

CUB SCOUT PACK 133 RULES & REGULATIONS 2013-2014



Brazos Pack #133

Cub Scout Pack 133 Pinewood Derby Rules and Regulations

I. REGISTRATION AND ELIBIGILITY

- a. Races are open to all registered Cub Scouts, siblings and parents.
- b. Each car entered must have been predominately made by the Scout that is entering the car. There will be no pre-made cars allowed to be entered.
- c. An Entrant may only enter one (1) car in his or her Division. The Scout may enter a second car for the Smash Derby.
- d. Each car entered will be assigned a unique registration number. This number is designed to classify cars into Divisional groupings for purposes of record-keeping convenience only. Registration numbers are not to be interpreted as rankings of any kind or as indications of sequence or priority for any particular event.
- e. After passing inspection, cars are quarantined in a pre-race area, in which case cars may not be removed from the roped off area or handled by the Entrant without prior arrangement or specific permission from a Key Staff Member.
- f. All cars competing for awards must satisfy the Construction Rules as set out in Section II herein.
- g. A new car must be built every year.

II. CONSTRUCTION RULES

- a. **Dimensions and General Specifications** (*applies to all Divisions without exception; reference Figure 1*)
 1. Maximum **LENGTH**, including any attachments to the car body, shall not exceed 7 inches.
 2. Maximum **WIDTH** overall (including wheels and axles) shall not exceed $2 \frac{3}{4}$ [2.75] inches.
 3. Maximum **HEIGHT**, including any attachments to the car body, shall not exceed 4 inches so that car will pass under overhead portion of timing apparatus.
 4. Minimum **width** between wheels shall not be less than $1 \frac{3}{4}$ [1.75] inches.
 5. Throughout the 1.75 inches wide center area of the car positioned above the center guide strip or rails, the minimum distance between the bottom of the car and the plane of wheel contact with the track surface itself shall be $\frac{5}{16}$ [.313] inches. This requirement also applies to the Smash Derby cars. Hinged scoops that reduce the minimum clearance will not be allowed. This clearance distance also applies to any protrusions or weights extending from the bottom of the car in this area. As a reference, the track guide rail heights are: Pinewood Derby = $\frac{1}{4}$ [.25] inches and Smash Derby = $\frac{3}{16}$ [.188] inches.
 6. Wheelbase may be modified provided that the car's overall length, including wheels and any accessories or extensions from the body, does not exceed 7 inches.
 7. The car must be free-wheeling with no starting device or other propulsion.
 8. No hazardous materials may be used. Propellant, incendiary or explosive materials are absolutely prohibited.

9. Note: Races may be optically timed. A sharply pointed car may be subject to a slight timing disadvantage because, at the moment it crosses or trips the sensor, its point may not exactly align with the central location of the optical sensor or mechanical switch used to record the finish time in that car's lane. Similarly, a pointed-car design may not align well with the release gate or pin, which may be rounded.

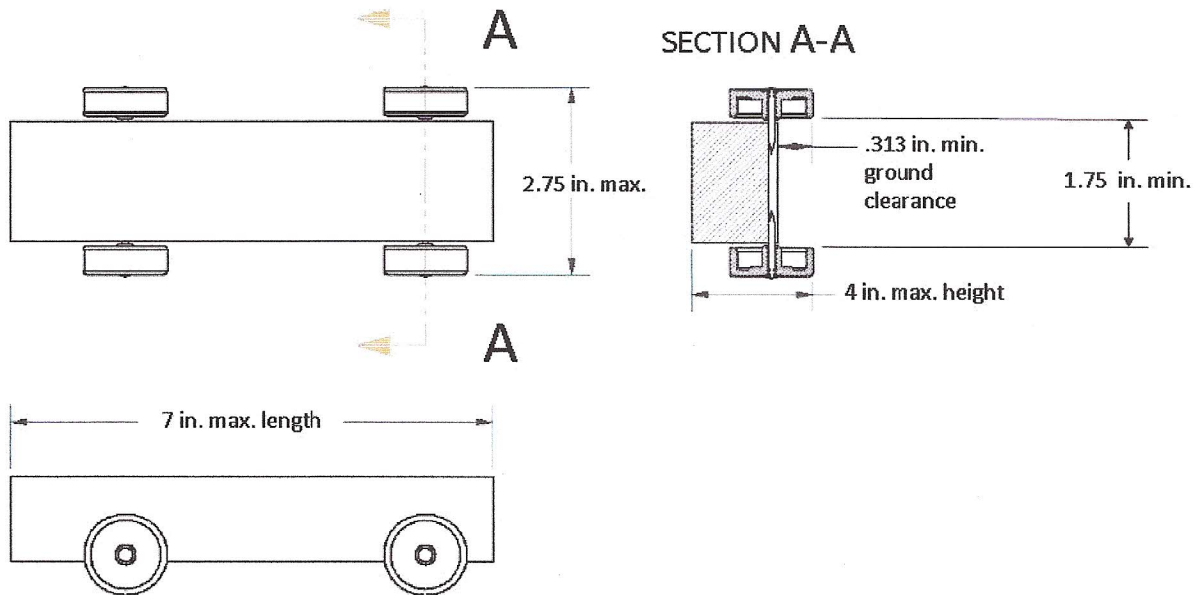


Figure 1 – Constraining Dimensions

b. Weight and Appearance (*applies to all Divisions with exceptions as noted*)

1. Weight shall not exceed 5.0 ounces. The readings of the Official Race Scale(s) will be considered final. Cars may be hollowed out and built up to the maximum weight by the addition of other materials or objects provided that such are securely built into the body or attached securely enough to prevent falling off or becoming separated from the car during normal race activity. (*Normal Race Activity refers to the traditional Pinewood Derby event. This does not include collision or impact-type events*).

2. Only BSA official Pinewood Derby kits may be used. (*Pinecar and other partially-finished or preshaped construction kits may be used for Tiger Rank and Open Division entries only.*)

3. Mercury shall not be used. It is a health hazard.

4. Details such as steering wheel, driver, spoiler, exhaust pipes, roll bars, decals, painting, and other interior and exterior detail are permitted as long as they cannot become separated from the car during normal race activity and as long as the car, together with any detail attachments, still satisfies length, width, clearance, and weight specifications.

5. Cars with wet paint or wet glue will not be accepted.

6. After a car passes inspection, its registration number will be attached using a small adhesive backed label or sticker which shall be located on the rear portion of the car for easy visibility in identifying the car and indicating its proper direction of travel.

7. If lead is used to weight the car, it must be sealed in the body or pointed in such a way to minimize exposure.

c. Wheels and Axles (*applies to all Divisions with exceptions as follows: Open entries are exempt from all requirements under this section.*)

1. The only wheels and axles allowed are from BSA official Pinewood Derby kits.

2. Wheel bearings, spacers or bushings are prohibited.

3. The car shall not ride on any type of springs.

4. Only the tread surface and width of a wheel may be altered. The tread surface may not be modified to produce any configuration other than flat and parallel with respect to the axis of the axle bore. The tread width may be altered only from the side facing the body of car and may not be less than .275 inches. The wheel diameter may not be less than 1.150 inches nor greater than 1.200 inches.

Lightly sanding and/or polishing the tread of the wheel to remove imperfections and/or mold marks will not normally reduce the diameter below this minimum.

Should it prove impossible to remove imperfections or true a wheel without reducing its diameter to less than the specified minimum dimension, an approved Grand Prix replacement wheel should be substituted.

5. Materials, other than permanent paint decoration or lettering highlights, may not be removed or added to the wheels except as stated above or as in II.c.7. below.

6. The backside (wheel side) of the axle heads may be ground or filed to remove burrs. Axle shaft diameter may not be less than .085 inches at any point that contacts or could contact the interior of the wheel's axle bore. Simple polishing of the axle should not reduce its diameter below the allowable level.

7. No wheel covers (i.e. hubcaps) are permitted unless their function is for decoration only and not to measurably alter the weight or performance of the wheel. Decorative wheel covers that hide the ends of the nail-axles must be removable for inspection purposes. In particular, no covers designed to provide a reservoir for lubrication materials may be employed.

d. Lubrication (*applies to all Divisions without exception*)

1. Only dry powdered lubricants, such as graphite, may be used. Excessive lubrication is prohibited as it may damage equipment or floors.

2. All lubrication residues must be wiped clean from any external body or wheel part(s) prior to inspection.

III. DIVISIONS AND AWARDS

a. For purposes of award presentations and ranking, separate Divisions are maintained for entrants as follows: Tiger, Wolf, Bear, 4th grade Webelos, 5th grade Webelos, Overall Pack Championship (for the fastest eight (8) cars from the Cub Scout Divisional races), and Open Category (for entries by siblings,

family members, and Boy Scouts - cars have more liberal compliance requirements in this Division).

- b. As soon as possible prior to any race, a complete listing of prize categories and awards being offered shall be made available for general distribution or through electronic means. The Race Committee reserves the right to grant additional awards or prizes to any Entrant or car on any basis at any time, based on ad hoc or exceptional criteria.
- c. Awards will generally be given to Cub Scouts by Rank and/or by standing overall among all Cub Scout Rank divisions in each event. Race organizers reserve the right to limit, substitute, or withhold awards in categories, ranks, or divisions on the basis of too few entries. Generally there must be at least 3 more cars entered than awards granted in each award category.
- d. Awards in certain selected events and/or Divisions may be based on subjective criteria (most creative, best workmanship) As such; they are not subject to review or challenge. The decision of the judges in such events is final.
- e. Awards based on objective criteria (elapsed time, proximity to target, etc.) may be challenged during the event only on the basis of measurement error or competing car or spectator interference.
- f. No more than one place award per event shall be awarded to the same entrant for cars entered in any one Division. This does not preclude; however, an Entrant's receiving a Division place award and an overall place award(s) for the same car, or receiving multiple awards for the same car in different Events.
- g. Open Division cars are not eligible for the overall Pack Championships.
- h. Cars run in the Cub Scout divisional races may not be rerun in the Pinewood Derby Open Division. A Cub Scout may enter a separate car in the Open Division. A surviving Cub Scout divisional Smash Derby car can be rerun in the Open Smash Derby

IV. INSPECTION AND DISPUTES

- a. Immediately after registration, each car will be weighed and inspected for rules compliance at one or more Inspection Stations.
- b. Each car must pass inspection before it can compete. Official inspectors have the right to disqualify any car that fails to comply with these rules. Entrants will be informed of the specific issues of non-compliance and given an opportunity to modify their car(s) to bring them into compliance and to resubmit their car(s) for re-inspection as long as registration remains open. If an Entrant's car cannot be brought into compliance for its intended Division, Inspectors may reclassify the car for entry in the Open Divisions as long as it satisfies the compliance requirements for those Divisions.
- c. The owner of a car suffering mechanical problems which prevent it from completing an official timing run will be given the opportunity to repair the car and submit it for a new timing run. Repaired cars must be re-inspected prior to being re-run.

- d. Any car observed to be leaving visible marks on track or guide-strip surfaces or otherwise considered likely by Inspectors or Race organizers to cause
- e. Ungentlemanly or unsportsmanlike conduct by any participant or member of the audience will be grounds for expulsion from the competition and/or the race area.
- f. Any protest of a car's compliance with the Construction rules or of its Divisional classification must be filed with Race organizers before registration closes in order to allow time for re-inspection or re-classification, as appropriate.
- g. All rules will be interpreted in consideration of the Scout Oath and Scout Law.
- h. Any participant or their guardian may appeal to the Race organizers for interpretation or clarification of these rules. Any decision by the Race organizers as to clarification or revised interpretation will be considered binding and final.
- i. All disputes as to rules conflicts, interpretation, or the specifics of any race event shall be referred to the Arbitration Committee for final determination

V. GENERAL RACE CONDITIONS

- a. Only designated Race Handlers shall be allowed to handle cars during timing runs used to determine time standings unless specifically authorized or directed by the Race organizers.
- b. Proper positioning of any cars will be limited to correct direction of car and reasonable alignment of car to track.

VI. RACE DESCRIPTIONS

- a. **Pinewood Derby.** The Pinewood Derby is open to all Scouts, Siblings, and Parents. All cars will be timed in several races. The lowest cumulative time over the races is declared the winner. Trophies will be awarded per Den for 1st, 2nd, and 3rd places plus trophies for Coolest and Cubmaster Award. The fastest eight (8) cars from the Cub Scout Divisional races will advance to the Overall Pack Championship races. The official Derby rules will be followed. Only BSA official Pinewood Derby kits (including the wheels and axels) may be used. (Pinecar and other partially-finished, preshaped or non-BSA construction kits may be used for Tigers and Open entries only.) The Open category is for siblings, parents, and scouts (although it must be a separate car) to race (rules are relaxed on wheels and axels; however, the height & weight requirements are the same). A new car must be built every year.
- b. **Smash Derby.** Using a tournament style elimination format, each run will have two (2) cars released simultaneously from opposite ends of a double-wide single-lane track. Remember that your car is likely to get destroyed. A separate car may be entered for the Smash Derby. Trophies will be awarded. Note: The sides of the track are low and a car that does not roll straight may roll off the track..Dens will compete immediately following their Pinewood Derby divisional races.

1. Entry

- i. Smash Derby entries must satisfy the Construction Rules as specified for Cub Scout Rank Divisions. Smash Derby entries are not required to participate in other events.
- ii. Cars should be entered in the Smash Derby with the understanding that substantial damage to the car is quite likely. Most cars entered in the Smash Derby will suffer damage.
- iii. There will be a Smash Derby event for each Cub Rank Division (Tiger, Wolf, Bear, 4th grade Webelos, and 5th grade Webelos) plus one Open Division event.

2. Smash Derby Track Dimensions

- i. The Smash Derby Track is sloped so that cars will run downhill with the intent of colliding in the middle of the track. The Smash Derby Track is designed to be just wide enough so that in some cases cars can narrowly pass by each other and then collide in reverse as they come back down off the slope pairs.
- ii. Each end is raised about 5 feet. The track is 32 feet long, 5 ½ [5.5] inches wide with a raised center guide strip only at the starting sections of the track.

3. How It Works

- i. Challenge pairs will be established using single elimination brackets, similar to NCAA basketball brackets. Depending on the number of entries per division and time as a limiting factor for each division, double elimination brackets may be considered. The purpose of using tournament style brackets is to match cars with similar collision "experience" so that cars that have been weakened in prior successful challenge runs are not put up against fresh cars. It is preferred that cars be entered into the Smash Derby and entered into the brackets prior to running the first bracket pair for the event.
- ii. Smash Derby entries will be run two-at-a time for purposes of determining the winner of each challenge pair.
- iii. During and after each run, cars may not be touched or removed from the track until they have finished moving completely and have come fully to rest.
- iv. An entry must survive a challenge run in rolling condition sufficient to make it to the impact zone on a subsequent run in order to be considered in race worthy rolling condition and to participate in further challenges.
- v. Eliminated cars may be marked (typically with a spot of liquid paper on one of the wheels) so that they can be readily identified as having already been eliminated.

4. Judging

- i. If one car is disabled (i.e. no longer in race-worthy rolling condition) and unable to run again, it loses that challenge run and is eliminated from further competition.
- ii. If both cars in a given challenge run are disabled such that they are no longer race-worthy, both are eliminated from further competition.
- iii. If both entries survive a challenge run in race-worthy rolling condition, the car that comes to rest with at least one wheel in contact with the track (not counting wheels that have become completely separated from the car) shall be declared the winner.
- iv. If both cars survive a challenge run in race-worthy rolling condition and both cars come to rest with at least one wheel in contact with the track (not counting wheels that have become completely separated from the car), the race shall be run again to determine a clear winner.
- v. If both cars survive a challenge in race-worthy rolling condition and both cars are completely knocked off the track (neither car comes to rest with at least one wheel touching the track), the race shall be run again to determine a clear winner. Reruns continue until a winner can be clearly determined by application of rules VI.b.4.i to VI.b.4.iv.
- vi. Once a car is damaged and parts, such as wheels, become separated from the car, they may not be re-attached to the car for the remainder of the Smash Derby event.
- vii. As in tournament style elimination, winners of challenge pairs will advance to the next round to be paired against other winners from that round. There will be as many rounds as necessary to determine a Champion with second and third place finishers.
- viii. As in tournament style, single elimination, the winners of the semifinal round will compete for champion. The losers of the semifinal round will compete for third place.

Ground Rules:

1. No loud screaming, running/tag or horse play in the hallways or in the building.
2. Please minimize food and drinks brought to the event to prevent accidental spills.
3. Parents: Please supervise your Scout and siblings by following the two rules above.

Cub Scout Pack133 Pinewood Derby 2014 Schedule

Saturday, March 22nd:

Event Volunteers arrive for set up	2:00 pm
Open Weigh in (as needed)	3:00 - 3:30pm
Doors open	4:00pm
Open Weigh in, adjustments	4:15 - 4:45pm

<u>Rank/Division:</u>	<u>Check-in Closes:*</u>	<u>Races Start:</u>
Tigers	5:00 pm	5:15 pm
Wolves	5:00 pm	5:15 pm
Bears	5:30 pm	5:45 pm
Webelos (I)	5:30 pm	5:45 pm
Open (Siblings and Parents)	6:30 pm	6:45 pm
Pack Championship		7:00 pm
Smash Derby		7:30 pm

*** Please arrive early enough for registration and inspection, and allowing time for any adjustments resulting from your inspection.**

When: Saturday, March 22, 2014 - 4:00 PM - 8:00 PM

Location: St. Paul Lutheran Church in Rosenberg
1208 5th Street, Rosenberg, TX 77471

