

Dan Beard District Pinewood Derby Rules



We have really updated the rules this year. The format has changed to a friendlier style. There are WARNING boxes and boxes with useful INFO.

1 GENERAL

1.1 In order to race at the **Dan Beard District Derby**, the participant must satisfy one of the two membership requirements.

- Registered as a Cub Scout at some point since January 1st, 2018 to present
- 5th Grade Cub Scout who was a Webelos Scout September 1st 2018

1.2 For the **Dan Beard OPEN Championship and RANK races**, the participants will be divided by age groups.

- Each Rank can compete against others of the same rank (as determined by what rank they were on September 1st, 2018 (or for new scouts from fall recruitment, what their rank would have been)
- Boy Scout Races- Boy Scouts who were Scouts (**Note a Scout cannot enter as both a Cub Scout AND a Boy Scout- ie. Enter as a Webelos Scout (5th grade) **or** enter as a newly bridged Boy Scout)

1.3 **The car must be built for the current Pinewood Derby Racing Season. NO REPEATS or REPAINTS.** A completed car purchased from a third party is not allowed. This includes pre-shaped but unpainted cars from any vendor. You must use the BSA kit to make your car.

1.4 The car may not be **sent** to third party facilities for tuning or other performance enhancements. The Scout must be the one to design, shape, and be involved in creating the car.

1.5 **The youth advances, not a specific car.** Feel free to retune your car or even build a whole new one! Many build a car for DESIGN at the Pack or District level and then build a new car for SPEED at the Council level.

1.6 Scout participants should be in Class A uniform at this race.



We ask each Pack to send the top 3 racers from your pack. **They will compete for The District Title. In addition to the district title race, we will hold an open championship. Each rank will race for a top three finish. Tigers, Wolf, Bear and Webelos, Boy Scouts and siblings. Then the top three from each rank will compete to be the Open champion. Anyone is allowed to enter this race. But only the top three cars from pack races will compete in the district title race.**

2 BODY

2.1 The main body structure(chassis) must be made of wood from the BSA kit.

2.2 The car must meet the following specifications:

- 2.2.1 Width: not to exceed 2 3/4 inches
- 2.2.2 Length: not to exceed 7 inches
- 2.2.3 Weight: not to exceed 5.0 ounces
- 2.2.4 Height: not to exceed 3.5 inches
- 2.2.5 Clearance: **The wheels are the only part of the car allowed to touch the track.**
- 2.1.6 Center rail width: Wheels must clear center guide rails, no less than 1 3/4 inches minimum.
- 2.1.7 Bottom no less than 3/8 inches from track surface

2.3 Wheelbase: the distance between the center of the front and rear wheel must be no less than 4 inches.

2.4 Front: the front edge of the car must be no more than 1 inch above the wheel lane of the track and be **at least 3/4 inch wide at the center of the car**. NO NARROW POINTED FRONT ENDS. **No part of the car body, wheels or attachments may protrude in front of the starting peg. (no notches can be cut into the front of the car which will allow the car to start in front of the other vehicles when placed on the starting peg.)**

Cars with this shape will be raced backwards. If the back of the car is in violation of this rule or others, the car will not be raced for a position in the district. Its time will be discounted and not be in the running for any speed awards.



The guidelines are intended to help you construct a car with the necessary clearance for most tracks. If any question arises about a car's clearance during check in, race inspectors will place the car on the track to verify that only the wheels can touch the track.

- **Car bottom:** to clear a filled center rail, the bottom of the car should be no less than 3/8 inch from the surface.
- **Fenders:** Fenders or other body parts may extend below 3/8 inch from the track surface. Remember the guide rail width so the fenders do not rub.
- **Weights:** To aid in a safe stop at the end of the track, we recommend that you insert weight inside the body or place it on the top of the car. Avoid placing thick (over 1/8") weight on the bottom of the car as that may destabilize the car on the stop section.

2.5 When placed in the starting position, no part of the car may protrude beyond the starting pin.

2.6 At least 4 wheels must be attached to the **sides** of the car body. **Each wheel must be attached to the car's wood chassis with a legal axle.**



Although at least 4 wheels are required on the car, it is not required that all 4 wheels touch the track surface. Some car designs specifically raise one wheel, or during the car's construction a wheel may be off the ground. This is permissible.

All 4 wheels on the car however give a greater chance that the car will stay in its lane and not jump the track and interfere or collide with other cars during the race.

2.7 The front most and rear most wheels must be positioned across the body from one another.

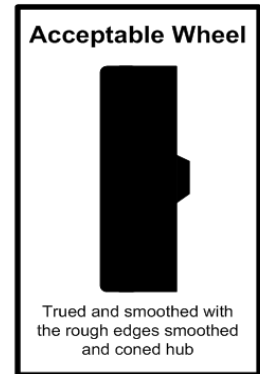
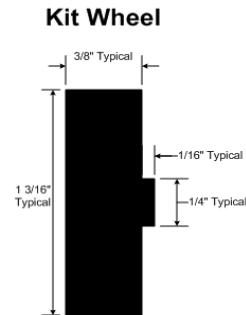
2.8 The complete inside and outside lettering of each wheel must be visible when the wheel is attached to the body.

2.9 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 and or bushings
7. Hubcaps covering the nail head
8. Loose/moving objects on or in the car
9. Magnets

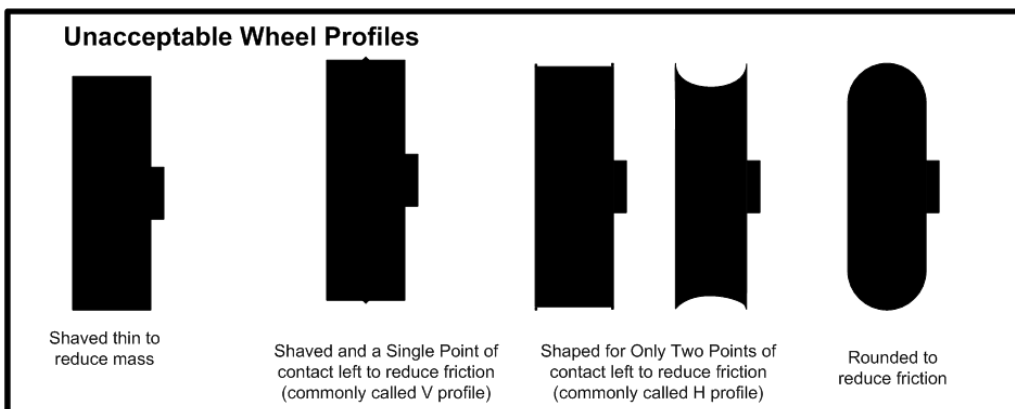
3 WHEELS

- 3.1 Only official BSA wheels are allowed. Colored wheels are allowed as long as they have the BSA stamp/Logo
- 3.2 All lettering and numbering, both inside and outside of the wheel, must remain complete and be visible with the wheel on the car.
- 3.3 The fluting, spokes and other markings on the outside wheel area must remain visible.
"Fluting" refers to the small bumps on the outside edge of the tread
- 3.4 The wheel diameter must be no less than **1.16 inches**.
- 3.5 The tread surface width must be no less than **7.5 mm**.
- 3.6 The tread surface must be flat and parallel to the wheel bore. Therefore, the following modifications are prohibited:
1. Rounding of the tread surface
 2. Grooving, H cutting, or V cutting the tread surface
- 3.7 The following wheel modifications are prohibited:
1. Removing material from the inside tread surface or the inside sidewall surface
 2. Drilling holes in the sidewalls or tread area
 3. Filling wheel tread with any type of material
 4. Filling the wheel bores and re-drilling the bore



The rules permit many wheel modification so long as you above. Common legal modifications include but are not limited to:

- Truing the tread surface with sandpaper, straight edge, or lathe to correct "out of round wheels.
- Truing and shaping the inner edge of the thread surface
- Narrowing the tread surface to 7.5mm to get straight edges
- Applying wheel bore treatments such as polish and wax to smooth the bore.
- Truing and re-coning the tip of the inner hub
- Removing the double step from the outer hub
- Balancing the wheel by adding material such as glue or fingernail polish to the inside of the wheel



Some online vendors sell aftermarket BSA wheels that have been lightened by removing material from inside the wheel surfaces. Per rule 3.7, these wheels are NOT allowed and are easily recognized at inspection. Cars with these wheels will NOT be permitted to race. If you plan to use aftermarket wheels, confirm with the vendor that no weight is removed from inside the wheel.

4 AXLES

- 4.1 BSA Nail Type Metal Axles are required with an overall diameter of no less than .084 inches.
- 4.2 One-piece axles that extend through the width of the car to support both wheels are not allowed.
- 4.3 Speed axles that can be bought are not allowed.



You must use official BSA axles.
You may also polish and groove the axle provided that the journal portion of the axle (the part the wheel rides on) is no less than .084 inches, roughly the same diameter as the BSA nails.

5 LUBRICATION

- 5.1 Over application of lubricant, which results in excessive shedding onto the track is not allowed.
- 5.2 Dry lubricates only: Graphite powder. Oil lubricants are not allowed in this race
- 5.3 No lubricants on or in the treads of the wheels.

6 WEIGHTS

- 6.1 Lead (Pb) weight, if used, must be completely sealed and safe from all possible contact with youth.
- 6.2 Drilling/Removal of lead weight is not allowed at the race or check-in venue.

7 RACE DAY

- 7.1 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.
- 7.2 Every effort will be made to do the inspection without any altering of the car. **If we can't verify that the wheels have not been lightened due to air dams, fenders, or other reasons, we will ask YOU to take the wheels off for inspection.**
- 7.3 Weight and dimensions of the car is according to the scales and measurements from the race committee.
 - 1. Questions or issues that arise during any phase of the race (from registration to final outcomes) will be determined by the race committee at that time.
- 7.4 After a car has passed inspection, only race officials may handle the car.
- 7.5 After check-in, adjustments are not allowed. Car repairs during the race are not allowed unless authorized by the race officials.
- 7.6 Once Inspection is PASSED before the race, the car will not be re-inspected after the race.
- 7.6 Good sportsmanship and behavior is expected. Race officials may ask anyone not following this rule to leave.



Typically, race officials will authorize a car repair if it was involved in a collision with another car or object. However, the decision to allow a repair is left entirely to the discretion of the race officials. Depending on the race officials, they may offer to assist with the repairs if needed.

8 QUESTIONS

Questions about the rules may be addressed to the Race Officials in charge of rules. DanBeardDistrictDerby@gmail.com
Subject line "rules"

Other questions about the day or general information about the even can be addressed to the Race Official Master of Ceremonies, TaraLyn Brown: DanBeardDistrictDerby@gmail.com.