**CUB SCOUT PACK 4--ST. GABRIEL**

**Pine Wood Derby Rules and Information**

**Latest Rules Update:** 03/01/2018

**SCOUTS ARE TO BUILD THE CAR THEMSELVES WITH THE HELP OF AN ADULT(S).**

**Scout benefits nothing if the adult does all the work!**

**A SCOUT IS TRUTHWORTHY!**

**Scout is expected to follow construction and race rules for their car.**

**CHECK IN**

All cars must be checked in at the designated time. During check in process the car will be inspected for specification/rules compliance.

After a car is checked in it will be put into the garage area until the scout is ready to race.

The car must remain in the garage area.

Scouts not allowed to handle their cars after check in.

After a car is checked in, no modifications are allowed unless the car breaks during a race. Then the scout and his adult helper have 5 minutes to repair their car, which must be re-inspected after the repair.

**SPECIFICATIONS:**

**Width**

Overall width of car shall not exceed 2-3/4 inches.

**Length**

Overall length of car shall not exceed 7 inches.

**Height**

Height of car shall not exceed 3 inches.

**Inside Wheels Distance**

Distance between the inside of the wheels shall be at least 1-3/4 inches, while keeping overall width of the car under 2-3/4 inches. Note: Car is 1-3/4 inches wide.

**Axle Slot Location**

Axle slots provided by the kit are to be used and may not be moved. Distance between kit axles is 4-3/8"

**Height**

Height of car shall not exceed 3".

Height specification is specific to Pack 4 track to allow clearance of overhead track reader.

**Clearance**

Minimum clearance from top of track to underside of car shall be 3/8”

Note: Weight or decoration added to bottom of car must meet the 3/8" clearance specification. If weight or decoration is not recessed in a hollow or mortise, car will probably NOT meet the clearance requirement.

**Weight**

Weight of car shall not exceed 141.8g. (5 oz.)

Scale used measures in grams.

The weight on the official race scale is the only weight that will be considered.

No loose materials of any kind are permitted on the car. Car may be hollowed out and built up to the maximum weight allowed using solid materials. No liquid fillers or liquid weight of any kind are allowed. All additional material shall be securely built into the body.

**Weight Placement**

Track transitions from the sloped section to the flat section in only 4 feet. The curve is tight.

If the majority of added weight is placed in the top rear of car, centripetal force at the curved section may cause car front to rise off the track often resulting in the car jumping track.

Take this force into consideration during design.

If a car jumps track, that heat will be re-run, however, any car jumping track 3 times will be disqualified from that heat.

**Details**

Details such as steering wheel, driver, decals, paint, etc. are permissible as long as these details do not exceed stated specifications.

Paint, glue or any other like substances must be completely dry prior to check in. Loose materials of any kind are not permitted on the car.

**ARTISTIC AWARDS**

Cars are to exhibit a high level of scout involvement and creativity.

Judging for artistic awards will be done by neutral third party ADULTS; not scouts, leaders or relatives of scouts.

**Acceleration**

Car must be freewheeling with no starting devices. Car must be accelerated by gravity only. No magnets permitted.

**Axle**

Only axles provided with each kit are acceptable. No solid axles allowed. Axle nail shaft and under side of nail head may be smoothed to remove burrs and rough spots. No other modifications of axles allowed. Axial locations may NOT be adjusted; attach axial in the slots provided. Distance between slots must remain 4-3/8 inches. Maximum allowable distance from either slot to the end of the car is 1-3/4 inches. Axle must be visible from bottom of the car for inspection. Axial can be secured by using glue.

**Wheels**

Wheel bearings, washers, bushings and graphite pads are prohibited. Only wheels provided in the car kit may be used. Wheels may be lightly sanded to remove ridges/burrs such as the rippled edge between the sidewall and the flat tread edge. Wheel treads may NOT be rounded, tapered, grooved or positioned at an angle. Wheel treads must run flat against the track surface. Narrowing or increasing size of wheels and/or treads is not allowed. Beveling, tapering, thin sanding, or lathe turning the wheels is prohibited. No weight may be added to the wheels. Wheel weight reduction procedures such as drilling out the treads, sidewalls, or spoke area of the wheels are prohibited. Wheel covers to retain graphite are not allowed. Wheels may not be painted or coated with any substance other than dry powdered lubricants, such as graphite. The “Official BSA” trademark must be visible on the outside of the wheel. At least 3 of the 4 wheels must be touching the track at all times. NO COLOR WHEELS – BLACK ONLY

**Lubricants**

Only dry powdered lubricants, such as graphite, may be used. Petroleum based or any other liquid lubricants, are forbidden. Cars may be lubricated up to the time of check in. No further lubrication will be permitted once the car has been submitted for check in.

**Car Front Shape**

Car or any part of the car may not extend beyond the starting gate pin. (Inverted U or V shaped car fronts are not allowed.) Front center of car shall be the farthest front section of the car if car front is tapered or modified.

**Suspension**

Car shall not ride on any type of spring

**Replacement Parts**

If you damage a part during construction, the pack may furnish a replacement. Additional kits may be purchased at the Scout Shop but they must be the same as provided, “Grand Prix Pinewood Derby Kit”, Item #17006”

**No Store Bought Cars or Kits**

Pre-made purchased cars are prohibited. Kits cars from other sources are not allowed. Only the kits provided are allowed and the enclosed body, wheels, and axles must be used.

**No Previous Cars**

Only cars built by the individual scout and his adult helper(s) for the period starting with receipt of the Official PWD Kits are permitted.

**DECISION OF THE JUDGES IS FINAL**

Rules/specification disputes will be decided by designated PWD judges. Judges rulings are final. No appeal.