

BOY SCOUTS OF AMERICA
GRAND CANYON COUNCIL
FOUR PEAKS DISTRICT

RULES FOR THE 2015 PACK 242 PINEWOOD DERBY

Lack of knowledge of the official rules shall NOT be considered a valid argument for non-compliance.

The Pack accepts no responsibility for the dissemination of these rules or the lack of knowledge thereof. Every attempt is made to publish the rules and distribute them at Den and Pack Meetings and other events such as workshops. Any problems regarding the lack of understanding or knowledge of the rules shall be disregarded and will have no bearing upon any decisions of the Chief Judge or the Co-Chairs.

These rules are intended to maintain the competition at a level at which most boys are capable of achieving with minimal adult intervention.

The official car of the Pinewood Derby is the Grand Prix Pinewood Derby Racing Car. The car is available from any distributor of Official Boy Scout supplies. Cub Scouts are strongly encouraged to use the Grand Prix Pinewood Derby Racing Car; however, other car kits may be used, if the kit complies with ALL rules stated herein. Note that individual Packs may require the use of the official Grand Prix Pinewood Derby kit, at the Pack's discretion.

PART 1. CAR SPECIFICATIONS

1.1 GENERAL

- A. In the case of any dispute or question regarding these rules, the determination of the Chief Judge shall be final.
- B. The car shall not have been made before June 1, 2014.
- C. The car shall be solely propelled by gravity, with no starting or launching devices.

1.2 WEIGHT AND APPEARANCE

- A. The primary structural material for the car shall be wood. The use of the block provided in the Official Grand Prix Pinewood Derby kit is encouraged, but is not mandatory.
- B. The total weight of the car shall not exceed **5.00 ounces** (141.7 g) to within a tolerance of 0.02 ounce (0.5 g).
- C. All materials used in the construction of the car shall be securely built into the body of the car or firmly affixed. No loose materials of any kind shall be permitted in or on the car. The use of mercury as any part of the car shall not be allowed.
- D. Additional items, such as a steering wheel, driver, decals, painting, or other accessories may be added to the car, as long as these items do not cause the car to exceed the maximum weight, length and width, or provide assistance in actively propelling the car.
- E. Fenders or body width extensions, if used, shall be shaped and placed in a manner that shall allow complete and unhindered access to the exterior of the wheel to confirm conformance with all provisions of Section 1.4.

1.3 DIMENSIONS

- A. The overall width of the car shall not exceed **2.75 inches** at the farthest horizontal protrusion, whether it is the body of the car or the wheels. The width of the car body at the points where the axles are inserted should be approximately **1.75 inches** to ensure that the wheels will fit over the guide strip on the track.
- B. The overall length of the car (measured from the farthest point forward to the farthest point rearward) shall not exceed **7.00 inches**.
- C. The wheelbase, measured between the centers of the front and rear axles, shall be between **4.25 and 4.63 inches**. The position of the axles is not regulated, provided that the overall length measurement

complies with rule 1.3.B above. It is not required to place the axles into slots pre-cut in the wood block; however, the pointed ends of the axles shall be readily visible from the underside of the car.

- D. The car shall not be shaped to allow the front of the car to protrude beyond the edge of the starting gate nearest to the car. If the front of the car protrudes and the official starter is not able to adjust for a fair start, the protruding car shall be disqualified.
- E. The car shall have clearance from the lowest point on the car body to the track surface of no less than **0.313 inches** in order to allow for wheel inspection and to avoid contacting the guide strip of the track.
- F. The maximum height of the car shall not exceed the height specified in Rule 2.1.E for the race entered.

1.4 WHEELS AND AXLES

- A. Only Official Grand Prix Pinewood Derby wheels and axles, as provided in the official car kits or the official wheel and axle kits, shall be used. No other wheels or axles shall be permitted. The internal and external raised BSA PINEWOOD DERBY lettering, spoke pattern, and serrated edges of the wheel treads shall remain visible and intact on all wheels.
- B. A minimum of three wheels shall be touching the track surface at all times.
- C. The outside diameter of each wheel shall be no less than **1.175 inches** at any point - see Figure 1.4.1.
- D. The measurement from the outside of the farthest point of the outside of the curved wheel sidewall not inclusive of the raised lettering to the inside of the tread shall be no less than **0.365 inches** at any point - see Figure 1.4.1.
- E. The thickness of the wheel tread shall be no less than **0.0635 inches** at any point - see Figure 1.4.1.

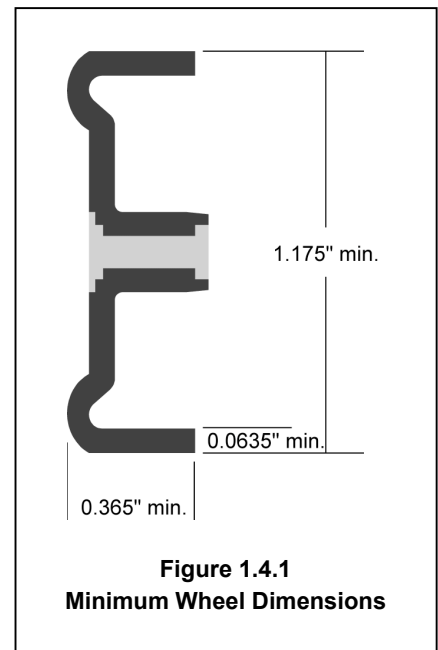


Figure 1.4.1
Minimum Wheel Dimensions

- F. Any clearly visible evidence of machining of wheels shall be cause for rejection. Examples include, but are not limited to:
 - a lip, step, or groove on the tread (such as "U" or "H" grooving)
 - a lip, step, or groove on the inside of the wheel not existing on a standard unmodified wheel (indicating removal of material from the inside of the wheel)
 - partial or complete removal of the internal lettering, external lettering, or spokes
- G. Polishing and/or step removal on wheel bores may be performed, but wheel bores shall not be otherwise modified.
- H. No covers, stickers, or hubcaps shall be allowed over the wheels or axles. All axle heads shall be fully visible and accessible.
- I. The car shall not use wheel bearings, spacers, or washers.
- J. The car shall not ride upon any type of springs.
- K. The wheels shall be free-wheeling.
- L. Axles may be filed, ground, or polished in order to remove protrusions or other imperfections.
(Note: some kits purchased from other than Official Boy Scout suppliers may have wheels that resemble official BSA wheels, but do not meet the regulations. If in doubt, measure - or better yet, simply use the Official Grand Prix Pinewood Derby Kit!)

1.5 LUBRICATION

- A. Cars may be lubricated before check-in. Cars shall not be lubricated after acceptance by the judges, except that re-lubrication may be permitted immediately prior to the championship race.
- B. Liquid lubricants shall be applied in a manner such that no residue shall leave the car or be deposited on the track or other surfaces.

PART 2. EVENT RULES

2.1 GENERAL

- A. In the case of any dispute or question regarding these rules, the determination of the Chief Judge at the race shall be final.
- B. In the event a car is discovered to be in violation of a rule after racing for its class begins, the car shall not be allowed to continue racing, and shall be disqualified.
- C. No one shall be allowed beyond the registration area and into the area immediately surrounding the track, except the officials and the Scouts racing. Those areas shall be designated as restricted.
- D. If a Cub Scout cannot be physically present to race their car, he may designate one other Cub Scout to act as his proxy for racing. The designated Cub Scout shall identify himself to race officials as the proxy racer for that car, and shall abide by all rules. Once made, this designation shall not be changed or transferred, except that the original Cub Scout may race the car himself if he is present.
- E. The maximum height for a car shall be no greater than **4.5 inches**, in order to provide adequate clearance for the timing mechanism for the track.

2.2 QUALIFICATION

- A. Competition at the Pack Pinewood Derby (with the exception of Open Class) is open to any Cub Scout in good standing registered to the Pack entering a car which meets all specifications in Part 1.

2.3 INSPECTION

- A. Each car shall pass inspection by the Official Inspection Committee before acceptance for racing. The inspection committee has the right to not accept any car that does not fully meet all specifications. If a car is not accepted, the owner shall be informed of the specific reason(s) why the car is not in compliance. Cars not accepted may be modified to fully meet all specifications and resubmitted for inspection if time permits prior to the close of check-in for its class.
- B. Numbers may be assigned at check-in. If assigned numbers are affixed to the car, they shall be clearly visible at all times.
- C. Any car may be re-weighed and/or re-inspected at any time for cause, which shall be at the sole discretion of the Chief Judge.

2.4 CLASSES

- A. The racing classes are defined as:
 - Tiger Cubs
 - Wolves
 - Bears
 - First-year Webelos
 - Second-year Webelos
 - Open Class - categories specified in Part 3
- B. Classes may be combined at the discretion of the Chief Judge.
- C. A Cub Scout may enter a car in both his rank class and in Open Class. The car entered into Open Class need not be the same car as entered in his rank class.

2.5 HEATS

- A. Each heat shall be announced. Drivers shall report to the starting line when announced. All other persons shall remain behind all barriers and shall not obstruct the view of other spectators.
- B. The Official Starter shall make sure that the cars are on the track properly, and then will start the race. He/she shall be the judge of whether the cars are properly aligned on the track, which cars are to race, and in which lane, and of all matters in the starting area. He/she shall also be the sole judge of "false starts".
- C. Each race shall be judged by Finish Line Judges as designated by the Pack. All judges must agree that each race is fair and without incident.
- D. Volunteer judges may be used. Volunteer judges shall not judge any race in which they have a family member racing.

- E. When the result of each heat is recorded, the drivers or designated officials shall take each car back to the starting line and give it to the Official Starter.
- F. When a car has completed racing, the driver or designated officials shall take that car to the holding area.
- G. If during a race, a car leaves the track, runs out of its lane, interferes with another car, or loses a wheel, axle, or other part(s), the race may be run again at the discretion of the officials. There shall be only one repeat race for this reason in any heat. If the same car has a problem again, the results of the repeat race shall stand, unless the problem car clearly interferes with another car, in which case the interfering car will be declared the loser.
- H. If a driver checks in after the close of check-in for his class but prior to the start of racing, the Chief Judge may allow participation if time or scoring system permits.

2.6 TIMING AND SCORING

- A. Timing and scoring shall be by a manner approved the Chief Judge.
- B. Each car shall race at least once in each lane.

2.7 REPAIRS

- A. An official Pit Area shall be provided for repairs and alterations.
- B. Repairs shall be permitted after racing begins, but shall take place in the official pit area under the direct supervision of the Chief Judge or his/her designee.
- C. The official in charge of the pit area shall be the sole judge of what repairs are necessary and allowable. If wheels or axles are replaced after acceptance, only those wheels or axles actually replaced may be lubricated.
- D. If a car requires repairs, the heats for which that car is scheduled may be deferred until such time that the car is repaired, or is withdrawn. If practicable, other heats within the same class may continue while repairs are made. If no other heats can be run without the participation of that car and a subsequent 10 minute period elapses, the racer shall be called to race, and upon failure to report to the starting line at that time, he shall forfeit.

(Note: It is highly recommended that racers bring their own spare parts and tools, and be prepared to make their own repairs if necessary.)

2.8 AWARDS

- A. Awards shall be as determined by the Chief Judge and Pack Pinewood Derby Committee.
- B. Other prizes and awards may be given depending upon availability. Such awards shall be made at the discretion of the Chief Judge or their designee.

PART 3. RULES MODIFICATIONS FOR OPEN CLASS

- A. Open Class racing is open to all Cub Scouts, Boy Scouts, Leaders, parents, siblings, relatives, friends, or other persons associated with the Boy Scout program, or to other persons with the permission of the Chief Judge.
- B. There are four categories of Open Class:
 - Sibling and Family Class
 - Stock Class
 - Unpowered Class
 - Powered Class
- C. For Sibling and Family Class cars, all standard rules shall fully apply.
- D. For Stock Class cars, all standard rules shall fully apply, with the following exceptions:
 - a. Rule 1.1.B is waived (*cars from previous years may be entered*)
- E. For Unpowered Class cars, all standard rules shall apply, with the following exceptions:
 - a. Rule 1.1.B is waived (*cars from previous years may be entered*.)
 - b. Rule 1.2.B is modified to read: "The total weight of the car shall not exceed **16 ounces** (453.6 g), within a tolerance of 0.02 ounces (0.5 g)."
 - c. Rule 1.2.D is modified to read: " Additional items, such as a steering wheel, driver, decals, painting, or other accessories may be added to the car, as long as these items do not cause the car to exceed the maximum weight and width, or provide assistance in actively propelling the car."
 - d. Rules 1.3.B through 1.3.D are waived.
 - e. Rules 1.4.A through 1.4.K are waived.
 - f. All wheels shall be made of plastic.
- F. For Powered Class cars, the rules for Unpowered Class shall apply, with the following additional modifications:
 - a. Rule 1.1.C is modified to read: "Starting, launching, and propulsion systems are permitted; however, any method of starting, launching, or propulsion employing any sort of combustion, such as rocket engines, fuel-powered motors, or any other type of burning fuel, or that has any potential for damaging the track, spectators, or the venue, is expressly and completely prohibited".
 - b. Rule 1.2.D is modified to read: " Additional items, such as a steering wheel, driver, decals, painting, or other accessories may be added to the car, as long as these items do not cause the car to exceed the maximum weight and width."
- G. Any Open Class car that leaves the track for any reason during a race shall be immediately disqualified (*keep this in mind when designing guidance and propulsion*.)
- H. A driver may register separately for each category of Open Class, and may enter the same car in each category; however, the car shall fully conform to the rules for the applicable category when racing in that category.
- I. All decisions on Open Class entries, qualifications, and/or race results made by the Chief Judge shall be final.

The Pack Pinewood Derby Committee strongly recommends that officials not accept responsibility or possession of cars between races. Pinewood Derby cars should be given to their owners for them to keep between racing events.

Any questions regarding these rules may be directed to:

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