



# Goose Creek District

Pinewood Derby Championship

March 9 2024



## RULES AND PROCEDURES

All participants and their race entries  
to meet all rules noted in this document.

**NOTE:** These rules are subject to change, at the discretion of the Derby Chairman. Consultation with the race committee will guide judgment. If a substantial change is to be made, it will be posted before racetime.

*Rules Updated 11/30/2023*

## FINAL RULES

All cars must be registered and pass inspection **prior to the first race.**

## QUALIFICATIONS

**Rank Classes:** Any from Goose Creek District Area Cub Scout (Lions, Tigers, Wolves, Bears, Webelos, Arrow of Light) are eligible to attend.

**Open & Outlaw Classes:** Anyone who made a car under the rules included in this document and are associated with the Goose Creek District Cub Scouts, friends, family or scouts.

## LOCATION

Sanders Corner Elementary School  
43100 Ashburn Farm Pkwy, Ashburn, VA 20147

## DISTRICT SCHEDULE

FRIDAY, MARCH 8, 2024 6:00PM - 9:00PM  
Race Registration and Drop Off

SATURDAY, March 9, 2024 9:00AM - 2:00PM  
Race Drop off  
In-Person Races  
Race Day Races Broadcast Online

## REGISTRATION FEE

\$13 per registration (Pre-registration Only)

Every participant receives:

Collector's Patch

Entry into a Drawing

<https://www.pack1154.org/derbyregistration>

## DISTRICT DERBY WEBSITE

<https://www.pack1154.org/goosecreekpinewood>

## AWARDS

### Rank Classes

- Outstanding Design

**Award:** one per rank class

- **Speed Awards:** 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> place per rank class

- **Grand Finale Speed**

**Awards:** 1<sup>st</sup>, 2<sup>nd</sup> 3<sup>rd</sup> place

### Design Awards

- Artistic
- realistic car
- best paint job
- non-car car
- pit crew favorite
- organizer favorite

- scout spirit
- outstanding design

### Other Classes

- **Open Class Speed**

**Awards:** 1<sup>st</sup>, 2<sup>nd</sup> 3<sup>rd</sup> place

- **Outlaw Class Speed**

**Awards:** 1<sup>st</sup>

## I. THE PINWOOD DERBY AND SPORTSMANSHIP

The Pinewood Derby is perhaps the highlight of a Cub Scout's year because of its fun and excitement. It is a time for a parent or guardian and a scout to work together in a hands-on project that builds skills and character. The craft skills come from learning to work with wood, planning a design, and creating a unique derby car. **The character development comes from learning about sportsmanship. The Pinewood Derby Committee STRONGLY SUGGESTS that each parent emphasize this idea with your scout.**

Sportsmanship is how we act and behave in preparing for and participating in group activities like the Pinewood Derby. There are four themes our district would like to emphasize regarding sportsmanship.

1. **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. This doesn't mean that you are a good person one time and not good another time. You can always be a good person, whether or not you have good car-building skills. Remember, you and your friends are individuals first and racers second. This idea is often called having respect for others.
2. **Follow the rules.** Without rules, there would be no Pinewood Derby. You will never know if you are really good at doing something unless you follow the rules. This is often called being honest.
3. **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 must not 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 must also be able to appreciate and feel happy for someone else when they run a good race or build a neat car.
4. **The scout should do as much work on the car as he or she is able to do.** *The fun of the derby is for the scout to make their own car and watch it race.* Adults should work with the scout and make the car as a project together, **allowing the scout to lead with their own creative ability.** The use of kits, finished parts, and purchased cars undermines the spirit of good sportsmanship, i.e. the scout takes credit for work done by someone else. Adults should always supervise the use of any power tools (drills, saws, sanders, etc.) but **let the scout get as much fun and experience out of building the car as possible.**

## II. DERBY RULES

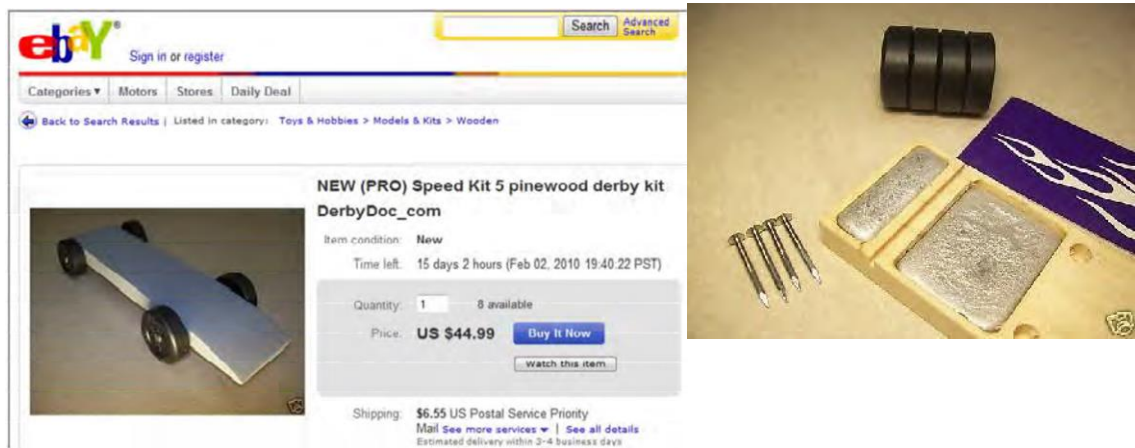
1. Any registered Cub Scout from a Goose Creek District pack may enter cars in their Rank Class, there is no requirement for previous participation or placement in a unit derby. Any scout, family or friend of Goose Creek Council Area Cub Scout Packs may enter cars for the Open or Outlaw Class. (Note, **this widens the pool of entrants for the open race from previous years.**) The rules in this booklet apply to all classes: Rank, Open & Outlaw. Outlaw Race shall follow **Section V Outlaw Mod Class for specific outlaw class rules.**
2. **All cars entered must be constructed from the "Official Grand Prix Pinewood Derby Kit"** (referred to below as "the kit") as distributed by the pack. "Precut" kit cars will **NOT** be allowed

in any category except for the Outlaw Class. *The car being raced must be constructed primarily by the participant entering the race. Other pre-made cars, e-Bay purchased cars or car kits, etc., are strictly prohibited and MAY NOT BE USED.* Additional kits may be purchased from an official Scout Service Center if they are of the exact type manufactured by the BSA as specified above. BSA colored wheels as noted in rule 26 may be used.

**Example 1. Pre-cut and/or non-BSA kits may NOT be used.**



**Example 2. E-Bay cars and kits may NOT be used.**



3. Cars must have been built since the conclusion of the previous year's derby. No parts from previous derby cars may be used except for weights. "Weight" is considered to be any material on the car that is not provided in the kit. Re-entries from prior year races are NOT allowed, except for Open or Outlaw Classes.
4. Registered Goose Creek scouts compete by rank: Lion, Tiger, Wolf, Bear, Webelos, and Arrow of Light. The top 5 finishers in each rank advance to the Championship Race.
5. Each car must pass a technical inspection before it is formally registered for competition.
6. The Inspection Committee has the authority to disqualify any car that does not conform to the rules as described in this booklet. Cars that fail the initial inspection may be taken home for modifications or modified at the worktables available at registration. Early registration and check-in are encouraged to allow time for any adjustments required due to a failed inspection.
7. All entries must be submitted online prior to race day. No onsite registration. Online registration opens on Jan 5, 2024 will remain open until noon on March 8.

8. For registered cars, check-in and inspection are in the evening prior to Race Day and prior to the first race time. Drop off and inspection close 30 minutes prior to the first race time. All times are posted on the event website.
9. The race participant or representative must be present at inspection and check-in. If the car fails inspection, the participant or representative will be given the reasons for failure and can make changes to comply with inspection rules. Once changes have been made, the car will be re-inspected. If the participant or representative is not present, they can give permission for an event official to alter the car to comply with the rules to pass inspection prior to the first race. If a race official has completed the required alterations, a different race official will be required to re-inspect the car for final inspection.
10. The official weight will be determined using scales provided by the Pack Pinewood Derby Committee. The weight shown on this scale is final. At the time of final weigh-in, all car parts and materials must be firmly attached to the car. If the car is over or under the weight limit, weight can be removed or added by the scout at the Pit Area until check-in closes.
11. Once a car has been checked-in and inspected, senior race officials can review a car if a missed violation is found prior to the race. Every effort will be made to provide ample notification and time for correction of any car found to be in violation of the rules. Contact information provided on the registration form will be used to contact the participant or representative for notification of any violations.
12. In-person spectators will be allowed during the race. Please note, if during the race the car malfunctions and requires adjustments of any kind, **ONLY** race officials can make the repair/adjustment. A car will be disqualified if a good faith repair cannot be completed by event officials. Participants can request for event officials to not repair in the event of malfunction. In this case, the car will be disqualified if it cannot complete a test run down the track passed the finish line.
13. A scout may enter only one car in a rank class. Scouts may enter the Open and/or the Outlaw Class with additional cars.
14. No car may be altered (to include the addition of lubricants) except in the case of a car malfunction repair after it has been registered. The Pinewood Derby Race Committee will store it until race day.
15. Cars are returned only after the close of the competition and/or scheduled pickup times. If participants cannot pick up cars at the designated times, they can arrange for a representative to pick up later. To arrange alternative pick up, contact us at [goosecreekderby@pack1154.org](mailto:goosecreekderby@pack1154.org).
16. Interpretation of the rules described in this booklet are at the sole discretion of the Derby Committee and independent inspectors.
17. On Race Day, all inquiries regarding rules interpretations and procedures to the Pinewood Derby Chairman or Race Officials prior to the start of the next race. Contact of derby officials can be made in-person or by text or chat in the case of virtual participation. Please see race day contact for inquiries. Specific race heat inquiries must be submitted prior to the end of the third

heat following the said heat.

18. Decisions of Race Officials on questions of rules interpretations and procedure may be appealed to the Pinewood Derby Chairman. All decisions of the Pinewood Derby Chairman are final. Decisions of Race Officials on questions of fact (i.e. the result of a specific race) may not be appealed beyond the Track master and/or Finish Line Judges. Contact of derby officials during a virtual event, will be made by text or chat. Please see race day contact for inquiries. Specific race heat inquiries must be submitted prior to the end of the third heat following the heat in question.
19. Unsportsmanlike conduct by any participant or spectator will be grounds for expulsion from the competition and/or the race area.

### III. RACE CAR DESIGN STANDARDS

20. Materials from the kit may be supplemented but not replaced. Lion kits start with the wedge and can be modified. Lions may use the "Official Grand Prix Pinewood Derby Kit" in place of the pre-cut wedge kit.
21. Maximum height shall not exceed 6 inches for the Open and Rank Classes.
22. Race cars may be no longer than 7 inches, nor wider than 2-3/4 (2.75) inches, as determined by the official gauges during the Registration and Inspection. All cars must meet this requirement.
23. The car must clear the lane guide on the racetrack. Underside clearance of at least 3/8 (0.375) inches and inside wheel-to-wheel clearance of at least 1-3/4 (1.75) inches is recommended. (Note: This is the original width of the car body.) Adequate clearance is the responsibility of the race car builder. All cars must meet this requirement.
24. Race cars may weigh **no more than 5.00 ounces of (total weight)** as determined on the official scales. All cars must meet this requirement except in the Outlaw class. **The precision of the weight scales will be set to .01 (hundredths place), therefore a car weighing 5.009 oz is considered as the legal weight of 5.00 oz.**
25. Weight will be considered part of the car for purposes of all measurements. All weight must be securely fastened to the car by permanent glue, nails or screws, but not by "sticky substances" such as tape or tack spray. Weights shall be passive (non-moveable, non-magnetic, non-electric, non-sticky, etc.). No liquids or loose materials of any kind are permitted in or on the car.
26. The pre-cut slots in the wood block provided will be used for the placement of the wheels. Only if these pre-cuts are not straight may they be filled and re-cut. However, the positioning of these slots may not change more than 1/4"; the original wheelbase (distance between the front and rear axles, center to center) must not change; and the distance between the front axle and the front of the car shall not be modified. If a wheelbase is questioned, the inspection committee will use a comparison wood block from an Official BSA Pinewood Derby Kit to make a final determination as to whether the wheelbase is acceptable.
27. **The front of the car must have a minimum of a 1/4" flat surface in the center to be placed**

**against the starting mechanism.** The **distance between the front axle and the front of the car shall not be modified**, example, it cannot have a cutout notch. No part of the car may extend beyond the starting mechanism of the racetrack.

28. Cars with pointed noses narrower than  $\frac{1}{4}$ " , like the one pictured below, are difficult to stage and may not trip the electronic finish line at the point of crossing. This may result in a disadvantage to the racer.

Example 3. Noses must be at least  $\frac{1}{4}$ ' wide in the horizontal axis.



- a. Indented noses are prohibited. Cars like the one pictured below will "stage" further down the track, and thus are not traversing the same course as other cars.

Example 4. Indented noses and cutout notches are NOT allowed.



29. The car shall roll on the wheels provided in the official BSA car kit or in an official BSA replacement wheel and axle kit, e.g. the multi-colored Official BSA Pinewood Derby wheels are allowed. The wheels must have the "BSA PINEWOOD DERBY" printed on the face as shown in Example 5. Similar non-BSA wheels may be on the market available for purchase such as the black spoked wheels or non-labeled wheels but they are not allowed as shown in Example 6.

**Example 5. Only official BSA wheels are allowed, which are shown below.**

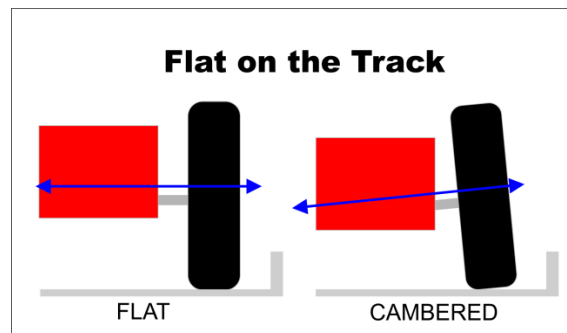


**Example 6. Wheels not from the official BSA kit are NOT allowed. The wheels shown below are not marked as official BSA wheels and are not allowed.**



30. **Axle/Wheel Alignment: Three wheels must simultaneously touch the track surface.** All four wheels must be able to come into direct contact with the body of the car. The portion of the wheel surface that contacts the track must remain parallel to the axle. **At least two axles must be straight to allow the wheel treads to be flat on the track** (Example 7).

**Example 7. Axle/Wheel Alignment**



31. Removal of significant material from the wheel sidewalls, tread, or face, whether on the inside or outside, is not allowed. Wheel treatment (hub and tread smoothing and polishing) may not result in substantial removal of mass or in narrowing the wheel width. The original "tread marks" on the wheel face and the "BSA" and "Pinewood Derby" words on the sidewall must remain intact, i.e. apparent to the inspector (Example 6A). There are two exceptions to this:
- Wheels may be **lightly sanded** to remove the mold mark on the tread.
  - Truing the wheels round by sanding or lathing is allowed. Taking material from the wheel area is strictly prohibited. Minimum wheel diameter allowable is 1.170 inches and width .310 inches and thickness 0.0395 inches. See example 6A below. **Calipers will be used to confirm the measurements noted within the rules. NOTE: Purchased pre-lathed wheels are often of a disqualified thickness.**
32. The wheels may not be cut, drilled, beveled, or narrowed. The wheel tread (the flat surface of the wheel) may not be rounded or otherwise shaped (convex or concave sanding/shaping). (Example 6A, Fail)
33. "U" or "H" or "V" grooving of the wheel tread is not allowed. (Example 6A, Fail)



Example 6A. (Measurements in diagram below noted)

<p>STANDRD WHEEL</p>	FAIL	FAIL	FAIL	FAIL	
	<p>ROUNDED WHEEL</p>	<p>"V" WHEEL</p>	<p>CUPPED WHEEL</p>	<p>REDUCED WHEEL</p>	
FAIL	FAIL	FAIL	FAIL	FAIL	FAIL
<p>"H" WHEEL</p>	<p>RIBBED WHEEL</p>	<p>SPEED WHEEL</p>	<p>SLANTED OUT WHEEL</p>	<p>SLANTED IN WHEEL</p>	<p>KNIFE EDGE WHEEL</p>

34. The axles may be straightened and the removal of the imperfections, such as pinch marks and mold ridges, by filing, sanding or polishing, is allowed. Machined axles with cut grooves, slots or other similar modifications are not permitted.

Example 8. Axles



Official BSA axles that have been polished are allowed.

Non-BSA axles are NOT allowed.

Machined axles are NOT allowed.

35. The axle nails must be firmly affixed to the wood of the car body and must be placed in the original "axle grooves" in the supplied wooden block, with exceptions as noted in rule 24.

36. The axles must be visible to the inspection committee. It must be obvious to the inspection committee that the grooves, wheels, and the nails from the kit are being used.

37. Wheels and axles which have been modified by someone other than the scout and their parent/guardian are prohibited, even if they are from the official kit.

38. Metal frames, metal axle supports, and single axles supporting two wheels are prohibited.

39. The use of bearings, bushings, hubcaps, inserts, sleeves, and/or washers is prohibited.

40. The car may not ride on any type of spring or suspension.

41. The race car may not be constructed or treated in such a way that the track's starting mechanism imparts momentum to the car. This provision disqualifies cars with sticky substances on the front of the car and protrusions that may catch on the starting pin. The car

must be freewheeling with no starting devices to push or enhance its travel down the track.

42. Only dry lubricants such as graphite or powdered Teflon "white lube" will be allowed for lubricating the wheels. Do not use other lubricants such as oils or silicone sprays. These can cause the wheels on the car to deteriorate, collect dust, and can cause damage to or alter the track. No hubcaps or coverings of any kind may be placed on the wheels to hold additional lubricant.
43. NO lubricant is allowed to be applied inside any Sanders Corner room or building. **A station will be provided outside to apply lubricant.**
44. No flashlights, LED's or any decoration or part of the car may interfere with the race timing equipment. Anything that may interfere must be removed or disabled while the car is racing (example, lights may interfere with timings sensors, etc.)

#### IV. CONDUCT OF THE RACES

45. Competition will consist of heat races within each rank class. Both boys and girls will race together in their respective rank class. Each rank class will race in a single heat to determine the top 3 winners of the rank class. The Grand Championship finals consist of the top 3 finishers from each rank class racing to determine the top 3 winners of the Goose Creek Grand Championship. Each car will race in all lanes of the track to eliminate any lane advantage in accordance with the race software. Example, a grand champion finalist would race four times in their rank class heat and four times in the grand championship finals.
46. The car with the lowest average score as determined by the race software will be declared the winner. In case of a tie, one additional race will be run with only the affected cars racing.
47. Track officials are responsible for the proper conduct of the races.
48. The "Starter Team" will stage cars on the tracks.
49. The race management software determines the lane assignments.
50. If, during a race, a car leaves its lane or leaves the track the race will be re-run.
  - a. If the same car again leaves its lane or the track without interference to another car, it will be judged last place and the race will not be re-run again.
  - b. If the same car again leaves its lane or the track with interference to another car, it will be judged last place and the race will be re-run without that car.
  - c. If a track fault is found which may have disadvantaged a car, the Track master may order the race heat to be re-run after the track is repaired.
51. If, during the race, a car sustains damage that affects its ability to race, ONLY race officials can make the repair/adjustment to repair only the damage incurred during that race. No other modifications or adjustments to the car are allowed. The car must be re-inspected before racing again. As no scouts will be present a car will be disqualified if a good faith repair cannot be

completed by event officials. Participants can request for event officials to not repair in the event of malfunction. In this case, the car will be disqualified if it cannot complete a test run down the track passed the finish line.

52. The race management software determines race order.
53. Only race officials may enter the track area. This rule will be strictly enforced.
54. All cars will be judged by rank for "Outstanding Design."
55. All scout classes are open to overall design awards. Open classes are open to class design award and overall artistic, realistic car, best paint job, non-car car design awards.
56. We are guests at the race location and expect all scouts and family members to behave themselves properly. All local rules and regulations apply while on property. Please see signage at the event for a list of local rules.
57. Spectators are welcome to the 2023 event.

## **V. OUTLAW MOD CLASS**

58. The spirit of the Outlaw Mod Class is to push the limits of modification with an official pinewood derby car kit.
59. Previous years' cars MAY be raced in the "Outlaw Class".
60. Cars must be made with an official BSA Pinewood Derby kit. Pre-cut official BSA derby car kits found at scout shops, hobby or craft stores may be used.
61. The car being raced must be constructed primarily by the participant entering the race. *Other pre-made cars, e-Bay purchased cars or car kits, etc., are strictly prohibited and MAY NOT BE USED.*
62. Cars must comply with the following specifications:
  - a. Weight: Cars must weigh no more than 16 ounces as measured on the official scale at the event.
  - b. Width: The maximum width of the car, including wheels and axles, must not exceed 2-3/4 inches.
  - c. Height: The maximum height of the car must not exceed 12 inches.
  - d. Bottom Clearance: The distance between the bottom of the wheels and the bottom of the lowest point of the car other than the wheels must be at least 3/8 inch
  - e. Width Between Wheels: The distance between the innermost edges of the left and right wheels must be at least 1-3/4 inches.
  - f. Wheelbase: There is no restriction on the distance between the front and rear axles.

- g. The car design may be enhanced by the addition of other stable materials such as plastic or metal. Any additions must be firmly attached and meet car size requirements.
63. No part of the car may protrude beyond the starting peg.
64. The following items are prohibited:
- a. Anything that interferes with the race timer electronics
  - b. Anything that may affect the tracks surface and cause a problem with future races.
65. Any combination of wheels or axles may be used, if they may not conceivably damage the track or affect other cars while racing.
66. Wheels must be made of a non-abrasive material, such as plastic, rubber, or polyurethane.
67. Cars race in "Check-In" condition. Once a car has been officially checked-in and qualified to race, it may not be handled other than in transporting it to and from the staging area between race heats. If a car requires repair or modification after check-in, the car must be re-qualified before being allowed to race again.
68. The car must start down the track of its own accord.
69. A designated representative may race the car.