



**OFFICIAL
WHITE BUFFALO DISTRICT
PINEWOOD DERBY
EVENT RULES
AND
PROCEDURES**

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1. GENERAL RULES: (Applies to all Race Events)

a. Qualification: All registered White Buffalo District Tiger, Wolf, Bear, Webelos 1 and Webelos 2 Scouts who finished in the top 3 in their age group at their pack derby may enter cars that are eligible to participate in the event. A Webelos Scout who crossed into a Troop after January first of the current year may return and race in the District Race.

b. Essential Materials: All cars entered shall be constructed from the "Official Grand Prix Pinewood Derby Kit" (referred to below as the kit).

c. Attendance: The Cub Scout MUST enter his own car. This means that the Cub Scout must be present at "Inspection, Registration and Race Time" to enter his car into competition. All participating scouts must be in uniform during the race.

d. "New Work": Construction of ALL entries MUST have begun AFTER last year's Pinewood Derby Races. No modifications should be made to cars after Individuals Pack Pinewood Derby. The construction of the car should be done by the Scout with appropriate adult supervision. Also no work shall be done on the car after the pack race.

NOTE: Re-lubing of wheels and axles prior to the district race check-in is permitted.

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

f. Inspection and Registration: Each car must pass a technical inspection before it may compete. Technical inspection and registration of cars occurs prior to official race.

g. 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 can be modified and brought back for final inspection and registration.

h. Impound: No car may be altered in any way after it has been registered. After a car passes registration, it will be stored and impounded, by the Pinewood Derby Race Committee until race time. Alterations include additional lube for the wheels.

i. Car Design Rules Interpretation: Interpretation of the rules described in 1a through 1h, and 2a through 2i are at the sole discretion of the Inspection Committee Judges present during the Registration and Inspection process.

j. 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.

NOTE: Unsportsmanlike conduct by any participant or spectator will be grounds for expulsion from the competition and/or the race area.

2. CUB SCOUT RACE CAR DESIGN STANDARDS

a. Material: Race cars shall be constructed for this event from the parts contained in the Official Grand Prix Pinewood Derby Kit (referred to below as the kit) as sold by the Scout Service Center. Materials from the kit may be supplemented or replaced with only official BSA Pinewood Derby materials.

b. **Weight:** Race cars may weigh no more than five (5) ounces (total weight) as determined on the official scales during the pre-race check-in.

c. **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. Racer may elect to cut/drill new grooves on opposite side of car provided that the same wheel base and positioning is used. It must be obvious to the judges that official BSA wheels and axles. Visually excessive modification of the wheels is not permitted. General balancing and sanding is permitted; however if the wheel is visually "thinner" or otherwise modified then the car will not pass inspection (see T6).

d. **Size:** Race cars may be no longer than 7 inches, nor wider than 2-3/4 (2.75) inches, as determined by the official gages during the Registration and Inspection. 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, so that the car will run on the race track. Adequate clearance is the responsibility of the race car builder.

e. **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.

f. **Wheel Treatment:** Wheel treatment (hub and tread smoothing and polishing) may not result in substantial removal of mass or reduction of the wheel width from official BSA Pinewood Derby wheels. Some of the original "tread marks" on the wheel face must remain intact, i.e. apparent to the inspector. 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.

g. **Unacceptable Construction:** The following may NOT be used in conjunction with the wheels or axles: hubcaps, washers, inserts, sleeves, bearings.

h. **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 and protrusions which may catch on the starting pin.)

i. **Lubricants:** Only dry lubricants such as graphite or powdered Teflon "white lube" will be allowed for lubricating the wheels. ***Lubricants may not foul the track.***

3. CONDUCT OF THE RACES

a. **Race:** Competition will consist of heat races. Track officials are responsible for the proper conduct of the races.

b. **Registration/Check-In:** The race-day "Registration/Check-In area" will have a scale and length box. This equipment will be the official equipment for the race.

c. **Pit Area:** Modifications, repairs, and lubrication are to be performed in the Pit Area only. Any modification and/or lubrication must be done prior to final submission for impound. Repairs may be done during the race if a mechanical issue occurs. The repair must be done only by the Cub Scout, with assistance from the Pit Technician or his adult partner, if needed.

d. Race Day Lubrication: You may lubricate your car in the Pit Area. In the interest of fairness, you may only lube your car prior to impounding. Once your car is impounded then no more lubrication is allowed.

e. Car Handling Responsibility: Scouts shall be responsible to present their own cars starting line for staging. Cars will be placed on the tracks by the Scout with assistance from the Starter Technician, if needed.

f. Race Format: GrandPrix Race Manager Software will be used to generate the racing schedule. The Partial Perfect-N Schedule will be utilized. Time will be used as the Race Scoring Method. The cumulative total of all heats, dropping the Racers worst time, will determine the Race Standings. No ties will be allowed in the Top 3 places.

g. Car Leaves Lane: If, during a race heat, a car leaves its lane but proceeds down the track in a manner that does not interfere with its opponent, then the race will be called normally. If the car leaves its lane and interferes with another car, the race will be re-staged and re-run. If the same car again leaves its lane and interferes with another car, that car will be given a max time (9.99 sec.), and the race will be re-staged and re-run without that car.

h. Car Leaves Track: If, during a race heat, a car leaves the track without interfering with its opponent, it shall be considered to have ended its race at that point and given a max time of 9.99 seconds.

i. 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 the Pit Technician. The Scout will have until his next scheduled race or 5 minutes; whichever time period is greater.

j. Car Repair (With Fault): If a car is damaged due to track fault, or damage caused by another car or person, then the Race Director, at his sole discretion, may allow additional repair assistance to the Scout. The Scout will have until his next scheduled race or 10 minutes; whichever time period is greater.

k. Call to Race: Competitors will be called by Car Number (assigned at registration) prior to each heat. When his Number is called, each Scout will retrieve his car from "IMPOUND" and present himself, with his car, to the "ON DECK" area. If the Cub does not respond, his Number will be called a second time. If the Cub has not presented himself in time for his heat, he will be given a max time of 9.99 seconds for that race heat.

l. Track Fault: If a car leaves its lane, the Race Director will inspect the track and, if a track fault is found which probably caused the initial violation, the Race Director will order the race heat to be rerun after the track is repaired.

m. The Race Area: Only race officials may enter the track area. This rule will be strictly enforced.

n. Rewards and Recognition: The most important values in Pinewood Derby competition are parent/son 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.

Racers will be recognized as follows:

- Every participating Scout will receive a District Pinewood Derby certificate.
- Trophies will be awarded for the first, second, and third-place finishers (Tiger, Wolf, Bear, Webelos 1 and Webelos 2 Cub Scout Ranks) in the White Buffalo District.
- The Top 3 Racers will proceed to represent the White Buffalo District in the Quivira Council Pinewood Derby

4. THE RACING ENVIRONMENT

a. Lanes: Each of the six lanes consists of a straight, smooth aluminum strip approximately 1 1/2 (1.50) inches, but certainly less than 1-3/4 (1.75) inches, wide and approximately 1/4 (0.25) inches, but certainly less than 3/8 (0.375) inches thick, centered on a smooth surface no less than 4 inches wide. Each race car shall straddle such a strip during its heats.

b. Starting Mechanism: The "starting line" consists of a vertical pins of approximately 1/4 inch diameter, extending above the track surface and centered in the each lane.

c. Finish Line Sensor Location: The track has electronics called "finish line sensors" in alignment with the corresponding starting line pin and centered in its lane.

d. The "Big Board": There will be an overhead projector showing current race and "ON DECK" for the next race. Please pay attention for your name to be ready.

e. Finish Line Clearance: Track Finish Line Electronics and other track accessories must be no closer than 3 inches above the track (i.e cars can be no taller than 3" high).