

PALMETTO COUNCIL, BSA

OFFICIAL PINEWOOD DERBY RULES 2022

This project is a parent and scout event and is recommended as such by the National Boy Scouts of America. The Pinewood Derby Committee STRONGLY SUGGESTS that each parent emphasize this idea with your scout. In all of the events, we require that the cars be built since last year's Pack Pinewood Derby.

GENERAL RULES:

G-1. Qualification: Cub Scouts who finished in the TOP 5 in overall speed with the current year's Pack Pinewood Derby may participate in the Palmetto Council Pinewood Derby.

G-2. Essential Materials: All cars entered shall be constructed from the "Official Pinewood Derby Race Kit" as sold in any BSA Scout Store or online at www.scoutshop.org. (Referred to below as "The Kit").

G-3. Attendance: The Cub Scout must enter his own car. This means that the Cub Scout must be present at "Inspection and Registration" (G-6) to enter his car into competition, except for extenuating circumstances. Pinewood Derby Chairman has the final call on this.

G-4. "New Work": The car entered will be the same car that participated and won in the Pack overall speed category.

G-5. Single Entry per Person: Only one car may be registered by any person in the Pinewood Derby.

G-6. Inspection and Registration: Each car must pass a technical inspection before it may compete. Technical inspection and registration of cars occurs prior to race day. All cars must be inspected and weighed in during the inspection and registration period. Times and dates will be announced by the race committee.

G-7. Late Registration and Inspection: All cars must be inspected and weighed in during the times listed in G-6. Cars MAY NOT be registered after this time.

G-8. Failure to Pass Inspection: The Inspection Committee shall disqualify cars which do not meet the rules as described herein. If a car does not pass inspection, the owner will be informed of the reason his car did not pass. Cars which fail the initial inspection may be modified and re-inspected during the Inspection and Registration period (G-6).

G-9. Impound: No car may be altered in any way after it has been registered. After a car passes registration, it will be stored by the Pinewood Derby Race Committee until the races.

G-10. Car Design Rules Interpretation: Interpretation of the rules described in G1 through G-11, and T-1 thru T-9 are at the sole discretion of the Inspection Committee Judges present during the Registration and Inspection process.

G-11. Race-Day Rules Interpretation: On Race-Day, the Cub Scout must make all questions of rules interpretations and procedures to the Pinewood Derby Chairman or Race Officials promptly. 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 Trackmaster. Note: Unsportsmanlike conduct by any participant or spectator will be grounds for expulsion from the competition and/or the race area.

II. CUB SCOUT RACE CAR DESIGN STANDARDS

T-1. Material: Race cars shall be constructed for this event from the parts contained in the Pinewood Derby Official Race Kit (referred to below as the kit) as sold by any BSA Scout Shop (i.e. Spartanburg or Charlotte). Materials from the kit may be supplemented but not replaced. (See rule T-3). Purchasing a car from the internet is prohibited.



T-2. Weight: Race cars may weigh no more than five (5.0) ounces (total weight) as determined on the official scales during the pre-race check-in.

T-3. Wheels and Axles: The car shall roll on the wheels from the kit. The wheels shall turn about the axle nails from the kit. The axle nails shall be firmly affixed to the wood of the car body, and **MUST** be placed in the original 'axle grooves' in the wooden block from the kit. It must be obvious to the judges that the grooves, wheels, and the nails from the kit are being used. Scouts may elect to purchase wheels from the BSA Scout Shop that are **IDENTICAL** to the kit wheels, but of a different color. These wheels will be allowed, but are subject to all rules of section T-6 and will be compared to a kit wheel at inspection time. If, in the opinion of the Inspector and/or Derby Chairman, the wheels are not identical to the kit wheels construction, the car will not be allowed to race. Official wheels have markings as shown below.



T-4. Size: Race cars dimensions are as follows:

- Width – not to exceed $2\frac{3}{4}$ (2.75) inches
- Length – not to exceed 7 inches
- Underside clearance – minimum $\frac{3}{8}$ (0.375) inches.
- Inside Wheel to Wheel – clearance of $1\frac{3}{4}$ (1.75) inches , so the car will stay in the lane.
- Height – Car must fit under timing tower – 3 inches is recommended.

Adequate clearance is the responsibility of the race car builder.

T-5. Weights and Attachment: 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. All weight must be securely fastened to the car, e.g. by permanent glue, nails or screws, but not by "sticky

substances", e.g. tape, or tack spray. Weights shall be passive, i.e. non-moveable, non-magnetic, non-electric, non-sticky, etc. Weights shall not be made of hazardous or potentially hazardous materials.

T-6. Wheel Treatment: Wheel treatment (hub and tread smoothing and polishing) may not result in substantial removal of mass or in reducing the wheel width from the original kit wheels. Some of the original "tread marks" on the wheel face must remain intact, i.e. apparent to the inspector (see pictures below). Wheels may not be machined to a beveled condition and the portion of the wheel surface that contacts the track must remain parallel to the axle (see picture below).

CLARIFICATION OF DISQUALIFYING / ALTERED WHEELS

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

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

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.



Illegal wheel (tread marks are gone)



Legal wheel (tread marks intact)

T-7. Unacceptable Construction: The following may NOT be used in conjunction with the wheels or axles: washers, inserts, sleeves, bearings. If hubcaps are used, axle nail head must remain uncovered.

T-8. Gravity Powered: 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 or protrusions which may catch on the starting pin.)

T-9. Lubricants: Dry lubricants such as graphite will be allowed for lubricating the wheels. Do not over apply lubricant. Use lubricants sparingly, as lubricants may not foul the track. Any car whose lube fouls the track will be subject to expulsion. All lubrication must be done prior to check-in and must be done at specified locations.

III. CONDUCT OF THE COMPETITION RACES

C-1. Sportsmanship: GOOD SPORTSMANSHIP IS EXPECTED BY ALL PRESENT. If any participant or parent displays unsportsmanlike conduct during the Pinewood Derby, the car will be disqualified and the family ejected from the event.

C-2. Heat Racing: Competition will consist of heat races. Track officials are responsible for the proper conduct of the races.

C-3. Race Day Lubrication: There will be NO lubrication done after the car passes through inspection and registration (G-6).

C-4. Car Handling Responsibility: All cars will be staged and handled by race day officials.

C-5. Lane Assignment: To equalize differences among track lanes, each car will race once in each lane. After all cars have run once in each lane, average times will be used to determine the fastest cars, with each scout's slowest run thrown out. Individual car averages will be used to determine finishing order, with each scout's slowest run thrown out.

C-6. Car Leaves Lane: If, during a race heat, a car leaves its lane, the race will be re-staged and re-run. If the same car gain leaves its lane that car will be assigned a time of 9.99 seconds (maximum allowed by the computer timing system) and the race will be re-staged and re-run without the car that left its' lane.

C-7. Car Repair (Without Fault): If, during the race, a wheel falls off or the car becomes otherwise damaged, then the scout may, to the best of his ability perform repairs with the assistance of his adult partner or Pit Crewmember, under the supervision of the Trackmaster. The scout is allowed three minutes to fix the car. The car must meet all rules standards. The Officials will run the heat again. If the car cannot be fixed in three minutes, it loses the heat, and will be assigned a time of 9.99 seconds.

C-8. Car Repair (With Fault): If a car is damaged due to track fault, or damage caused by another car or person, then the Trackmaster, at his sole discretion, may allow additional repair assistance to the Cub.

C-9. No Finishers: If, during a race heat, no car reaches the finish line on the track, all cars will be assigned a time of 9.99 seconds.

C-10. Call to Race: Competitors will be announced by name prior to each heat.

C-11. Track Repairs: If a car leaves its lane, at his sole discretion, the Trackmaster may inspect the track and, if a track fault is found which probably caused the initial violation, the Trackmaster may order the race heat to be rerun after the track is repaired.

C-12. The Race Area: Only race officials may enter the pit area. This rule will be strictly enforced.