

Pack 421 Pinewood Derby Rules

(Rev 6 – 12/28/06)

1. Conduct

- a. Good Sportsmanship is required at all times.

2. Ground Rules

- a. The race is open to registered Cub Scouts and Webelos Scouts in Pack 421. Two Open Class races (Stock and Custom) will be held for Scouts, non-Scouts and adults.
- b. Cars must have been made for the current year's Pinewood Derby. Cars built in previous years are eligible for Open Class Racing only.
- c. The winners will be determined by a process documented separately.
- d. If a car jumps off the track, the heat will be run again. If the same car jumps off the track a second time it will automatically lose the heat.
- e. If a car leaves its lane and interferes with another car, the heat will be run again. If the same car leaves its lane and interferes with another car, the heat will be run again without the interfering car. The interfering car will automatically lose the heat.
- f. If a car suffers a mechanical problem, loses an axle, breaks a wheel, etc. and a repair can be accomplished in a reasonable time (suggest 5 minutes), the heat will be run again. If not, the car will automatically lose the heat.
- g. The winner of each heat will be determined by automatic mechanism at the finish line. If the finish line mechanism fails, the heat will be run again.
- h. Only race officials and boys racing will be permitted inside marked track areas.

3. Inspection

- a. Each car must pass inspection by the official inspection team before it may compete. The inspection team has the right to disqualify those cars that do not meet these rules. Car owners will be informed of the violations and given an opportunity to modify the cars to meet these rules.
- b. All racers registering for Open Class (Stock) Racing must also meet all inspection criteria.
- c. Racers registering for Open Class (Custom) Racing are permitted to use alternate wheels, but must meet all other inspection criteria.
- d. After successful inspection, cars will be impounded in a controlled area until after they have completed all races.
- e. Cars advancing to the District Pinewood Derby will not be returned until the day of the District Pinewood Derby.

4. Vehicle Size and Clearance

- a. Maximum overall width (including wheels, axles, and details) shall not exceed 2 ³/₄".
- b. Minimum width between wheels shall be 1 ³/₄".
- c. Minimum clearance between the bottom of the car and the bottom of the wheels shall be ³/₈".
- d. Maximum length shall not exceed 7", including all added trim and vehicle accessories.

- e. Maximum height shall not exceed 3", including all added trim and vehicle accessories.
- f. The wheelbase (distance between front and rear axles) may not be changed from the Official Kit. (4 ³/₈")

5. Weight and Appearance

- a. Weight shall not exceed 5 oz. The readings of the official race scales will be considered final.
- b. The car may be hollowed out and/or built up to the maximum weight by the addition of wood or metal only, provided it is securely built into the body or firmly affixed to it. Weights affixed to the outside bottom of the car may be used provided they meet the minimum clearance requirements (See ¶4c)
- c. Mercury will not be used for adding weight. It is a potential health hazard.
- d. Details such as steering wheel, driver, spoiler, decals, painting, and interior details are permissible as long as these details do not violate other provisions of these rules.
- e. Cars with wet paint will not be accepted.

6. Wheels and Axles

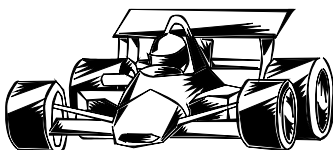
- a. Only the official Scout Grand Prix wheels and axles distributed with the official kit can be used. Wheels and axles CANNOT be modified, except as noted below.
- b. Wheel bearings, washers, or bushings are prohibited.
- c. The car shall not ride on any type of springs.
- d. The car must be free-wheeling with no starting device or other propulsion.
- e. Wheels can not be altered in any shape or form. (Exception: the plastic flashing or molding burr can be carefully removed. The side bead must still be showing)
- f. Car must rest on a minimum of 3 wheels at the starting gate.

7. Lubrication

- a. Only dry powdered lubricants, such as graphite, may be used. Regular oils, Teflon, or silicon lubricants or sprays may soften the plastic wheels and are therefore not permitted.
- b. Cars may be lubricated before inspection. No further lubrication will be permitted.

8. Problems

- a. See rule #1a
- b. Any participant (including the parent of the participant) has the right to appeal to the Pack Committee for an interpretation of these rules. The Pack Committee will be the final judge of these rules.
- c. Unsportsmanlike conduct by any participant or member of the audience will be grounds for expulsion from the competition and/or race area.
- d. Situations not covered by these rules will be resolved by the Pack Committee. This decision will be considered final.



Pack 421 Pinewood Derby Race Method

(Rev 2 – 1/4/06)

1. General

- b. Good Sportsmanship is required at all times.
- c. The Pinewood Derby consists of Den Races, the Pack Championship, the Open Class (Stock), and the Open Class (Custom) race.
- d. Race winners will be determined by the Race Software based on time and finishing position information supplied by the Track Timer.
- e. The data displayed by the Race Software is final.

2. Den Races

- a. Each entering Scout will race against members of his den to determine the top 3 racers in the den.
- b. Den races will be conducted using 2-lane double-elimination race brackets.
- c. In some cases, the number of entering Scouts in a den will cause the Race Software to generate a bye round for a particular racer. In this event, the Pack will supply a vehicle to be used to race against the car with the bye. The racer granted the bye will win this race automatically.
- d. The two finalists in the double elimination brackets will race head-to-head to determine first and second place in the den.
- e. Third place in the den will be determined by the fastest average time of all remaining racers through all double-elimination rounds.
- f. First, second, and third place racers in each den will advance to the Pack Championship.

3. Pack Championship Race

- a. The top three racers in each den will compete in the Pack Championship.
- b. The Pack Championship Race will be conducted using a 4-lane Partial-Perfect-N race method.
- c. Each car will race twice in each lane, against as many other vehicles as possible.
- d. Ranking in the Pack Championship will be determined by the order of fastest average time through all heats.
- e. The fastest racers will advance to the Arrowhead District Pinewood Derby.

4. Open Class (Stock) Race

- a. The Open Class (Stock) Race is open to Scouts and non-Scouts of all ages.
- b. Cars raced in the Open Class (Stock) Race may have been built in previous years.
- c. Cars built for the Open Class (Stock) Race must meet all inspection criteria defined for the current year Pack Pinewood Derby.
- d. The Open Class (Stock) Race will be conducted using a 4-lane Partial-Perfect-N race method.
- e. Each car will race twice in each lane, against as many other vehicles as possible.
- f. Ranking in the Open Class (Stock) Race will be determined by the order of fastest average time through all heats.
- g. The fastest average time in the Open Class (Stock) Race will be named the Pack 421 Open Class (Stock) Champion.

5. Open Class (Custom) Race

- a. The Open Class (Custom) Race is open to Scouts and non-Scouts of all ages.
- b. Cars raced in the Open Class (Custom) Race may have been built in previous years.
- c. Cars built for the Open Class (Custom) Race must meet all inspection criteria defined for the current year Pack Pinewood Derby except for the selection of wheels. The builder may select alternate wheels as long as all other criteria (size, weight, lubrication, etc.) are met.
- d. The Open Class (Custom) Race will be conducted using a 4-lane Partial-Perfect-N race method.
- e. Each car will race twice in each lane, against as many other vehicles as possible.
- f. Ranking in the Open Class (Custom) Race will be determined by the order of fastest average time through all heats.
- g. The fastest average time in the Open Class (Custom) Race will be named the Pack 421 Open Class (Custom) Champion.