints, and comments go to the District Pinewood Derby Committee Chairman

District	PWD Chair	Contact info	District Race Location
District North	Stephen Sluka	ssluka@trpack1.com (732)-803-8478	TBD
District South	Joe Rohr	drjrohr@gmail.com (609) 335-2535	TBD



Please remember – This event is about our SCOUTS.
 They need to participate and help in creating and building their cars.
 Don't look at winning as the only prize they will take away from this event.

