

2012 Canoe on Wheels Rules

This event is intended to be a fun event for all competitors, both the speed demons and the crafty. As such there will be awards for many aspects of the event. Some categories are as follows;

- Indian theme car
- Tribal spirit car (to celebrate your tribe)
- Original design
- Paint job
- Decorated
- Girlie
- Hotrod
- Judge's choice
- Fastest; K-1st grade, 2-3 grade, 4-5 grade and overall (please remember that you are competing for a ribbon!)

Please note that this year we will not allow lubricants. Cars must be brought to tech/check-in "dry" without graphite/Teflon/oil. We will check for it during tech. You must have clean axles, wheels and body. A mystery lube will be provided when you bring your car for tech/drop-off. You may only apply the lube provided and right before you hand over your car. The lube is known to cause graphite/teflon to bind (so keep those axles/wheels clean).

Basic rules: Use Revell pinewood derby car kits. These are available at Michaels and other hobby shops (did not see them at Hobby Lobby in 59!). <http://www.revell.com/pinewood-derby/> will tell you where you can buy them also. These use the nail axles and wheels with "BSA" molded on the side walls of the tires.

Detailed rules for the speed demons;

Car Specs:

A. Body – Main body material must be wood. Axles must be inset in wood. Body must be clean and free of lubricants/graphite/etc.

B. Width - Not to exceed 2 3/4 inches

C. Length – The entire car may not exceed 7 inches

D. Weight - Not to exceed 5.0 ounces. **No Lead (Pb) is allowed in the car construction.**

Please consider the safety of your kids and others. Lead is a known neurotoxin. Cars suspected of having Pb will be immediately removed and result in disqualification of the car. The pinewood derby kits come with 99.99% lead free weights, please use these. Most people believe placing the weight in the rear of the car gives an extra push in the transition area of the track.

E. Height - Not to exceed 5 inches (exceptions for "Craft/non speed" cars)

F. Center Rail Width Clearance – Must clear center guide rails, typically no less than 1-3/4 inches minimum.

G. Bottom Clearance - No less than 3/8 inches from track surface. Fender flairs with less clearance are acceptable as long as the center rail width clearance is the same in rule F. Weights are preferred to be inset in the body or on top of the car to aid in a safe stop at the end of the

track. No part of the car nor any attachment to the car may be capable of coming into contact with the track other than the wheel(s).

H. Wheelbase –All cars must have a wheel base no less than 4", 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. Staggered wheelbases are not allowed.

I. Four Wheels – All cars shall have four wheels. When any three wheels are touching a flat plate the fourth wheel must not be out of plane by more than 0.125". Many people believe fast cars only have three wheels touching the track at any one time. Others believe that when the non spinning wheel contacts the ground at the transition area of the ramp it upsets the car and absorbs energy.

J. Front End – Depending upon the track, the front of the car may rest against a short starting pin. We therefore require that the front bottom of the car which rests on the pin is no higher than 0.75" above the track. The front end must be at least 1 inch wide in the middle. No part of the car body, wheels or attachments may protrude in front of the starting peg.

K. General - 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.

PROHIBITED:

A. Any Lead (Pb) item. Lead is a known neurotoxin and will result in immediate removal and disqualification of the car. It is suggested to use normal steel as weight.

B. Starting devices or propellants are prohibited.

C. Springs are prohibited.

D. Liquids, wet paint, oil, sticky substance, or powders of any kind are prohibited. This includes loaded clays/gum to dial in the weight.

E. Glass or excessively fragile parts are prohibited.

F. Bearings, bushings, washers, sleeves, hubcaps or inserts attached to or in contact with the axle, body or wheels are prohibited.

G. Loose or movable objects on/in car intended to give a speed advantage are prohibited

H. Magnets are prohibited.

I. No part of any car, or attachment to any car, that is metal, pointed, sharp, and/or jagged may be capable of contacting any part of the track.

J. Any device that, at the judges discretion, is determined to give the car additional propulsion beyond gravity.

BODY:

The main body structure must be made of wood. You can use your own block of wood or alternately, a pre-shaped block may be purchased. It is strongly encouraged to design and prep your own body. It is known that aerodynamic shapes go faster.

WHEELS:

A. Use only Official Revell Pinewood Derby BSA wheels that are clean and free of lubricants/graphite/etc.. It is known that the BSA wheels are faster than the old pine care wheels. The new BSA wheels are well made with little to no flash and very true and require little to no preparation.

B. The wheels may not be modified in any way other than the local removal of injection gate flash/sprue flash/vent flash and polishing of the surface where the nail head and car body contacts the wheel bore. This means that only small spots where the injection gates and the thrust bearing surfaces are located on the wheels can be sanded/polished. The remainder of the wheel surfaces must remain as purchased.

C. All other wheel modifications are PROHIBITED. Hollowing, sanding, or otherwise removing or modifying material from inside the wheel is prohibited.

Other examples include, but are not limited to:

Rounding of wheel edges is prohibited.

Grooving, H-cutting or V-cutting are prohibited.

Altering of wheel profile is prohibited.

Narrowing the tread surface is prohibited.

Drilling sidewalls is prohibited.

Filling of any wheel surface with any type of material is prohibited.

Wheel bores may not be filled and re-drilled to alter bore diameter or to achieve better fit with the axle.

Please note: There are after market 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.

AXLES:

A. 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/recommended as long as overall diameter is not reduced below .084" requirement. Typical treatments include polishing with 600, and 1000 grit sandpaper and following this with jewelers rouge.

It is also recommended that the nail head be cleaned of burrs/metal flash with a small file and then polished as the axle surface has been. This is recommended as the burr/flash is significantly different on every nail bought. Hard work and preparation in this area pays off.

B. Cars should be tuned or aligned by the racer, adult supervision is encouraged. Cars that run straight on smooth flat level ground tend to run faster down the track. Hard work and preparation in this area pays off.

C. Grooved axles are prohibited.

D. Axles must not be connected to any device that mechanically alters rotation and spin.

E. Axles must be mounted into the wood sections of car. Predrilling the holes is recommended to prevent splitting of the wood body.

F. Lubricants are banned and a mystery lube will be applied at tech. Axles must be clean and free of lubricants/graphite/etc.

INSPECTION:

Each car must pass inspection by the Official Inspection Committee before it may compete. Each car will get only two attempts to meet spec. This means that the weight must be close enough that you don't come back more than once to get the weight "dialed in".

The Inspectors will disqualify any car not meeting these rules. Any adult or guide/princess 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.

WEIGHTS:

Absolutely no use of Lead (Pb) will be allowed in any car. Lead is a known neurotoxin and will result in immediate removal and disqualification of the car.

All weights must be secure in/on the car and not move.

Use of loaded clays / gum is not allowed to "dial in" the weight.

REPAIRS:

Any car losing wheels or any part that prevents it from running is eliminated from competition.

EXCEPTION: Race official discretion. Race officials may authorize repairs when damage is caused by collision with another vehicle or object. Repairs must be done before the next heat that the car is in starts. If the car cannot be repaired before it's next race starts, that car will be eliminated from competition.

BEHAVIOR:

GOOD SPORTSMANSHIP AND BEHAVIOR IS EXPECTED. Race Officials may ask anyone not following this rule to leave. We are racing for ribbons and fun with our kids.

QUESTIONS:

Questions may be addressed to the Race Officials. The Race Officials may be contacted at rclarke@ymcachicago.org