

# **Cub Pack 342**

## **Pinewood Derby Rules**

### **I. CAR**

- A. The car must be newly built for the current Cub Scouting year using the official BSA Pinewood Derby® Kit (No model kits or premade kits allowed). The car should be substantially built by the Scout. Parental supervision in the construction of the car is encouraged.
- B. If a wheel is broken and a new slot is needed, the slot can not exceed 1/4 of an inch from the original position of the Pinewood Derby kit (the original slots are cut at 4 1/2" ). Wheels may not be designed to ride upon the guide strip of the track. Loose pieces that fall off during a race are not permitted.
- C. The axles of the car must be from the official B.S.A. PD Kit or an official B.S.A. PD wheel replacement kit. Axles must be firmly attached to the car. The axles should not be mounted at an angle or deliberately bent in order to tip any of the wheel treads to an angle. The use of a flexible suspension system of any type is prohibited.
- D. The wheels of the car must be from the official B.S.A. PD Kit or an official B.S.A. PD wheel replacement kit. Wheels may not be altered in any way. Mold projection defects on wheel treads may be removed by sanding lightly. The wheels may not be sanded to enhance performance. The decorative dots on the wheel treads may not be removed. If wheel sanding is detected the car will be disqualified. The wheels must be attached to the car with the pins provided in the kit. No cars will be accepted in the Pinewood Derby where bearings, washers, or spacers are used as part of the wheel assembly. The official wheel width is 0.34".
- E. Lubrication - only graphite powder or the B.S.A. white lube T102/polytetra fluor oethylene may be used to lubricate wheels. (Warning - other lubricants may damage the plastic wheels and keep them from turning freely.) Once the car is impounded, it may NOT be relubricated except when the wheel is damaged or becomes dislodged during a race or if permitted by the race officials. Graphite must be applied over a trash can.
- F. The total weight of the car may not exceed 5 ounces. The maximum width of the car, including wheels, may not exceed 2.75 inches. The maximum length of the car may not exceed 7 inches. The motion of the car may not be mechanically aided (motor, springs, rubber bands, etc. are prohibited).
- G. The Race Officials may disqualify any car that in their determination is not in compliance with the spirit of the PD.

### **II. RACE PROCEDURE**

- A. Cars may be raced only by the qualifying Cub Scout unless other arrangements have been made and approved with the race officials.
- B. During registration, a Scout's car will be weighed, measured, and inspected to insure compliance with the above rules.
- C. A single balance (scale) will be used to weigh cars. The balance must be able to resolve at least 0.1 ounce. Cars will not be accepted if their weight exceeds five (5) ounces by even the smallest resolution of the balance.
- D. A metal container will be used to determine if the car complies to the length and width limitations.
- E. A Cub Scout whose car fails any part of the inspection will be given the opportunity to make adjustments to the car. Cars will be re-weighed, measured, and inspected until they comply with the specifications outlined in the rules.
- F. After the car has passed inspection, it will be taken by a race official to the pit table to await the race. Cars may not be handled after inspection until they are scheduled to race.
- G. Cars will be protected from handling by anyone except the race officials and the car owner.
- H. No additional lubrication may be applied to the car at the PD site, either before or during a PD unless permission is granted by the race officials.
- I. A heat is defined as 4 runs down the track. Each car will race in each lane once per heat.
- J. Each heat will begin with the racing Scouts being called by name to the pit table. A Race official at the pit table will give the Cub Scout their car. The Scouts will then take the cars to the Race Starter for positioning on the track. Upon completion of a heat, cars that have not been eliminated must be placed at the finals table.
- K. The race official will announce whether the top car or the top two cars from each heat will move to the next round of competition. (This depends on the number of cars in the race and what level of finals (quarter, semi) are currently being held.)
- L. After each run, each car receives a point value. (1 point for 1<sup>st</sup>, 2 points for 2<sup>nd</sup>, 3 points for 3<sup>rd</sup> and 4 points for 4<sup>th</sup>) After each heat the car with the lowest number of points places first for that heat. The car with the second least number of points places second for that heat and so on.
- M. In the event of a tie between two cars that have the potential of moving to the next round or are in the finals, there will be a runoff. Each car will run down each lane again during the runoff heat.
- N. In the event of a breakdown of a car during the race, the participant will be given time to repair the car. The time allotted by the judges will be the greater of 10 minutes or the time to complete the portion of the finals (quarter, semi) that currently is running. Only the damaged portion of the car may be modified. Work must be done by the Scout with assistance from his parent or guardian. Race officials shall re-inspect any car that is serviced during the race. The Race officials may choose to continue with other race heats in order to avoid long delays in the race.