

TUSCARORA COUNCIL NEUSIOK DISTRICT



Official Cub Scout Pinewood Derby

Rules and Regulations

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The rules contained in this packet pertain to the Neusiok District Pinewood Derby only. It is recommended that each Pack Pinewood Derby follow these rules. If not, the winning cars that will race in the District Derby may not conform to these rules and MAY BE disqualified. There will be no exceptions due to Packs using different or outdated rules.

GENERAL RULES

- **Qualifications:** The Neusiok District Pinewood Derby race is open to Scouts registered in the Neusiok District who placed **1st, 2nd, or 3rd** in their Pack's Pinewood Derby race for the current year. **Three overall Best of Show cars for each Pack will be allowed entry into the District Best of Show competition.** A Scout may enter as one of the Best of Show, and a 1st – 3rd place racer. **A maximum of six (6) Scouts per Pack. 1 car per unit may also be submitted for the Neusiok District Outlaw race for adult leaders/parents (Must not damage the track or other vehicles, and must remain compliant with the guide to safe scouting. No other rules pertaining to vehicles apply in the outlaw race)**
- **Disqualification:** Any car and/or Akela/Cub team not conforming to these official rules will be disqualified.
- **Single Entry per Person:** Only one car may be registered per Akela/Cub team (Scout and adult partner) for the race. (This does not disallow an Akela from participating on more than one team (i.e. 2 or more Cubs). Each team must use the car they registered with.
- **Attendance:** Unless otherwise approved in advance by the Official Race Committee, the Cub Scout and their adult partner (Akela) must be present to race their car.
NOTE - Absenteeism approval should not be given for reasons such as ball games, birthday parties, or other such conflicts. Absenteeism approval should only be considered in cases of severe sickness or other such unavoidable circumstances. For concerns involving potential absenteeism, please contact the District Executive, Brandon Lanning, at (919) 820-9663 or at Brandon.Lanning@scouting.org.
- **Uniform Requirement:**
 1. Scouts must correctly wear their Class A uniform to participate in the race. This includes an official BSA shirt (blue for cub scouts, blue or tan for Webelos), official BSA pants, and official BSA socks. Neckerchief and slide are optional, but must follow BSA Class A Uniform standards if worn. Shirts must be tucked in. Additional Class A Uniform information can be found online at scouting.org
- **Inspection and Registration**
 1. Each **car must pass inspection** by the Official Inspection Committee before it may compete.
 2. If a car fails to pass inspection, the Akela/Cub team will be told what problems exist so they may correct the problems to meet the rules, as time allows.
 3. Any Akela/Cub team may appeal the findings of the Official Inspection Committee to the Race Committee Chairman, whose decision is final.
 4. **Once a car has passed inspection, the Cub Scout must take his car directly to the impound area** provided by the Race Committee and place it in the position decided upon by the impound area supervisor. **Once it is in place, the car is considered impounded** and cannot be moved until it is time for that car to race. At that time, **ONLY the Cub Scout** or the Official Race Committee, if necessary, may handle it.
- **Late Registration:** Cars must be registered and have passed the final inspection by the deadline set by the Pinewood Derby District Committee. Time may be extended to accommodate those still in line or other extenuating circumstances, pending committee/chair approval.
- **Car Repair:**
 1. Should a car be damaged (being dropped or otherwise) by the scout's action(s), the Scout may, to the best of his ability, perform repairs with the assistance of his adult partner with a five (5) minute time limit. All repairs must occur in the 'Pit Area', under the supervision of a district representative.
 2. If a car is damaged due to track fault or by another car or person then, at the sole discretion of

the Race Committee Chairman, additional repair assistance and/or time may be allowed to repair the non-offending car.

3. Repaired cars must be re-inspected and pass inspection by a District race official.
 4. Cars repaired **may not** be re-lubricated.
- **Removal of Cars:** Should the cars need to be moved prior to the race due to unforeseen circumstances, only the Official Race Committee may move the cars

CUB SCOUT RACE CAR DESIGN SPECIFICATIONS

- **Cars used in previous Pinewood Derby's may not be used.** All cars must be built from scratch by the Akela/Cub team for the current Pinewood Derby Season. This includes minor changes to cars, repainting cars, etc.
- **Cars purchased in their completed or partial form online may not be used.** The Akela/Cub team must completely build the car.
- **Cars cannot be sent to a third party for tuning or other performance enhancements.** Cars must be built, tuned and/or aligned by the Akela/Cub team.
Note: If needed, assistance by a den leader, pack member, friend and/or family member is allowed but must be done with the Akela/Cub team helping; professional assistance is not allowed (see below).
- **Only BSA Pinewood Derby components may be used; third party blocks or components (wheels, axels, etc.) cannot be substituted.** This limitation does not apply to components used that are in addition to those required to build the car (decorative, weight, lubrication, etc.)

NOTE - If the Akela/Cub team lacks the resources/knowledge to complete their car, it is suggested that you contact your leader and request a workshop and/or assistance from another member of the pack.

- **Dimensions:**
 1. Cars cannot be more than **2 ¾" wide.**
 2. The maximum height is **3 ½"**.
 3. The car cannot be more than **7" long.**
 4. The car need to no less than **1 ¾" wide between the axles.** (Measurement from left to right)
 5. The bottom of the car must **be at least 3/8" above the ground.** (Allows clearance for track)
 6. The point of contact for the starting pin must be at less **¼" wide.**
 7. No part of the car (body, wheels, or attachments) may protrude past the starting pin.

NOTE – The block of wood out of the box is 1 ¼" wide, left to right. This allows for no room to cut/heavy sand the sides of the car.

- **Weight:**
 1. The finished car may not weigh more than **5.00 oz.**, as determined on the Official Race Scale. The official race scale is highly calibrated, and its measurement is final.
 2. All car parts must be firmly attached. No movable weights are allowed.
 3. Dangerous substances such as mercury and lead are not acceptable.
- **Lubrication:**
 1. Any lubricant used must not foul or damage the track.

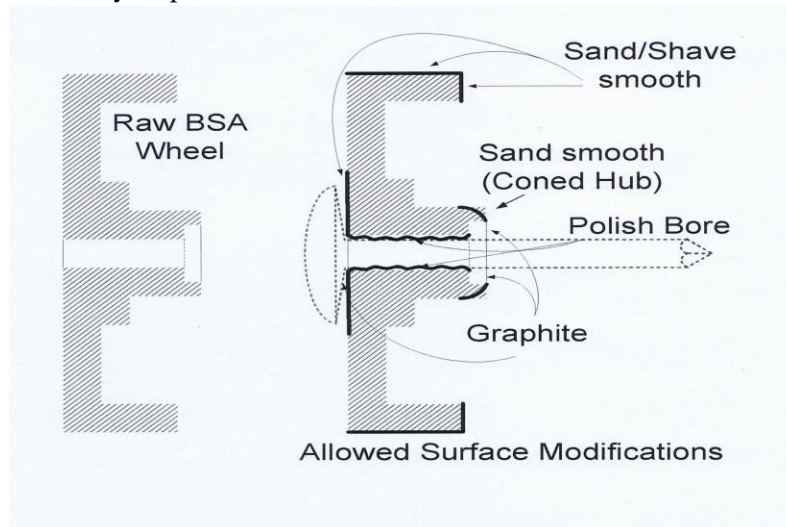
Note: There have been numerous parties testing lubrication options; Graphite is common, but can be harmful to yssour health if used improperly. Carefully follow instructions for graphite application.

- **Wheels**

1. Only the current official BSA Pinewood Derby wheels may be used.
2. All lettering/numbering, both inside and outside the wheel, must remain complete and visible. The fluting (and other BSA markings on the outside wheel area must remain visible). “Fluting” refers to the bumps on the outer edge of the wheel.
3. No bushings, washers or bearings are allowed in any configuration.

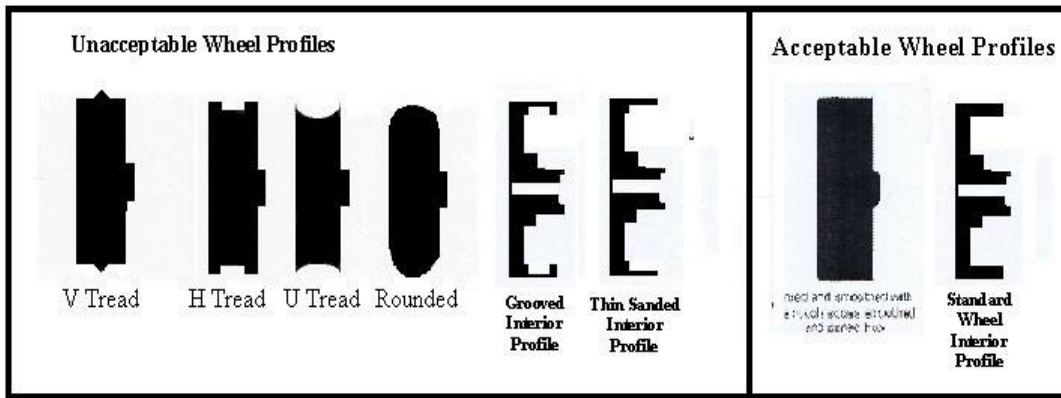
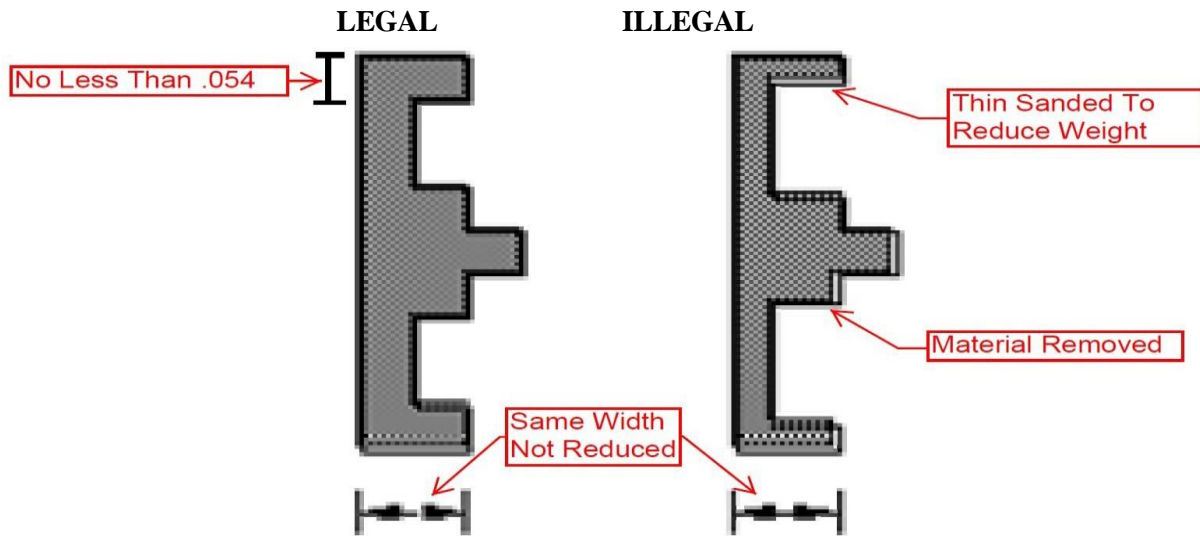
- **Legal Wheel and Axle Modifications**

1. The outer wheel surface (tire tread) may be sanded, shaved, or polished, so long as they do not violate any other rules outlined in this official guide.
2. The outer wheel surface must remain flat.
3. The inner hub may be slightly coned.
4. The outer surface of the wheel hub (where the axle head rubs) may be beveled and/or smoothed.
5. The axle hole may be polished.



- **Illegal Wheel/Axle Modifications**

1. The tread surface/thickness cannot be less than **0.054"**. *This will be measured using a highly calibrated tool, and its measurements are final.*
2. No part of the wheel may be reshaped in any way to minimize tread contact or alter aerodynamics. **NO ROUNDED, CURVED, H OR V TREADS** are allowed. (see diagram on next page)
3. The inner tread and/or inner wheel cannot be thin sanded and/or grooved to reduce the wheels weight.
4. You cannot drill holes in the sidewalls.
5. Hubcaps are not allowed.
6. Axle positions may not be altered (moved forward, backwards, or angled). They must remain in their original positions.

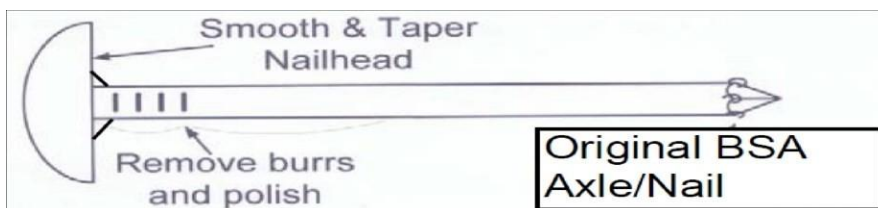


- **Axle Specific Rules**

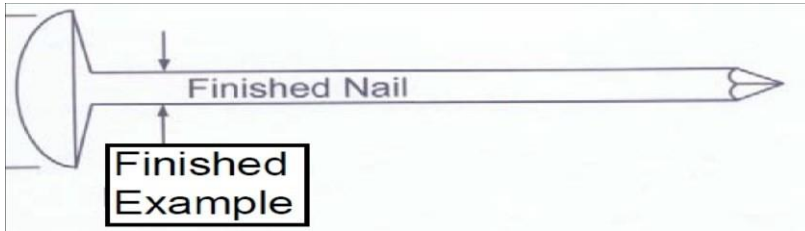
1. **Only BSA axles/nails may be used.** These are included with your Pinewood Derby Kit.
2. Axles must not be connected to any device that mechanically alters rotation and/or spin.

- **Some Possible Axle Modifications (see diagram on next page)**

1. The axle burrs and casting shoulders/wings (on inside where axle shaft meets axle head) may be removed.
2. The axle head may be slightly coned to reduce contact with the wheel hub.
3. The axle shaft and axle head may be sanded and/or polished.



Some Possible BSA Axle/Nail modifications.



*NOTE - The above required use of only BSA axles/nails is intended to provide an area in the cars construction in which the Cub Scout can safely do all the work/steps under his Akela's guidance. It cannot be stressed enough how important it is that the Cub Scout **significantly** contributes to the construction of his car. The preparation of the axles/nails provides a great opportunity for the Cub Scout to safely contribute to his cars construction, while learning a skill and developing pride in his accomplishments. The suggested improvements listed above involve putting the axle/nail into a small drill (clamped into a vise works best), which serves as a lathe. With appropriate supervision, this is a relatively safe practice even for the youngest scouts, as it does not involve a saw or other significantly dangerous power tool. You should always use care and close supervision while operating the drill/lathe and the related tools. A small file, sand paper and polishing compound can be used to do all the following. **Always wear safety glasses and masks for fine debris that is removed in the lathing process.***

- **Decorations / Details / Attachments:**

1. Details such as steering wheel, driver, windshield, fenders, decals, etc. are allowed and encouraged, as long as they do not exceed maximum height, length, width and weight rules, and do not cause the car to violate any other rules outlined in this official guide.
2. Cars with wet paint on the day of check-in will not be accepted.
3. The car may not ride on springs.
4. No mechanical, kinetic, or other energy storage mechanisms are permitted.
5. The care may not be constructed or treated in such a way that the track's starting mechanism imparts momentum to the car.

RACE RULES AND PROCEDUES

- **Race Day Lubrication**

1. Lubrication must be done outside of the building, or in a place specified by the District Committee before inspection.
2. Cars may not be lubricated or re-lubricated once they have undergone and/ passed inspection.

- **If A Car Leaves Its Lane**

1. If, during a race heat, a car leaves its lane or the track but does not interfere with its opponent, then the race results will remain unchanged.
2. If the car leaves its lane or the track and interferes with another car, the race will be re-staged and re-run.
3. If the same car leaves its lane or the track and interferes with another car during the re-run, that car will be judged last place and the race will be re-staged and re-run again without the offending car. The offending car will be given a final time of 9.999 seconds.
4. If a car leaves its lane, the Pinewood Derby chairman, at his sole discretion, may inspect the track. If a track fault is found to be the probable culprit, the race heat may be re-run after the track is repaired.

- **No Finishers**

1. If during a race heat no car reaches the finish line on the track, the car which went the farthest in its lane shall be declared as the heat winner. All cars will be given a final time of 9.999 seconds.

- **The Race Area**

1. Only race officials and Cub Scouts racing in the current heat are allowed in the track area.
2. All spectators and non-racing persons must remain in the spectator area while the races are conducted.
3. Violation of these two rules will result in being asked to return to the spectator area. Upon failure to comply with multiple requests, the penalties may include disqualification for the event, or removal from the grounds as seen fit by the Race Committee Chairman.

- **Impound / Track Area**

1. No food and/or beverages will be allowed in the impound or track areas.
2. The impound and track areas should be prominently and clearly identified with “No food/beverage” signs posted. **THIS APPLIES TO ALL PERSONS OCCUPYING THE AREA.**

NOTE – It is the race committee's responsibility to protect the cars from damage while in the impound area. Therefore, the displaying of the cars in an unprotected/public area where they are exposed to potential damage from spectators (spilled drink/coffee, knocked over table, etc.) is strongly discouraged. Spectators should not be allowed within close proximity to the cars until after the race has been completed. Furthermore, no food or beverages are allowed in the impound or track areas. A sticky drink or doughnut residue can destroy a car that an Akela/Cub team has spent a significant amount of time preparing and tuning.

- **Track Damages**

1. Any person other than those responsible for the track set-up, installation and/or operation must not touch the track. Violation of this rule is subject to disqualification and/or expulsion from the competition area.

- **Sportsmanship**

1. Good behavior and sportsmanship is expected.
2. Race officials may ask anyone not demonstrating good sportsmanship to modify their behavior. Failure to comply with the request of the race official may result in disqualification and/or expulsion from the competition area.

District Executive's Notes and Comments

This project is intended to be a parent/guardian and youth event and is recommended as such by the National Boy Scouts of America. The Neusiok District Pinewood Derby Committee strongly suggests that each parent/guardian emphasize this idea with their scout.

Akelas should make every attempt to emphasize and encourage your Cub's ability to learn and allow them to participate in as much of the Pinewood Derby Car's construction as possible, so long as it is done safely. The Pinewood Derby is designed to teach a Cub Scout to take pride in their creation and/or successes, and to learn new skills along the way. Take the time to explain to your Cub what the two of you are trying to accomplish, how to do it safely, mistakes to look out for, etc. Once you have taught them the basics, you can supervise and allow them to learn from their mistakes. It can certainly be difficult, but it is very important to resist the temptation to "do it for them" at every turn. Please exhibit good safety habits and/or standards in working with all tools and materials. Remember that you are setting an example, so make it a good one. Use this event as a chance to spend quality time and to bond and promote good character traits and morals with your Cub Scout. Let's all remember to have fun, and good luck!

SPORTSMANSHIP

Two things the Pinewood Derby requires each participant to learn are 1) the skills necessary to build a car, and 2) fair play, adherence to the rules, and honesty must be always demonstrated. Even more important is how we act and behave while participating in the Pinewood Derby or any other group activity; exhibiting good sportsmanship.

The first thing to remember about sportsmanship is that everyone's skills are a little different. You may be good at something like singing or drawing, but not as good at something else like basketball or computers. Parents have different skill levels, too. Remember, you and your friends are individuals first and racers second. Having respect for others should be encouraged and instilling the Cub Scout Motto of "Do Your Best" should come first.

Honesty is also an integral part of good sportsmanship. We must compete honestly and fairly. Without adherence to the rules, it would be impossible to have a successful Pinewood Derby experience. We encourage you to review these rules with your pack and explain why some rules may be the way that they are. This provides a level of ownership for the Scouts and allows them the opportunity to demonstrate honesty should they see something wrong.

There are winners and losers in every competition. You accept this when you choose to compete. There may be times when you win and feel happy, and times when you lose and feel unhappy. Being a winner is easy and losing is sometimes hard. If you win, you must not brag or gloat. If you lose, you should try not to feel jealous or bitter. To be a good sportsman, you must be able to say, "I did my best" and be satisfied with the results. You should always be able to appreciate and feel happy for someone else and share in their success, just as you would want them to share with you. A good thing to remember is that as long as you give your very best effort and don't give up you didn't lose; you just didn't come in first place this time.

Good Luck and Have fun!!