

**Cub Scout Pack 76**  
**2022 Pinewood Derby Rules**  
**Saturday, March 26, 2022 (Tentative)**  
**Location and Time to be Announced**

**Overall:** All cars must be built for the current Pinewood Derby Racing Season. NO REPEATS or REPAINTS. In order to race at the district championship the youth must have been a Cub Scout at some point since January 1st, 2022.

Cars must be tuned or aligned by the racer but adult supervision is encouraged. Cars may not be sent to third party facilities for tuning or other performance enhancements.

**Body:**

The main body structure must be made of wood. Cars that were purchased complete may not be used. If the builder lacks the resources to cut out a car from a stock block of wood, attendance at a workshop (den/pack/district/council) is strongly encouraged. Alternatively, a pre-shaped block of wood may be purchased to be used with the stock BSA Wheels and approved Axles.

**Car Specs:**

- A. **Width** - Not to exceed 2 3/4 inches
- B. **Length** - Not to exceed 7 inches
- C. **Weight** - Not to exceed 5.0 ounces on scale accurate to 1/10 ounce. The weight shown on the official race scale is final.
- D. **Height** - Not to exceed 6 inches
- E. **Wheel Placement:** The car body must be at least 1 3/4 inch wide at the axles
- F. **Bottom Clearance:** The entire underside of the car must clear the ground by at least 3/8 inch.
- G. **Wheels and Axles:** Only **Official Cub Scout Grand Prix Pinewood Derby Wheels and Axles** will be permitted. No solid one piece axles. Wheels may be **lightly** sanded to remove molding marks only. **All four wheels must come into contact with the track at all times.** No cone shapes or beveling of the tire surface is permitted. No bearings, bushings, or washers will be permitted. No two-wheeled axles are permitted. Please see the "WHEELS" section below for more details.
- H. **Wheelbase** –All cars must have a wheelbase no less than 4" and may not exceed 4 1/2", with the two rear wheels being positioned directly across the body from one another and the two front wheels being positioned directly across the body from one another.
- I. **Details:** Additions such as weights, steering wheels, drivers, decals, and other details will be permitted as long as they are **securely** attached and the car meets all the size and weight specifications. **All additions are included in the measurements.** 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. Cars with wet paint will not be accepted.
- J. **Lubrication:** Only dry powered graphite lubricant is permitted. All other lubricants are prohibited. Graphite can only be applied before check-in and inspection.
- K. **Front End**
  - **Height:** The front of the car will rest against a short starting pin. **Therefore the front bottom of the car which rests on the pin is no higher than 3/4" above the track.**
  - **Width:** The front end must be at least 1/2 inches wide in the middle.

**No part of the car body, wheels or attachments may protrude in front of the starting peg.**

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.**

The following items are **PROHIBITED**:

- A. Springs
- B. Starting devices or propellants
- C. Electronic or lighting devices that interfere with the race electronics. Non-interfering devices are allowed. All electronic or lighting devices should have the ability to be easily disabled if needed.
- D. Liquids, wet paint, oil, sticky substance, or powders of any kind (other than axle lubrication as specified above)
- E. Glass or excessively fragile parts
- F. Bearings, bushings, washers, sleeves, hubcaps or inserts attached to or in contact with the axle, body or wheels.
- G. Loose objects on car
- H. Magnets

#### **WHEELS:**

Use only Official Scout Grand Prix wheels.

**All lettering/numbering, both inside and outside, must remain complete and be visible. The fluting and other BSA markings on the outside wheel area must remain visible.** Outer wheel surface may be lightly sanded, shaved, or polished to remove surface imperfections and mold casting burrs, but must not be reshaped in any way in an attempt to lighten the wheel, minimize tread contact or alter aerodynamics. Tread surface must be flat and parallel to the wheel bore.

The following wheel modifications are **PROHIBITED**:

- A. Rounding of tread surface/wheel edges
- B. Grooving, H-cutting or V-cutting
- C. Altering of wheel profile
- D. Narrowing the tread surface, other than truing inside tread edge
- E. Drilling sidewalls
- F. Hollowing, sanding, or otherwise removing or modifying material from inside the wheel
- G. Filling of any wheel surface with any type of material

There must be at least four wheels on the car and **all four wheels MUST make contact with the track surface.**

Each wheel must be mounted on an axle, on the outside of the car, in the vertical position. Each wheel must be attached directly to the wood car body by an axle and spin freely. The two rear wheels and the

two front wheels must be positioned directly across the body from each other. Staggered wheelbases are not allowed.

**Please note:** There are aftermarket modified wheels that are LIGHTENED. This is usually done by turning the wheels on a lathe and removing material from the inside of the wheel. These wheels are NOT allowed and EASILY RECOGNIZED at inspection. Cars with these wheels will not be permitted to race. No part of the car or any attachment to the car may be capable of coming into contact with the track other than the wheels.

#### **AXLES:**

- BSA Nail type axles are required with an overall diameter of no less than .084 inches for each wheel. Some polishing and/or modification is allowed as long as overall diameter is not reduced below .084 requirement.
- Axles must not be connected to any device that mechanically alters rotation and spin.
- Axles must be mounted into the wood sections of the car. Drilled holes or slots can be used.
- Over-application of lubricant which results in excessive shedding onto the track is not allowed.

#### **INSPECTION:**

- Each car must pass inspection by the Official Inspection Committee before it may compete. The Inspectors will disqualify any car not meeting these rules. Any adult or scout may appeal the findings of the Inspectors to the Race Committee Chairperson, whose decision is final. After acceptance, only race officials will handle the cars.
- Cars may be reclassified or disqualified if they are determined by the race officials to not meet these requirements.

#### **REPAIRS:**

- Any car losing wheels or any part that prevents it from running cannot be repaired after the 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 is in charge of all car repairs. Adult guidance is allowed and encouraged. The scout is allowed 5 minutes to fix the car, then Officials will run the heat again. After repairs are made, the car must be re-inspected by the inspection officials. If the car cannot be fixed in 5 minutes, it will be eliminated from the race.
- Please note: In the event the Derby must be run virtually due to COVID or other reasons, no repairs will be allowed. Any car that is no longer able to race will be eliminated.

#### **BEHAVIOR:**

- GOOD SPORTSMANSHIP AND BEHAVIOR IS EXPECTED! Race Officials may ask anyone not following these rules to leave.

**Be warned that any entry deemed by race officials to damage the track or interfere with other racers will not be allowed to race.**