

# 2020 Pinewood Derby Rules

## Car Specifications & Requirements

### Dimensions and weights:

1. Cars must have been built during the 2020 Pinewood Derby racing season using an Official BSA Pinewood Derby Kit.
2. Width, including wheels and axles, must not exceed  $2\frac{3}{4}$  inches (6.99cm).
3. Length shall not exceed 7 inches (17.78cm).
4. Weight shall not exceed 5.0 ounces (141.75 grams) measured on a scale accurate to  $\frac{1}{10}$  of an ounce. Overweight cars must be reduced to running weight or below before they can be entered. The official race scale shall be considered final.
5. Cars must clear the center rail of the track, which is  $1\frac{5}{8}$  inches wide by  $\frac{1}{4}$  inch tall along the entire length of the car. Minimum clearance between the bottom of the car and the bottom of the wheels shall be  $\frac{3}{8}$  of an inch to avoid contact with the tracks center guide strip.
6. No part of the car may protrude beyond the starting pin. The front edge of the car must not be more than 1 inch above the wheel lane of the track and be at least  $\frac{1}{2}$ -inch-wide at the center of the car.
7. Any details added must be within length, width, and weight limits.
8. All cars must have a wheelbase no less than 4 inches (101.6 mm), 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. Maximum allowable wheelbase shall not allow any portion of the wheels to extend beyond the front or rear of the car.

9. 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.
10. All weights shall be attached to the wood of the car, not the axels or wheels. No weights are allowed inside the wheels in any way, shape, or form.

**a. Examples of Prohibited Items which CANNOT be used:**

- i. Magnets, springs, or suspension systems of any type
- ii. Starting devices, finish line devices, propellants, or propulsion systems
- iii. Wet paint or sticky substances
- iv. Glass or excessively fragile parts
- v. No bearings or solid one-piece rod style axles
- vi. Axles and wheels attached to any device that mechanically alters rotation or spin
- vii. Loose objects on car - all weight must be securely fastened or embedded in the car
- viii. Live ammunition as decoration (Yes, this has happened in the past)
- ix. Electronic or lighting devices (if lights are on the car they must be turned off)

**Wheels:**

1. Only unaltered Official BSA Wheels are allowed:
  - a. All four wheels must be unaltered in any manner.
  - b. All four wheels must turn independently and the tread surface of all four wheels must touch the racing surface throughout the race.

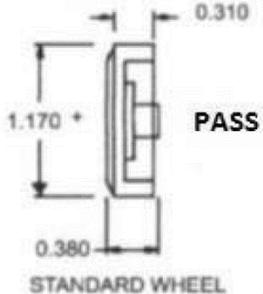
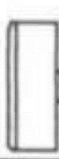
- c. Only the axles that come with the official BSA Pinewood Derby Kit are allowed.  
(If the axles provided in the BSA Pinewood Derby Kit have burrs from the manufacturing process you are permitted to lightly polish them off).
  - d. All axels shall remain straight as they come in the BSA Pinewood Derby Kit.  
Axels that have been bent, curved, or altered in anyway other than what is mentioned in point “C” above shall not be permitted.
  - e. The fluting and other BSA markings on the outside wheel area must remain visible.
  - f. Tread surface must be flat and parallel to the wheel bore.
  - g. No material may be removed from the inside wheel surfaces at any point.
  - h. All lettering and numbering, both inside and outside, must remain complete and be visible. No wheel covers, inside or outside, may be used.
  - i. Judges reserve the right to measure the wheel with calipers to verify dimensional compliance with official wheel size restrictions.
2. The weight of the wheel shall not be increased or decreased, only unaltered Official BSA wheels are allowed.
  3. Wheel bores may not be filled and re-drilled to alter bore diameter or to achieve better fit with the axle (no material may be added to the wheel bores, axles, or wheels).

**Please note:** There are after-market modified wheels available that have been 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 can be EASILY RECOGNIZED at inspection. Cars with third party manufactured or modified wheels will not be permitted to race. Only Official BSA wheels are allowed.

The following diagram offer wheel measurements and examples of disqualifying wheel modifications.

### CLARIFICATION OF DISQUALIFYING / ALTERED WHEELS

No alteration, narrowing, lathe cutting, or re-shaping of wheels (inside or outside) is allowed!!!!

 <p>STANDARD WHEEL</p>	FAIL	FAIL	FAIL	FAIL	
	 <p>ROUNDED WHEEL</p>	 <p>"V" WHEEL</p>	 <p>CUPPED WHEEL</p>	 <p>REDUCED DIAMETER</p>	
FAIL	FAIL	FAIL	FAIL	FAIL	FAIL
 <p>"H" WHEEL</p>	 <p>RIBBED WHEEL</p>	 <p>SPEED WHEEL</p>	 <p>SLANTED OUT</p>	 <p>SLANTED IN</p>	 <p>KNIFE EDGE</p>

NO LIGHTENING OF THE WHEEL IS ALLOWED