

# War Eagle District Pinewood Derby Rules

## I. Eligibility & Registration

🔧 Race registration will be completed on March 9 at 1pm-2:30pm at the Redeemer Lutheran Church.

## II. Body Specifications

🔧 **Width** - not to exceed 2 ¾ inches (7cm).

🔧 **Length** - not to exceed 7 inches (17.8cm).

🔧 **Height** - must have clearance under Finishing Gate – not to exceed 6 ½ inches.

🔧 **Weight** - must not exceed 5.099 ounces measured on Pack 208 Official Race Scale.

🔧 Overweight cars may be reduced to 5.099 ounces or below before they can officially be entered, at Check in March 25<sup>th</sup>.

🔧 **Center Rail Clearance** - Cars must clear the center rail which is 1 5/8 inches wide by ¼ inch tall along the entire length of the car.

🔧 **Wheelbase** - Can be extended. – Standard wheelbase is 4 3/8 inches from center of front axle to center of back axle. Any wheelbase can be used.

🔧 Axle holes may be drilled into body of car as long as the specs are met.

🔧 **The main body structure must be made of pinewood.**

🔧 **Body design** - may be enhanced by adding other stable materials such as plastic, metal and/or details. All additions must be firmly attached and conform to size specifications. No loose materials will be allowed on the cars.

🔧 **No part of the body, wheels, or attachments can extend beyond the starting peg on the track.**

🔧 **The length is not to exceed 7 inches.**

## III. Prohibited Items that can NOT be used

- 🔧 Magnets, springs or suspension systems of any type
- 🔧 Starting devices, finish line devices, propellants, or propulsion systems
- 🔧 Wet paint, or Sticky substances
- 🔧 Glass or excessively fragile parts
- 🔧 Electronic or lighting devices (if lights are on the car they must be turned off)
- 🔧 Bearings
- 🔧 Solid one piece rod style axles
- 🔧 Axles and wheels attached to any device that mechanically alters rotation or spin

## IV. Axles

🔧 Nail type axles as found in the Official Pinewood Derby kit are to be used.

🔧 Modifications to the Axles are allowed *that include straightening, sanding, polishing, canting, grooving, beveling & tapering of axle head as long as the Diameter of the Axle in not reduced the Diameter may not be less than .084 inches (2.13mm).*

🔧 Axles can be mounted by drilling Axle holes or inserted into the slots on car.

## V. Wheels

🔧 Only Official BSA Wheels are allowed (either new style & old style) all markings must be intact on inside and outside of wheel. You may use the Official BSA Colored wheels

🔧 **Outer wheel surface:** *may be sanded, shaved, lathed or polished to remove any imperfections, true roundness, remove mold castings and burrs, but must not be reshaped in any way to minimize tread contact or alter aerodynamics.*

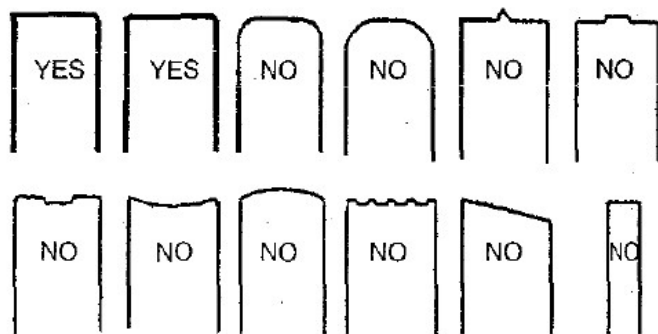
🔧 The fluting (small decorative dots on the edge) must remain visible around the entire circumference.

🔧 The tread / contact surface must remain flat and parallel to the bore.

🔧 The width of the tread must not be less than 7.5mm

🔧 No removing or reducing the letters or spokes or drilling additional holes.

### Wheel Profile Illustration:



⚔ The following wheel modifications are **NOT** Allowed

- ⚔ No Rounding of the wheel treads – they must remain flat.
- ⚔ No Grooving, H-cutting, V-cutting, Crowning, Tapering or Dishing
- ⚔ No Altering the wheel profile
- ⚔ No Drilling sidewalls
- ⚔ No Filling of any wheel surface with any type of material

⚔ Coning the hubs, truing the inside edge of the wheel, and removing the outer hub step down is allowed.

⚔ Wheel Bore *treatment is allowed including polishing, sanding and / or tapping.*

- ⚔ Wheel bores may not be filled and re-drilled

⚔ There must be at least four wheels on the car, *however it is not required that all four wheels make contact with the track surface – one wheel may be lifted from the track surface.*

- ⚔ Each wheel must be mounted on an axle, on the outside of the car, on the vertical side of the car.

- ⚔ Each wheel must be attached by an axle

## VI. Lubrication

⚔ Graphite ONLY in Scout Division & Open Class

## VII. – Race Operations and Miscellaneous Rules

⚔ All Cars **MUST** pass inspection before being allowed to race based on the rules and specification stated in I-VI.

- ⚔ An approved inspected car will then be checked in and not be touched by anyone but the race officials. Until the cars are released by Race Officials.

⚔ All lubrication of wheels must take place prior to final inspection check in and before Final Race (see below)

⚔ Officials have the Right to Disqualify Any Car, which does not meet all of the stated rules and specifications. The Officials Decision is Final.

⚔ Appealing a decision – if a Race Official makes a ruling and you wish to appeal it – all Officials will be assembled and based on majority rule the decision will be upheld or overturned.

⚔ Each car will race once in every lane (1 times)

- ⚔ Each race is timed with electronic equipment.

- ⚔ In the event the equipment fails, the race(s) will be re-run.

⚔ In the event of a tie(s) a run-off will be run between any of the cars as needed to fill the Overall Races.

- ⚔ 5 Fastest Cars in each Division will advance to Overall Race

- ⚔ Each Division will run separately.

### ⚔ During Races

⚔ If a car jumps the track and interferes with another car then the race will automatically have to be re-run.

⚔ If the same car jumps the track again, then it is disqualified (after interfering) from that race.

⚔ If a car jumps the track and does not interfere with another car, and finishes the race it will not be re-run.

⚔ If a car jumps the track and does not interfere with another car, but does not cross the finish line a time of 9.9999 seconds will be assigned to that car's race.

⚔ If an item affixed to a car falls off during a race, and in the opinion of the race official the car is still able to race, repairs will not be allowed.

⚔ If a car suffers a mechanical failure or is unable to finish, the individual will be allowed 5 minutes to make the repair under the supervision of a race official. No weight can be added to the car as part of the repair action. If the car is unfit to race after the 5 minute period, or becomes disabled after further racing, it will be disqualified and taken out of the race. No other modifications are allowed – such as re-lubing; only the repair to the item(s) can be preformed.

⚔ Any car that is discovered to be illegal during the competition by a Race Official will be disqualified from competition.

### ⚔ After the Races

- ⚔ Times will be calculated and reviewed by Race Officials for the Trophies.