



**OFFICIAL  
PACK 944  
PINEWOOD DERBY  
EVENT RULES  
AND PROCEDURES**

**RACE DAY  
January 28, 2008**

**CHECK-IN  
6:30 p.m.**

**RACE  
7:00 p.m.**

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## **1. GENERAL RULES: (Applies to all Race Events)**

### **1.1. Qualification**

All registered Pack 944 Tiger, Cub, and Webelos Scouts may design, build and enter cars that are eligible to participate in the "Cub Scout Race" event. Siblings, Parents, or guardians of Cub Scouts registered in Pack 944 may design, build and enter cars that are eligible to participate in the "Open Race" event.

### **1.2. Essential Materials**

All cars entered shall be constructed from the "Official Grand Prix Pinewood Derby Kit" (referred to below as the kit) as distributed at the Pack meeting. Additional kits may be purchased from the Scout Shop, 41<sup>st</sup> & Garnett, Tulsa, OK.

### **1.3. Competitor Categories**

All Tiger Cubs, Cub Scouts, and Webelos Scouts that are registered within Pack 944, siblings, and parents or guardians with registered sons may enter this Pinewood Derby. Cub Scouts will compete with others in the same Cub Scout Den. The first through third place winners in each Den will move on to the finals. All other entries will compete in the Open class. Also, Den champions and an overall Pack champion will be selected based upon "Best Design". "Best Design" encompasses the overall presentation of the car, including shape, paint job, uniqueness, etc.

### **1.4. Attendance**

The Cub Scout MUST enter his own car. This means that the Cub Scout must be present at "Inspection and Registration" to enter his car into competition.

### **1.5. New Work**

Construction of ALL entries MUST have begun AFTER last year's (2007) Pack 944 Pinewood Derby Races.

### **1.6. Single Entry per Person**

Only one car may be registered by any person in the Pinewood Derby.

### **1.7. Inspection and Registration**

Each car must pass a technical inspection before it may compete. Technical inspection and registration of cars occurs prior to the race on Monday, Jan 28<sup>th</sup>, from 6:30 to 7:00 p.m.

### **1.8. Failure to Pass Inspection**

The Inspection Committee shall disqualify cars which do not meet the rules as described herein. If a car does not pass inspection, the owner

will be informed of the reason his car did not pass. Cars which fail the initial inspection will be returned to the participant who can attempt to correct the problem. The car may be resubmitted for inspection.

**1.9. Impound**

No car may be altered in any way after it has been registered. After a car passes registration, it will be taken by the Pinewood Derby Race Committee until the races have been completed.

**1.10. Race-Day Rules Interpretation**

On Race-Day, the Cub Scout must make all questions of rules interpretations and procedures to the Pinewood Derby Chairman or Race Officials promptly. Decisions of Race Officials on questions of rules interpretations and procedure may be appealed to the Pinewood Derby Chairman. All decisions of the Pinewood Derby Chairman are final. Decisions of Race Officials on questions of fact (i.e. the result of a specific race) may not be appealed beyond the Trackmaster and/or Finish Line Judges. **Note:** Unsportsmanlike conduct by any participant or spectator will be grounds for expulsion from the competition and/or the race area.

## **2. CUB SCOUT RACE CAR DESIGN STANDARDS**

**2.1. 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) as distributed at the November 26<sup>th</sup> Pack meeting. Additional kits may be purchased from the Scout Shop, 41<sup>st</sup> & Garnett, Tulsa, OK. Materials from the kit may be supplemented but not replaced.

**2.2. Weight**

Race cars may weigh no more than five (5) ounces (total weight) as determined on the official scales during the pre-race check-in. Note: The local post office is a good place to check the weight of the car prior to registration. Usually this will get the car close enough that some minor "tweaking" can be done prior to the race. Also, I will be available the weekend prior to the race, in case anyone wants to weigh their car on the official scales. More information on this will follow as the race day approaches.

**2.3. Wheels and Axles**

The car shall roll on the wheels from the kit. 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 grooves" may be used, but are

not required. It must be obvious to the judges that the wheels and the nails from the kit are being used.

**2.4. Wheel Treatment**

Wheel treatment (hub and tread smoothing and polishing) may not result in substantial removal of mass nor in reducing the wheel width from the original kit wheels. Some of the original "tread marks" on the wheel face must remain intact, i.e. apparent to the inspector.

**2.5. Size**

Race cars may be no longer than 7 inches, nor wider than 2-3/4 (2.75) inches, as determined by the official gages during the Registration and 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 race track. Adequate clearance is the responsibility of the race car builder.

**2.6. Weights and Attachment**

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, but not by "sticky substances", e.g. tape, or tack spray. Weights shall be passive, i.e. non-moveable, non-magnetic, non-electric, non-sticky, etc.

**2.7. Unacceptable Construction**

The following may NOT be used in conjunction with the wheels or axles: hubcaps, washers, inserts, sleeves, bearings.

**2.8. 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.)

**2.9. Lubricants**

Only dry lubricants such as graphite or powdered teflon "white lube" will be allowed for lubricating the wheels. *Lubricants may not foul the track.*

### 3. CONDUCT OF THE RACES

- 3.1. **Inspection Gages:** The race-day "Pit Stop" area will have the official scale and length box. Please stress this fact to all Cub Scouts: They should be prepared to make adjustments to their cars if necessary.
- 3.2. **Race Day Lubrication:** There will be a lubrication table set up at the race. In the interest of fairness, only one lubrication is allowed before the beginning of the first heat race and then once again before the beginning of the first race of the finals.
- 3.3. **Car Handling Responsibility:** Scouts shall be responsible to present their own cars at the "Pit Stop" area for lubrication (if they so choose), and at the inspection area for registration.
- 3.4. **Lane Assignment:** To equalize differences among track lanes, each car will run in each lane of the track. Race management software will determine the lane assignments for each race.
- 3.5. **Advancement:** Race management software will be used to manage the race. This software is electronically interfaced to the track and automatically determines which cars run in each heat, which lanes the cars are assigned, times the cars, and records their finishing place. Each car will run three races, once in each lane. The three races are timed and averaged. The lowest average times are used to determine the places in each of the dens. The top three finishers from each den (Tiger cubs, Wolves, Bears, and Webelos) will advance to the finals.
- 3.6. **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. If the car leaves it's lane and interferes with another car, the race will be re-staged and re-run. If the same car again leaves it's lane and interferes with another car, that car will be judged last place, and the race will be re-staged and re-run without that car.
- 3.7. **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.
- 3.8. **Car Repair (Without Fault):** 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 with the assistance of his adult partner or Pit Crewmember.

- 3.9. **Car Repair (With Fault):** If a car is damaged due to track fault, or damage caused by another car or person, then the Trackmaster, at his sole discretion, may allow additional repair assistance to the Cub.
- 3.10. **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.
- 3.11. **Track Fault:** If a car leaves its lane, at his sole discretion, the Trackmaster may inspect the track and, if a track fault is found which probably caused the initial violation, the Trackmaster may order the race heat to be rerun after the track is repaired.
- 3.12. **Track Champion:** The Champion from each Den shall be accompanied, with his car, from the track to the stage by his parent or other designee. The car will be impounded on the stage until the start of the Final Heats. Inspection, repair as necessary and addition of graphite, all performed solely by the Cub Scout, will be permitted prior to the start of the Final Heats.
- 3.13. **The Race Area:** Only race officials may enter the track area. This rule will be strictly enforced.
- 3.14. **Rewards and Recognition:** The most important values in Pinewood Derby competition are parent/son participation, good sportsmanship and learning how to follow rules. The Awards Committee is responsible for recognizing and encouraging these qualities in addition to traditional racing awards. Racers will be recognized as follows:
- 3.14.1. Every participating Scout will receive a Pinewood Derby patch.
- 3.14.2. Every car will be awarded a certificate and/or a ribbon for winning its own unique appearance category (Most Creative, Most Humorous, Most Colorful, Best Paint Job, and so on).
- 3.14.3. Medals will be awarded to the first, second and third-place finishers in each Den. Also a medal will be awarded to the "Best Design" for each Den.
- 3.14.4. Trophies will be awarded for the first thru sixth-place finishers overall in Pack 944. A trophy will also be awarded to the "Best Design Overall" in Pack 944.
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## 4. THE RACING ENVIRONMENT

- 4.1. **Track Length and Drop:** The track shall have a racing surface (starting line to finish line distance) of approximately 28 feet with a drop of approximately 4 feet.
- 4.2. **Track Slope:** The track slope shall decrease from approximately 30 degrees at the starting line to approximately 0 degrees at the finish line.
- 4.3. **Lanes:** Each lane will consist of a straight, smooth wooden strip approximately 1-1/2 (1.50) inches, but certainly less than 1-3/4 (1.75) inches, wide and approximately 1/4 (0.25) inches, but certainly less than 3/8 (0.375) inches thick, centered on a smooth surface no less than 4 inches wide. Each race car shall straddle such a strip during its heats.
- 4.4. **Starting Mechanism:** The "starting line" shall consist of vertical pins of approximately 1/4 inch diameter, extending approximately 1 inch above the track surface and approximately centered in the each lane.
- 4.5. **Finish Line Sensor Location:** The track has electronics called "finish line sensors" that shall be in alignment with the corresponding starting line pin and be approximately centered in its lane.
- 4.6. **Finish Line Judging:** The impartial Finish Line Judge shall make the final decision of car place. Heat finish judging is determined by the finish line sensor, but may be challenged by the Finish Line Judge. If the track's electronic finish line sensor's result is challenged by the Finish Line Judge, the race will be re-staged and re-run.
- 4.7. **Finish Line Judge Backup:** Finish Line Judge will temporarily excuse themselves if they know that one of the heat contestants is a son or relative. A backup Finish Line Judge shall be available in case a judge needs to be excused for any reason.

## 5. SPECIAL NOTES TO ALL CONCERNED

### NO Flash Photography:

Due to the extremely sensitive sensor at the finish line of the race track, flash photography is **NOT** permitted *during* any race. Before and after are fine, but not during. Any flash going off during the race will stop the timer causing the results of the race to be invalid. This will result in a restart of the race. An "official" photographer with equipment capable of shooting

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without flash will be taking pictures during the race, and the pictures will be made available on the pack website following the race.

**Participation:**

This project is a parent and son event, and is recommended as such by the National Boy Scouts of America. Parents, please do not build the car for your scout. Please make sure that your scout is involved throughout the building process. The youngest scouts may only be able to sand and paint, while the older scouts should be able to participate throughout the project. The Pinewood Derby Committee **STRONGLY SUGGESTS** that each parent emphasize this idea with your son. In all of the events, we require that the cars be built this year.

**Sportsmanship:**

Two things the Pinewood Derby requires each participant to learn are 1) the craft skills necessary to build a car, and 2) the rules that must be followed. Even more important, though, is how we act and behave while participating in the Pinewood Derby or any other group activity... Sportsmanship.

The first thing to remember about sportsmanship is that everyone's skills are a little different. You may be good at something like singing or drawing, but not as good at something else like basketball or computers. You can always be a good person, whether or not you have good car-building skills. Remember, you and your friends are individuals first and racers second. Have respect for others.

The second thing to remember is to follow the rules. Without rules, there would be no Pinewood Derby. You will never know if you are really good at doing something unless you follow the rules. Be honest.

The third thing to remember about good sportsmanship is that there are winners and losers in every competition. You accept this when you choose to compete. Being a winner is easy, and losing is sometimes hard. If you win, you must not brag or gloat. If you lose, you must not feel jealous or bitter. To be a good sportsman, you must be able to say "I did my best" and be satisfied with the results. You must also be able to appreciate and feel happy for someone else when they run a good race or build a neat car.