



PINEWOOD DERBY RULES

(Great Trail Council, Spring 2025)

Guiding Principles:

• The Pinewood Derby Race is for the enjoyment of all participants in a fair and equitable environment • It is a social event for the pack/district/council which encourages parent/child teamwork and good sportsmanship • The goal is participation of all where teamwork is preeminent and competition is secondary • It can be used to teach basic tool and construction skills to our children with an eye towards friendly competition • Children should be guided in designing and constructing a car of their own choosing from which they can take pride in their accomplishments.

Quick Rules:

• Car kits should be official Scouting America • New car each year built primarily by the scout • 5.0 ounce maximum car weight, 7.0 maximum length, 2.75 maximum width • No major alternations to wheels or axles • Dry lubricants only • Failure to comply with the detailed rules may lead to disqualification.

NOTE: Derby car rules by themselves are pretty simple. These detailed rules provide light to gray areas which may tempt some to bend them or cause conflict. We have tried to answer any question that may arise. The Race Committee's interpretations will be final.

Detailed Rules:

- Rules are to be used until newer versions are supplied. Rules do not otherwise expire.
- All safety rules concerning the use of hand tools and power tools by cub scouts must be observed.
- All Cub Scouts registered in a Great Trail Council Pack are eligible to compete. They need not have placed in a unit's Pinewood Derby to qualify.
- The interpretation of rules will give the benefit of the doubt to the racer within the context of a fair and equitable race for all participants.

- Final interpretation of rules and judgments will be made by the Race Chairman or a designated Race Committee.

Derby Car Construction:

- Only 1 car may be entered per Scout and all cars must be freshly built and/or constructed for the current Pinewood Derby Racing; Cars from previous racing seasons may not be reused.
- Cars must be constructed, decorated, tuned and/or aligned by the racer with adult supervision as necessary.

Derby Car Body:

- The main body structure must be made of wood. Only Official BSA Pinewood Derby Car kits may be used. The substitution of other woods (i.e. harder, denser, heavier woods) is expressly forbidden.
- Weights are preferred to be inset in the body or on top of the car to aid in a safe stop at the end of the track. Weights on the bottom of the car may drag on the raised guide rail for the track slowing the car considerably and potentially damaging the track.
- No part of the car or attachment to any car, which is metal, pointed, sharp, and/or jagged, may be capable of contacting any part of the track. Only the vehicle's wheels should touch the track.
- Drilled holes or slots can be used to mount axles.
- ONLY DRY LUBRICANT(s) ALLOWED. No oil lubricants are allowed.

Derby Car Specifications:

- Width - Not to exceed 2 3/4 inches
- Length - Not to exceed 7 inches
- Weight - Not to exceed 5.0 ounces on scale accurate to 1/10 ounce.
- Center Rail Width - Must clear center guide rails, typically no less than 1-3/4 inches minimum.
- Bottom - No less than 3/8 inches from track surface between center rails. 1. Fender flairs with less clearance are acceptable as long as the center rail width clearance is maintained.
- The following items are **PROHIBITED**:
 1. Springs
 2. Starting devices or propellants
 3. Electronic or lighting devices that interfere with the race electronics.

4. Liquids, wet paint, oil, sticky substance, or powders of any kind (other than axle lubrication)
5. Glass or excessively fragile parts
6. Bearings, bushings, washers, sleeves, hubcaps or inserts attached to or in contact with the axle, body or wheels.
7. Loose objects on car
8. Magnets

Derby Car Wheels:

- Use only Official BSA Pinewood Derby wheels.
- Outer wheel surface may be lightly sanded, shaved, or polished to remove surface imperfections, mold casting burrs, and correct off center wheel bores.
- All 4 wheels **MUST** touch the track

Derby Car Axles:

- BSA Nail type axles are required.
- Axles must be mounted into the wood sections of the car.
- Axles may **NOT** be bent.

Derby Car Weights:

- The use of exposed Lead(Pb) in cars is prohibited. All Lead(Pb) must be completely sealed and safe from all possible contact with the youth. There are many reasonably priced alternatives that should be used instead.
- All weights should be secured firmly to the vehicle with glue, screw, putty or wooden plugs. Loose or unsecured weights will not be allowed. Weights that fall from cars during racing may not be reattached.

Race Event

General Rules

- The Cub Scout should be present and in field uniform if possible.
- Efforts will be made to provide a designated pit area for last minute tuning and/or repairs. The presence of a pit area or tooling should not be assumed. Racers should bring any tooling or lubricants necessary to support their race car.
- Cars must be surrendered for impoundment by Race Officials at the time of inspection.
- After acceptance and impoundment **ONLY** Race Officials will handle the cars.
- An impoundment area/table will be provided where cars may be viewed. Spectators may view the cars, but may not handle them.
- The following areas will be roped off and may be accessed only by Race Officials: Inspection Area, Impoundment Area, Race Track Area
- Final Inspection - Inspection will take place on the morning of the race and ends fifteen minutes before the scheduled race time for each rank. In order to be fair and equitable to all racers and so the race can start on time, late arrivals who, because of time constraints, cannot be checked before the deadline may not be inspected or otherwise qualified.
- Good sportsmanship is required at all times by all participants. Cars, racers and/or other participants may be disqualified and asked to leave the race venue at the discretion of the Race Chairman/Committee.

Race Methodology

- Scouts will race with other Scouts in their age range; Lions race other Lions, Tigers race other Tigers, etc.
- The race will be a timed event. The best cumulative time will determine the winner.
- The vehicles will be staggered in heats, with each vehicle traveling down each lane of the track. On a track with four lanes, the vehicles will compete in four distinct heats.
- There is no guarantee that the heats will contain the same vehicles each time.
- Race officials reserve the right to change the membership of heats or rotation of heats to accommodate unforeseen circumstances.

Inspections:

- Each car must pass inspection by Race Officials before it may compete.
- If it is determined by the race officials that a submitted car does not meet these requirements, it is deemed 'not race ready' and disqualified.
- Any adult or scout may appeal the findings of the Inspectors to the Race Chairman/Committee, whose decision is final.
- Race Committee members who may also be parents of racers, may not inspect or participate in the inspections related to their cars. Any apparent or perceptible conflict of interest will result in immediate disqualification.
- Cars failing early inspection may resubmit their cars any time between early inspection and final inspection, where final inspection will be cut off fifteen minutes before the race's published start time.
- Once impounded, racers may not touch or handle their cars.
- No performance tuning or repairs will be allowed once a car is impounded. **EXCEPTION:** Race officials may authorize repairs, usually when damage is caused by the negligence or mishandling of the car by Race Officials (i.e. car is dropped during transport or loading)
- Every effort will be made to calibrate the scales and measures used for inspections. In the event that a car weighs differently on two scales, the benefit of the doubt will be given to the racer and the lower of the two weights will be used.
- Weights will be determined to 1/10th of an ounce without going over. A reading of 5.0 will be valid while a reading of 5.1 will not. In the event that a scale gives results to the 1/100th of an ounce, rounding will be used and a reading of 5.04 will be valid, but a reading of 5.05 will not as it would round to 5.1.
- Race officials may use instruments to determine measurements, including but not limited to scales and rulers. Final determinations are at the discretion of the Race Officials.

Execution of Heats:

- The execution of heats will be performed by race officials at the discretion of the Race Chairman/Committee.
- In the event of an on-track collision between two or more cars, the heat may be rerun at the discretion of Race Officials.

- Reasonable efforts will be made by Race Officials to allow all racers to participate, but cars may be disqualified as 'not race ready' if they are dragging on the track, jumping the track, represent a concern to other racers or no longer meet inspection guidelines.
- Any car losing wheels or any part that prevents it from running cannot be repaired after the final inspection and weigh in. **EXCEPTION:** Race officials may authorize repairs, usually when damage is caused by collision with another vehicle or object. ** The Cub Scout and parent are in charge of all car repairs. ** Guidance is allowed and encouraged. ** Ideally repairs can be done before the next heat that the car is in starts. ** After the car is repaired Officials will run the race again. ** There is a five minute limit on the repair if the heat is to be rerun. ** Repaired cars are subject to re-inspection at the discretion of Race Officials.
- Cars that fail to reach the end of the track or final time gate may be 'helped along' by race officials provided the time recorded is non-competitive.
- In the event that a repair is made to the track once racing has begun, only the preceding heat may be rerun. All other heats will stand as-is.

Awards:

- Awards will be distributed at the end of the race for 1st, 2nd, and 3rd place in each age range (rank)

Summary:

Kids and parents alike have a blast building and racing cars as part of Pinewood Derby. These rules are as exhaustive as possible in order to have an enjoyable race that is fair and equitable for everyone.

- Please review the rules again and follow the intent of the Guiding Principles.
- Please do not put Race Officials in awkward situations by violating the rules, asking for exceptions, running late or being overly competitive.
- Please have fun with the children!