NORTHERN STAR COUNCIL
BOY SCOUTS OF AMERICA

2010 Pinewood Derby Rules

Body:

The main body structure must be made of wood. Cars that were purchased completed may not be used. If the builder lacks the resources to cut out a car from a stock block of wood, attendance at a workshop(den/pack/district/council) is strongly encouraged. Alternately, a pre-shaped block may be purchased to be used with the stock BSA Wheels and Axles.

Cars must be tuned or aligned by the racer, adult supervision is encouraged. Cars may not be sent to third party facilities for tuning or other performance enhancements.

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. Center Rail Width Clearance – No less than 1-3/4 inches minimum.
F. Bottom Clearance - No less than 3/8 inches from track. Fender flairs with less clearance are acceptable as long as the center rail width clearance is the same in rule E.
G. 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.
H. 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 1/2" above the axle line. The front end must be at least ½ inches wide.

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.

No part of the car body, wheels or attachments may protrude in front of the starting peg.

The following items are PROHIBITED:
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
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.

WHEELS:

A. Use only Official Scout Grand Prix wheels.

All lettering, both inside and outside, must remain and be visible. The fluting and other BSA markings on the outside wheel area must remain visible. Outer wheel surface may be lightly sanded, shaved, or polished to remove surface imperfections and mold casting burrs, but must not be reshaped in any way in an attempt to lighten the wheel, minimize tread contact or alter aerodynamics. Tread surface must be flat and parallel to the wheel bore. Coning the hubs and truing the inside edge is allowed. Tread width may not be less than 7.5 mm. You may add material to the inside of the wheel to aid in balancing (glue, fingernail polish, tape) of the wheel, but no material may be removed.

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

The following wheel modifications are PROHIBITED:
A. Rounding of wheel edges
B. Grooving, H-cutting or V-cutting
C. Altering of wheel profile

D. Narrowing the tread surface
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 car 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.

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).

AXLES:

BSA Nail type axles are required with an overall diameter of no less than .084 inches. 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 and spin.
Axles must be mounted into the wood sections of car. Drilled holes or slots can be used.

Over-application of lubricant which results in excessive shedding onto the track is not allowed. Approved lubricants include (but are not limited to) graphite, Teflon, Nyloil, and Krytox.

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. Any adult or scout may appeal the findings of the Inspectors to the Race Committee Chair-person, whose decision is final. After acceptance only starters and judges 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. Due to the historic use of Lead(Pb) the elimination will be phased in. This is the last season where Lead(Pb) will be allowed as a weight. All Lead(Pb) must be completely sealed and safe from all possible contact with the youth. As of 7/1/2010 Lead(Pb) will not be allowed for weight. PLEASE try to avoid Lead(Pb) in cars this year!

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 when damage is caused by collision with another vehicle or object. The Cub Scout is in charge of making 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 it's 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.