

## Technical Standards:

The inspection judges at race-day check-in are responsible to evaluate each car's adherence to the technical standards. Their decision may be appealed to the inspection chairman and the event chairman, who, after consultation with the inspection team, the SCOUT, and his parent/assistant, shall render a final, binding decision.

**T-1. Material:** Race cars shall be constructed for this event from the parts contained in the **Official Grand Prix Pinewood Derby Kit** (referred to below as **the kit**) or be an official BSA accessory as sold by National Supply division BSA or be. Materials from **the kit** may be supplemented but not replaced.

**T-2. Weight:** Racecars may weigh no more than five (5) ounces (total weight) as determined on the official scales during race day inspection. **No weight may protrude below wooden bodyline.**

**T-3. Wheels and Axles:** The car shall roll on the wheels from **the kit** or be an official BSA accessory. The wheels shall turn about the axle nails from **the kit**. The axle nails shall be firmly affixed to the wood of the car body. The axle dimensions may not be changed. The outside surface of the axle head (the non-contact surface) may not be changed substantially, such as, by polishing. **It must be obvious to the judges that the wheels and the nails from the kit are being used** or are an official BSA accessory.

**T-4. Size:** Race cars may be no longer than 7 inches, nor wider than 2 3/4 (2.75) inches, nor taller than 3 inches, as determined by the official gages during race day inspection. (Underside clearance of at least 3/8 (0.375) inches and inside wheel to wheel clearance of at least 1 3/4 (1.75) inches is recommended, so that the car will run on the racetrack. Adequate clearance is the responsibility of the race car builder.)

**T-5. Weights and Attachments:** Weight may be added to the car and will be considered part of the car for purposes of all measurements. "Weight" is considered to be any material on the car that is not provided in **the kit**. All weight must be securely fastened to the car, e.g. by permanent glue, nails or screws, tape, but no tack spray. Weights shall be passive, i.e. non-moveable, non-magnetic, non-electric, non-sticky, etc.

**T-6. Wheels:** Wheels and axles may not be modified in any way. With the exception of filing off the wheels molding burrs on the wheels racing surface.

**T-7. Unacceptable Construction:** The following may NOT be used in conjunction with the wheels or axles: hubcaps, washers, inserts, sleeves, bearings.

**T-8. Gravity Powered:** The race car may not be constructed or treated in such a way that the track's starting mechanism imparts momentum to the car. (For instance, this provision disqualifies cars with sticky substances on the front of the car and protrusions which may catch on the starting pin.)

**T-9. Lubricants:** All cars can only be treated with graphite before inspection.

**T-10. Staging:** The entire car must stage behind the starting pin.

**T-11. Body:** The car body may have no moving parts.

**C-1. Inspection Gages:** All inspection will be conducted by one team at a special inspection area using scales and gages approved by the Chairman. Please stress this fact to all members of your Pack: They should be prepared to make adjustments to their cars if necessary.)

**C-2. Impounding:** Once the car has passed inspection and received its number sticker, it will be impounded and only handled by derby officials.

**C-3. Lane Assignment:** Lane assignment for the cars first race will be assigned by random drawing and all races afterward will rotate between the two tracks. In such a case where both cars are scheduled to race the same track the track assignment will be assigned by a flip of the coin.

**C-4. Car Repair:** If, during the race, a wheel falls off or the car becomes otherwise damaged, then the SCOUT may to the best of his ability perform repairs. The SCOUT may seek advice and assistance for repairing the car. If a car is damaged due to track fault or due to fault of another car or SCOUT, then the track chairman, at his sole discretion, may allow additional repair assistance.

**C-5. Car Interference:** If, during a race heat, a car leaves its lane and, in so doing, interferes with another racer, then the car at fault shall be declared to have lost the race heat. (However, see **C-9**.)

**C-6. Car Leaves Lane:** If, during a race heat, a car leaves its lane but proceeds down the track in a manner that does not interfere with its opponent, then the race will be called normally. (However, see **C-8**.)

**C-7. Car Leaves Track:** If, during a race heat, a car leaves the track without interfering with its opponent, it shall be considered to have ended its heat at that point. (However, see **C-8**.)

**C-8. Track Fault:** If a car leaves its lane, at his sole discretion, the track chairman may inspect the track and, if a track fault is found which probably caused the initial violation, the track chairman may order the race heat to be rerun after the track is repaired.

**C-9. No Finishers:** If, during a race heat, no car reaches the finish line on the track, the car which went the farthest in its lane shall be declared as the heat winner.

**C-10. Appeals:** The Cub Scout or their Akela must make all questions of rules interpretations, procedure and fact to the track officials before the next race starts. A station at each track will be designated for this purpose.

**C-11. Opponent Assignment:** Until the finals, Races will be picked from random drawing. In the case that a racer competed with another racer consecutively, it is up to the Scout and their Akala to inform the race officials prior to the start of the race.

**C12. No Call:** If the winner of a heat cannot be declared by a majority of the judges (2 judges or 1 Judge and an automated finish line device), the track chairperson may order the heat to be re-run.

### **The Racing Environment:**

**R-1. Starting Mechanism:** The "starting line" shall consist of a vertical pins of approximately 1/4-inch diameter, extending approximately 1 inch above the track surface and approximately centered in the each lane.

**R-2. Finish Line Sensor Location:** If the track has electronics, the "finish line sensors" shall be in alignment with the corresponding starting line pin and be approximately centered in its lane.

**R-3. Finish Line Judging:** Three impartial finish line judges, assigned by the track chairman, shall be at station to call each heat. Heat finish judging is by majority rule. The track's electronic finish line sensor may serve as one of the judges.

**R-4. Finish Line Judge Backup:** Backup finish line judges shall be available in case a judge needs to be excused for any reason. A finish line judge will temporarily excuse himself if he knows that one of the heat contestants is a conflict of interest.