

## CAR CONSTRUCTION RULES

1. Cub Scout should have primary responsibility for the work on the car. The parent should act as an advisor and should not build the car for the Cub Scout.
2. Cars must be built this year and cannot be one built in a previous year. The Cub Scout may enter only one car for the races.
3. **Official Kit Required** - Only the Official BSA Grand Prix Pinewood Derby Kit shall be used. Use of any other kit, wheels, or axles will be cause for disqualification.
4. **Cars submitted only for the Design competition and not the race do not have to meet the racing requirements that follow. They will be identified as not eligible for racing, registered and impounded in the Pit Area at Check-in.**
5. **The weight of the car shall not exceed 5.0 ounces (142 grams).** An official weigh-in will be conducted at car registration. Weight may be taken off or added as needed to allow the car to reach the maximum weight limit. **Remember: Scales may weigh differently. The Pack scale will be the OFFICIAL SCALE.**
6. **The maximum length of the car may not exceed 7".**
7. **The maximum width of the car may not exceed 2 3/4".**
8. **The minimum width between wheels shall be 1 3/4".**
9. **The minimum underbody clearance should be at least 3/8" or the bottom of the car will drag on the track.**
10. **The maximum height of the car may not exceed approx. 6" OR THE CAR WILL HIT THE FINISH LINE GATE.**
11. The entire car must stage behind the starting pin.
12. All weight and accessories must be securely fastened to the car, and fixed in place. Wheels are the only allowable moving part on the car. Custom parts such as fenders, spoilers, windshields, roll bars and other details are permissible provided they do not cause the car to exceed the maximum length, width, and weight specifications
13. "Quick Start Bumpers" (wire bumper in front of car) are allowed providing entire car is located behind the starting pin.
14. **Wheels and Axles** - The wheelbase (the distance between the front and rear axles) ***may not be changed*** and the ***axles may not be moved from their original positions (that is, the axles must be located in the pre-cut slots)***.
  - a. **If axles are moved, the car will NOT be allowed to race**
    - b. All four wheels are **not** required to touch the track.
15. **Only the Official Scout Grand Prix Wheels and Axles can be used.** Wheels and axles cannot be modified.
  - a. Wheels may be lightly sanded only to remove the mold projection on the tread. This light sanding is the only wheel improvement allowed, and shall not reduce the diameter of the wheel. Further beveling, tapering, thin sanding, wafering, or lathe turning of the wheels is strictly forbidden.
  - b. The outside diameter of the wheel should remain square or perpendicular with the side of the wheel. This will be verified at check-in.
  - c. Axles may be polished but diameter of head and shaft must be maintained as supplied in the kit. Axles may be permanently affixed to the car.
  - d. Only a dry powdered lubricant (such as a graphite-based powder lubricant) will be

- allowed. Graphite may not be packed into any hubcaps of the derby cars. Any other means of automatic lubrication is prohibited. Liquid or gel lubrication is prohibited
16. Wheel bearings, washers, bushings, sleeves, etc. are not permitted. Nothing can be placed between the wheel and axle, or between the wheel and car body.

**ALL CAR BUILDING ACTIVITIES SHOULD BE ADULT SUPERVISED!**

**INSPECTION & RACE PROCEDURES**

**Note:** Cars entered just for Design competition only require registration. Once registered, cars will be placed in the "Pit Area".

- A. Early registration & inspection will be Friday, January 17, 2014, 6:00 - 8:30 pm.** A racetrack will be available for practice runs, timers will be made available for practice runs. A pit official will supervise all practice racing. Scouts who have registered early can arrive later in the morning on race day (by 9:30 AM to participate in Design Competition Judging).
- B. Race Day will be on Saturday, January 18, 2014. New registrations and inspections will begin at 8:00 a.m. Design award judging will begin at 9:30 a.m. Races start at 10:00 AM.** In fairness to all participants and volunteers, no one arriving after 9:30 AM will be permitted to race. Following check-in and inspection, cars will be secured in the "Pit Area" and grouped by design competition entry.
- C.** All cars must be weighed on the official scale and be inspected before the car will be allowed to race. Numbers will be assigned to each qualifying car. After registration, cars must remain in "Pit Area" until the end of the race. No car may be modified after registration and inspection.
- D.** A "Pit Area" will be set up near the racetrack. Once a car has been placed in the "Pit Area" only Cub Scouts and pit officials will be allowed into the "Pit Area". Under the supervision of the pit officials, the Cub Scout and parent will do any repairs.
- E.** After inspection, cars will be placed in the Pit Area; **No further lubrication will be permitted after this.**
- F.** Any oil or grease type product that may "foul" the track is not allowed. Powdered graphite is a common and acceptable lubricant. In fairness to all participants, any wheels not meeting the above specifications will have to be replaced.
- G.** The entire car must stage behind the starting pin.
- H.** The car must be powered by gravity alone. No other force may contribute to the movement of the car.
- I.** The Preliminary heats will be run by Cub Scout rank. Medals are awarded to the three cars with the fastest times in each Den and trophies awarded to the three cars with the fastest times in each rank. The top twenty five cars with the fastest times overall will proceed to the Finals.
- J.** For the Finals, heats will be run again and the fastest times taken. The five cars with the fastest times during the Finals will win the 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, and 5<sup>th</sup> place pack trophies
- K.** Heats will be set up for both the rank and pack rounds by the race-timing officials. In both the Preliminary and Final heats, lane assignments will be rotated to ensure all cars will have raced on all lanes.
- L.** When notified of their turn to race, the Cub Scout will go up to the "Pit Area" and retrieve his car for his race. A pit official will then direct the Cub Scout to his assigned race area.
- M.** The starting gate officials will assist the Cub Scout in placing his car on the assigned lane and the

Cub Scout is responsible for lining up his car on the track. The Cub Scout will then move to the finish line to watch his car race.

- N.** Race-timing officials will be responsible for verifying the order of finish of each heat. In the event of a tie for an award position, the cars involved will race again to determine the finishing order.
- O.** Lane officials will supervise the return of each car to the "Pit Area" after the end of each heat.
- P.** If your car is dropped (or damaged in such a way that it will not run) you will be allowed to quickly repair it under supervision of a race official, **but no further lubrication is allowed**, and the car must be re-inspected.

**No displays of unsportsmanlike behavior will be tolerated. Anyone in attendance showing poor conduct will be asked to leave the area for the duration of the Derby.**

**ALL PARTICIPANTS ARE ASKED TO STAY AND CLEAN UP**

## Notes for Registration and Inspection Table:

The weight of the car shall not exceed: **5.0 ounces (142 grams)**

The maximum length of the car may not exceed: **7 inches.**

The maximum width of the car may not exceed: **2  $\frac{3}{4}$  inches.**

The minimum width between wheels shall be: **1  $\frac{3}{4}$  inches.**

The minimum underbody clearance should be at least  $\frac{3}{8}$ <sup>th</sup> inch or the bottom of the car will drag on the track.

The maximum height of the car may not exceed approximately 6 inches **OR THE CAR WILL HIT THE FINISH LINE GATE.**

The entire car must stage behind the starting pin.

### Wheels and Axles

- The wheelbase (the distance between the front and rear axles) may not be changed and the axles may not be moved from their original positions (that is, the axles must be located in the pre-cut slots).
- All four wheels are not required to touch the track.
- Only the Official Scout Grand Prix Wheels and Axles can be used

Any oil or grease type product that may "foul" the track is not allowed. Powdered graphite is a common and acceptable lubricant. In fairness to all participants, any wheels not meeting the above specifications will have to be replaced.

**ONCE THE CAR IS REGISTERED NO FURTHER ADJUSTMENTS OR LUBRICATION  
MADE BE MADE!**