



## **2024 POTOMAC DISTRICT PINWOOD DERBY (PWD) RULES - FOR ALL PACKS –**



The Potomac District will hold its 2024 Pinewood Derby virtually on Saturday, May 11, 2024 at Bells Mill Elementary School, 825 Bells Mill Road, Potomac, MD. Check-In will open at 9:00 a.m. and close at 9:50 a.m. Racing and award presentations are expected to conclude by 1 p.m. The order of racing will be Lions, Tigers, Wolves, Bears, Webelos I, and Arrow of Light. Den-level trophies will be presented at the end of each den race. Overall District 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> place trophies will be presented after the Arrow of Light heats and Arrow of Light trophies are presented.

The Potomac District PWD Race will be run on an aluminum track with four lanes and electronic timing. Each car will run four times against den-level competitors. Each car will run on each of the four lanes. The three fastest average times in each of the den-level races will be recognized with a trophy for 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> in the respective den-level. Also, the three fastest average times across all the den-level races will be used to determine the Overall District awards for 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup>.

In addition to standard maximum and minimum car dimensions diagramed in these rules, two additional dimensions are established for this race due to the design of the track:

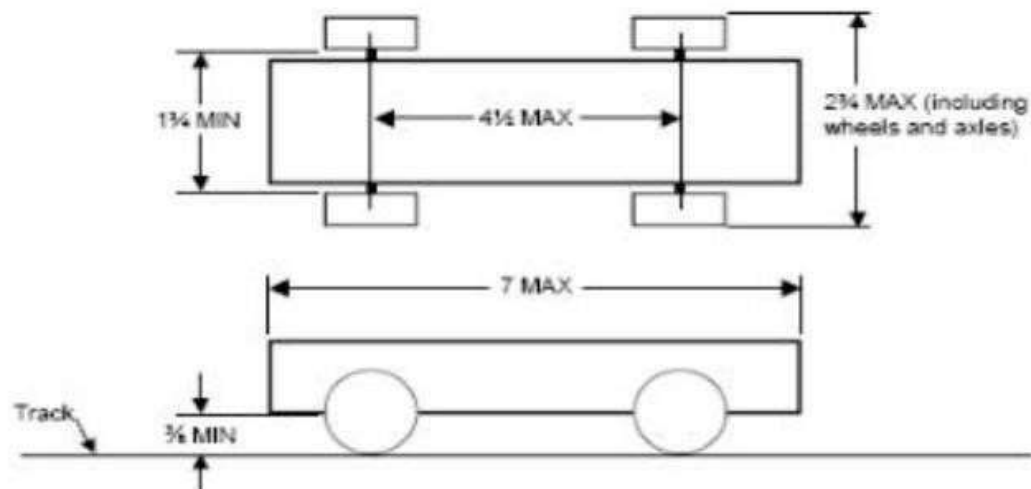
- 1) Vertical clearance below the electronic Finish Line timer is only 6 inches; cars that compete for speed must be 6 inches or less in height;
- 2) The aluminum track starting pins extend 2 inches above the surface of the track. No part of the car may protrude forward beyond the starting pin.

### **RACE ELIGIBILITY**

- a) Each pack is allowed to enter the first-place car for each of your den levels (Lions, Tigers, Wolves, Bears, Webelos I, and Arrow of Light).
- b) Each pack may also send one car for the “Appearance” Competition — awards will be given for: **Best In Show, Judge's Favorite, Most Unusual, Most Humorous & Most Colorful**. The pack will determine the criteria for selection of their entries. The “Appearance” competition cars may or may not be raced depending on time availability during the derby. Judging and awards for the “Appearance” competition will be based on design appearance alone.

- c) The Scout must be present to race his or her car unless their pack is granted a waiver by the District. If a qualifying Scout cannot attend the race, the pack may elect to send a substitute Scout and his or her car to the race.
- d) Each car must pass inspection and weigh-in before it can compete. The Inspection Team has the right to disqualify cars that do not meet these rules. Car owners will be informed of any violations and given the opportunity to modify the car to meet the rules prior to the start of the race (if time permits).
- e) Any participant (including the parent of the participant) has the right to appeal the decision of the Inspection Team to the Potomac District Pinewood Derby Race Chairman.
- f) Each Pack MUST provide the name of one person who, if necessary, can be called upon to assist with Derby Day jobs. If no volunteer is shown on the registration form, the pack official signing the registration form will be the individual contacted prior to Derby Day for job assignments.
- g) By signing the Potomac District Pinewood Derby Registration Form or registering online, the unit leader acknowledges that his/her Pack's cars meet these rules.

## DESIGN/CONSTRUCTION



### Length, Width, and Clearance

- a) Maximum overall width including wheels and axles = 2 3/4 inches.

- b) Maximum overall height = 6 inches (not shown in the diagram).
- c) Minimum width between wheels =  $1\frac{3}{4}$  inches.
- d) Minimum clearance between bottom of the car and track =  $\frac{3}{8}$  inch. If you put weights under your car, recess them into a hole in the underside of the car's body.
- e) Maximum car length = 7 inches. This measurement includes any decorations added to the car such as wings, spoilers, bumpers, exhaust pipes, etc.
- f) **Wheelbase (distance between front and rear axles) must not be more than  $4\frac{1}{2}$  inches.**
- g) Commercially precut Pinewood Derby car kits may be used if they meet the above specifications. Only official Cub Scout Pinewood Derby wheels and axles may be used. The solid metal axles (one axle for two wheels), wheels and end caps found in some commercial kits may not be used.

#### **Weight and Appearance**

- i) Weight  $\leq$  5.00 ounces. The car may be hollowed out and built to the maximum weight by the addition of wood, metal, plastic, paint, or decals only, provided each is built into or securely affixed to the body.
- j) No loose materials of any kind are permitted in or on the car.
- k) Details and additions such as steering wheel, driver, spoiler, and decals are permitted as long as they do not cause the car to exceed the specifications identified above.
- l) Cars with wet paint or glue will not be accepted at inspection/weigh-in.
- m) Mercury shall not be used in adding weight to the car.

#### **Wheels, Axles, and Lubrication**

- n) Wheels - Only the wheels and axles provided with an official Cub Scout Pinewood Derby Car Kit can be used. Official Cub Scout Pinewood Derby wheels and axles that are sold separately (i.e. colored wheels) may also be used. If official Cub Scout Pinewood Derby

Wheels and Axles are included in a precut car kit, they may also be used. The car may not be sent to third-party facilities for tuning or other performance enhancements.

- o) Four wheels must be used, one per axle – no more, no less. Not all four wheels need to touch the track.
- p) Axles on the car may be polished. However, using pre-polished or pre-grooved axles from a third-party facility is prohibited. The car may not ride on springs.
- q) Mold projections on wheel tread - Mold projections on a wheel's tread may be removed, but the wheel should not be otherwise shaved, shaped or narrowed.
- r) Wheel bearings, washers and bushings, etc. prohibited - Use of bearings, bushings, washers, or the like between the wheel and car body are prohibited. Wheels must come in direct contact with the car body.
- s) Wheel rim coverings are prohibited - A covering placed on a wheel rim that might hold graphite or lubricant around a nail axle head is not permitted.
- t) No mechanical propulsion - The car must be freewheeling with no starting assistance, springs, or other methods of propulsion. No magnets are permitted anywhere on the car.
- u) Only dry lubricants, such as graphite, molybdenum (moly), or tungsten disulfide (WS2) powder may be used. Liquid lubricants, such as Krytox lubricant, oils, and silicone sprays are prohibited.
- v) Wheel alterations prohibited - use of any type of beveled, tapered, thin sanded, wafered or lathe-turned wheels is prohibited. Any attempt to reduce the running surface of the wheel will disqualify the car.

## **INSPECTION**

- a) Each car must be registered, numbered, and pass inspection and weigh-in before it can compete in the Derby.
- b) The Inspection Team, appointed by the Chair, may disqualify those cars that do not meet the 2020 Potomac District Pinewood Derby Rules.
- c) Once a car is inspected and registered, only Derby Committee officials will handle the car. Cars will not be re-inspected unless the car is damaged in handling or in a race.
- d) Be sure to lubricate the axles and make any last-minute repairs before the car is presented for Registration and Inspection.

## **RACING RULES**

- a) Cars must be made for the current 2020 Pinewood Derby season. Derby cars or axles and wheels from cars raced in prior year competitions are not permitted. NO REPEATS or REPAINTS.
- b) Each car will participate in four heats, running once in each of the four track lanes.
- c) The average time to complete the four heats will determine the fastest cars in each den-level and the overall district.
- d) The following rules apply:
  - i) If a car comes off the track during a heat, a “No Race” will be declared and the heat will be run again. If the same car jumps off the track a second time, that car’s time for that heat will default to 9.9999 seconds.
  - ii) If a car leaves its lane and interferes with another car, a “No Race” will be declared and the heat will be run again. If the same car leaves its lane a second time and/or interferes with another car, the interfering car will be removed from the heat and assigned a time of 9.9999 seconds for the heat.
  - iii) If a car suffers a major mechanical problem, a “No Race” will be declared and race officials will attempt to repair the car within 5 minutes. If the car is still unable to compete, the damaged car will be assigned a time of 9.9999 seconds for the heat and any remaining heats.
  - iv) If a car or cars do not make it to the Finish Line, the car(s) will be assigned a time of 9.9999 seconds for the heat.

## **DISQUALIFICATION**

- a) The Scout owner of a noncompliant or disqualified car will receive a participation patch. Their car will still race but will not qualify for a speed award.
- b) Any Scout competitor (including the parent or sponsoring adult of the Scout) can appeal to the Chair for an interpretation of these Rules.
- c) Decisions of the Chair during all heats and races are final.

## **AWARDS**

- a) Five Appearance (non-racing) Awards will be presented; one each for Best In Show, Judge's Favorite, Most Unusual, Most Humorous and Most Colorful. Additional appearance awards may be presented at the discretion of the Potomac District Chair.
- b) 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> place trophies will be presented to Scouts with cars that finish with the fastest average times (average of the four heats) in their den-level.
- c) 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> place overall district trophies will be presented to Scouts with cars that finish with the 3 fastest average times in the entire Derby.

Questions concerning these rules or the Potomac District Pinewood Derby race, may be addressed to the Potomac District Chair, Ken Sprinkle at [kens@infoservinc.com](mailto:kens@infoservinc.com).