2023 Wilkinson Wood Car Derby Rules

OVERALL: All cars must be built from the official Scouts Canada Kub Kar Kit. **NO REPEATS or REPAINTS**. Cars must be tuned or aligned with the racer, adult supervision is encouraged. Cars may not be sent to third party facilities for tuning or other performance enhancements.

BODY: The main body structure must be made of wood. Cars that were purchased completed may not be used.

Car Specs:

A. Width-Not to exceed 2 3/4 inches
B. Length-Not to exceed 7 inches
C. Weight-Not to exceed 5.0 ounces on scale accurate to 1/10 ounce.
D. Height-Not to exceed 3 inches

E. Clearances: Center Rail Width: Must clear center guide rails, typically no less than 1-3/4 inches minimum.

Bottom: No less than 3/8inches from track surface between center rails. NOTE: Most aluminum tracks have more space available for the bottom attached weights sold at SCOUTS CANADA stores and should be allowed.
Other: Fender flairs with less clearance are acceptable as long as the center rail width clearance is maintained. 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 or attachment to any car, which is metal, pointed, sharp, and/or jagged, may be capable of contacting any part of the track.

F. 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.

G. Front End - Height: Depending upon the track, the front of the car may rest against a short starting pin. Therefore the front bottom of the car which rests on the pin is no higher than 1" above the track.
Width: The front end must be **at least ½ inches wide** in the middle. **No part of the car body, wheels or attachments may protrude in front of the starting peg.** 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 ITEMS: A. Springs B. Starting devices or propellants C. Electronic or lighting devices that interfere with the race electronics. D. Liquids, wet paint, oil, sticky substance, or powders of any kind (other than axle lubrication) E. Glass or excessively fragile parts F. Bearings, bushings, washers, sleeves, hubcaps or inserts attached to or in contact with the axle, body or wheels. G. Loose objects on car H. Magnets

WHEELS: A. Use only Official Scouts Canada Kub Kar Kit wheels. All lettering/numbering, both inside and outside, must remain complete and be visible. The fluting and other SCOUTS CANADA markings on the outside wheel area must remain visible. Outer wheel surface may be sanded, shaved, or polished to remove surface imperfections, mold casting burrs, and correct off center wheel bores. Outer wheel surface must not be reshaped in any way in an attempt to minimize tread contact or alter aerodynamics. Tread surface must be flat and parallel to the wheel bore. Coning the hubs and truing the inside tread edge is allowed. Tread width may not be less than 7.5 mm. You may add material such as glue, fingernail polish, or tape, to the inside of the wheel to aid in balancing of the wheel, but **no material may be removed from the inside surfaces**. Minimum diameter of wheel is 1.16” to maintain the ridges on the outer edge.

B. Wheel Bore treatment is allowed including polishing and/or tapping. Wheel bores may not be filled and re-drilled to alter bore diameter or to achieve better fit with the axle.

The following wheel modifications are **PROHIBITED:**

A. Rounding of tread surface/wheel edges B. Grooving, H-cutting or V-cutting C. Altering of wheel profile D. Narrowing the tread surface, other than truing inside tread edge E. Drilling sidewalls F. Hollowing, sanding, or otherwise removing or modifying material from inside the wheel G. Filling of any wheel surface with any type of material

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. Each wheel must be mounted on an axle, on the outside of the car, in the vertical position. Each wheel must be attached directly to the wood car body by an axle and spin freely. No part of the wheel may overlap the center guide rail by more than 1/8 inch. The two rear wheels and the two front wheels must be positioned directly across the body from each another. Staggered wheelbases are not allowed.

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. 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.

AXLES: SCOUTS CANADA 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 as long as overall diameter is not reduced below .084 requirement.

Grooves are allowed; the depth of the groove(s) is not limited so long as the journal portion of the axle (the part the wheel rides on) is no less than the stated minimum diameter.

Axles must not be connected to any device that mechanically alters rotation or spin. Axles must be mounted into the wood sections of car. Drilled holes or slots can be used. **Approved lubricants include (but are not limited to) graphite, Teflon, Nyoil, and Krytox.** Over-application of lubricant which results in excessive shedding onto the track is not allowed.

INSPECTION: Each car must pass inspection by the Official Inspection Committee before it may compete. The Inspectors will disqualify any car not meeting these rules. A team may appeal the findings of the Inspectors to the Race Committee Chair-person, 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: The drilling/removal of Lead(Pb) will NOT be allowed at the race venues or at check-in time due to the toxicity of the material. PLEASE avoid Lead(Pb) in cars this year! If you decide to ignore the law* and put Lead(Pb) into a child's toy, the Lead(Pb)must be completely sealed and safe from all possible contact with the youth.

REPAIRS: Any car losing wheels or any part that prevents it from running cannot be repaired after the inspection and weigh in. EXCEPTION: Race officials may authorize repairs, usually when damage is caused by collision with another vehicle or object. The sponsor is in charge of all car repairs. Guidance is allowed and encouraged. Ideally repairs can be done before the next heat that the car is in starts. After the car is repaired Officials will run the race again. If the car cannot be repaired before its next race starts that race will also be delayed until the end of the races.

BEHAVIOR: GOOD SPORTSMANSHIP AND BEHAVIOR IS EXPECTED. RACE OFFICIALS MAY ASK ANYONE NOT FOLLOWING THIS RULE TO LEAVE.

QUESTIONS: Questions may be addressed to event organizer. Event organizer may be contacted at **council@wilkinsonps.org**.