

2024 CAPE FEAR DISTRICT PINWOOD DERBY RULES

OFFICIAL CAR RULES:

- These rules and the equipment used at this event take precedence over any rules or equipment used at previous Pinewood Derbies.
- The Pit Boss has final say if a car passes or fails inspection.

All cars, **regardless of division or category**, must comply with the following racing specifications which are excerpted from the Official Grand Prix Pinewood Derby Kit Instructions:

- The car must be newly constructed. It shall not have been built (whether it was run) in a previous year.
- The car must be built using the materials in the official Pinewood Derby Racing Car Kit, including the body block and nail axles. Wheels from the kit may be substituted with Official BSA approved colored plastic wheels purchased from the Scout Shop (Black – SKU 17553, Blue – SKU 17556, Orange – SKU 17557, Red – SKU 17554, Yellow – SKU 17555). No other wheels may be used. Materials from the kit may be supplemented but not replaced. Professionally prepared axles and wheels are not permitted.

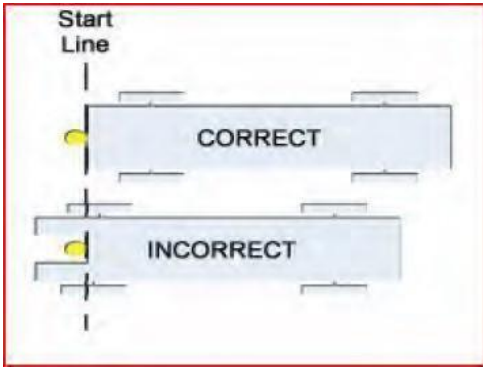
1. Length, Width, and Clearance

- a. Overall width including wheels, axles, and attachments shall not exceed 2 $\frac{3}{4}$ ".
- b. The width between wheels must be 1 $\frac{3}{4}$ " so the car will clear the center guide strip on the track.
- c. Overall height including any attachments shall not exceed 4 $\frac{3}{4}$ ".
- d. Bottom clearance between the car and the track must be at least $\frac{3}{8}$ " so the car will clear the center guide strip on the track.
- e. Overall length including any attachments shall not exceed 7.0".
- f. The wheelbase (distance between the front and rear axles) must remain at a distance of 4 $\frac{1}{4}$ inches (some kits may be off between 1/8 inch to 1/4 inch).

2. Car Body, Weight, and Appearance

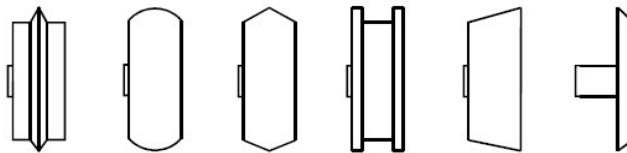
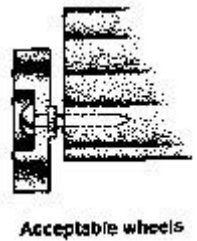
- a. The maximum weight shall not exceed 5.00 ounces. The reading of the official scale will be final.
- b. No liquids or loose materials of any kind are permitted in or on the car.
- c. No taping of weights to the car is permitted.
- d. The car may be hollowed out and built up to a maximum weight by the addition of solid materials only, provided any additional materials are securely built into the body or firmly affixed to it.
- e. Details such as steering wheel, driver, decals, painting, or interior detail are permissible if these details do not exceed the maximum length, width, and height specifications and/or modify the mechanical functions of the body, wheels, and axles.
- f. The car shall not have any parts that include live animals, etc.
- g. Car shall not extend past the starting gate.

Note: The starting gate is a dowel coming up from the track that is lowered evenly among the lanes at the same time. Any attempt to build a car that extends beyond the starting gate dowel will be disallowed.



3. Wheels & Axles

- a. **ONLY BSA approved wheels and axles**, as provided in the Official Pinewood Derby Kit (or the Official BSA approved colored wheels purchased from the Scout Shop) shall be used (Black – SKU 17553, Blue – SKU 17556, Orange – SKU 17557, Red – SKU 17554, Yellow – SKU 17555).
- b. The wheels may not be tapered or rounded. The wheels may be slightly sanded to remove any molding marks or surface imperfections but may not be modified in any other way. Lathing wheels is not permitted. The treads must be left flat. Beveling, tapering, narrowing, thinning, thin sanding or wafering of the wheels is prohibited. See below for examples.
- c. Washers and bushings are prohibited.
- d. The car must have four wheels.
- e. The distance between front and rear axles cannot be altered.
- f. Axles must be **fully visible for inspection**. If the axle channel is covered, the covering must be removable at the time of registration for inspection of the axles. Please do not permanently attach any device that covers the axle channel on the bottom of the car.
- g. The car shall not ride on any type of springs.
- h. The car must be freewheeling, with no starting devices or other types of propulsion.
- i. Axles can be smoothed to remove surface imperfections.
- j. Judges will use a special-purpose gauge to ensure that wheels do not have a diameter less than 1.180.” Raw wheels (slightly sanded- not lathed) will have 1.182” to 1.185” of diameter or greater. Judges will also check to ensure that the wheels do not have a width less than .360”. Finally, a visual inspection and, if necessary, comparison against known illegal wheels on web sites such as maximumvelocity.com will be used to ensure no other illegal modifications have been made to the wheels.



These are examples of unacceptable wheels.



4. Lubrication

- a. Only graphite or powdered Teflon “white lube” will be allowed for lubricating the wheels. You MAY NOT use any other lubricant, especially oil and silicone sprays. (Liquids and sprays mix with the paint of the car or the plastic wheels and make them tacky which will slow your car.)

- b. There will be NO lubrication after your car has completed Final Inspection and Registration.
- c. If lubrication is applied at the time of registration it must be done outside of the building or at a specific, designated location.



5. Inspection and Registration

- a. Each car must pass inspection by the Official Inspection Committee before it may compete. The Inspectors have the right to disqualify those cars which do not meet these specifications. The Pit Boss has final say on if a car passes or is disqualified.
- b. Once the car has been inspected, weighed, and registered, it will go to a holding area and may only be handled by the Pit Crew for repairing.
- c. Once registered, there will be NO additional lubricant applied to the wheels. All lubricant should be applied outside of the building and PRIOR TO weigh in (excessive graphite application has made a terrible mess of both the track and the racing venue in the past years).
- d. No test runs before the event.



6. Ground Rules and Competition

SPEED

- a. The car cannot be altered in any way after the race starts, except for repairs. NO GRAPHITE may be applied to the car during the race or while in the building.
- b. The speed race will be run on a multi-lane track with a timer. Each Cub Scout will run multiple races, once on each lane of the track. The winner will be the car that has the lowest total elapsed time in the races.
- c. Only Pinewood Derby officials may enter the track area.
- d. The car whose nose is over the finish line first is the winner for that race as detected by the electronic finish device.
- e. The judge at the finish line will determine the winner if the electronic finish device fails.
- f. If a car jumps the track or interferes with another car, the heat will not be counted and will be re-run. If a car jumps the track twice in the same heat, that car will be disqualified from the race.
- g. In the event of a breakdown on the track (a wheel falls off), a repair time of two (2) minutes will be allowed. Only the Cub Scout participant and the Pit Crew will make repairs. One time only is allowed for repairs to a car.
- h. The Pinewood Derby Committee will manage any questions of the rules or problems that may arise during the event.
- i. The decisions of the Inspection Crew, the Derby Officials, and the Judges are final. These rules will be strictly enforced.

7. Awards and Recognition

- a. The most important values in Pinewood Derby competition are parent/scout participation, good sportsmanship and learning how to follow rules. The Awards Committee is responsible for recognizing and encouraging these qualities in addition to traditional racing awards.
- b. First, Second and Third place awards will be presented to the fastest cars of each rank.
- c. The first place finishers of each rank will race against each other for “King of the Hill.”

Coaching Hints for Parents

- Help your Scout understand the rules and specifications found in the kit and those developed by the Cape Fear District Pinewood Derby Committee.
- Spending time with your scout and helping them “do their best” will be remembered by both of you long after the race is finished.
- Remember the focus of this event is not to win at any cost but for each Cub Scout to “DO THEIR BEST”
and HAVE FUN!!

PACK LEVEL RACING GROUP BREAKDOWN

- LIONS WILL RACE AS A SINGLE GROUP
- TIGERS WILL RACE AS A SINGLE GROUP
- WOLVES WILL RACE AS A SINGLE GROUP
- BEARS WILL RACE AS A SINGLE GROUP
- WEBELOS WILL RACE AS A SINGLE GROUP
- ARROW OF LIGHT WILL RACE AS A SINGLE GROUP