



## PACK 1500 – CAR DESIGN AND CONSTRUCTION RULES

1. All Pinewood Derby cars must be newly built in the **current** Cub Scouting year.
2. The car should be built **mainly** by the Scout. It is understood that Scouts at different age levels will have different skills and abilities. The spirit of the derby is that the Scouts build the cars and parents offer **advice and supervision**. While it may be necessary for the parent to operate a power tool or saw, the Scout is required to do the majority of the car building. **Cars must be built using the materials in the Official Pinewood Derby Racing Car Kit (catalog number 17006) or the Official Wheel/Axle Kit (see the section on wheels). Hobby shop parts such as Pinecar precut car bodies, Pinecar axles, Pinecar wheels, axle tubes, bearings and springs are strictly prohibited.**
3. 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.)

**In an effort to ensure fairness to all participants, any Pinewood Derby Car that does not comply or meet the design and construction rules will be disqualified from racing competition.**

1. Moveable (i.e., loose) parts are not permitted.
2. Added design features are permitted if they comply with all other Car Design and Construction Rules.
3. Cars must be clean and dry. (No wet glue, paint or lubricant).
4. No part of the car may extend beyond the starting mechanism of the racetrack.



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1. The pine wood block may be shaped in any way desired as long as it follows the Car Design and Construction Rules.
2. Overall **length** cannot exceed 7 inches.
3. Overall **width** cannot exceed  $2\frac{3}{4}$  (2.75) inches.
4. Overall **height** cannot exceed 4 inches (To fit under the top of electronic timer/Finish Line).
5. **Underside clearance** of at least  $\frac{3}{8}$  (0.375) inches and **inside wheel-to-wheel clearance** of at least  $1\frac{3}{4}$  (1.75) inches is recommended, so that the car will run on the racetrack. Adequate clearance is the responsibility of the racecar builder.
6. The front of the car must have a minimum of a  $\frac{1}{4}$ " flat surface in the center to be placed against the starting mechanism (i.e., it cannot have a cutout notch).
7. The distance between the front axle and the front of the car shall NOT be modified.

1. Cars cannot weigh over 5.0 ounces, **as determined at the time of registration on the Derby Day using the official scale** and judged by a member of the race staff.
2. 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.
3. The car may be hollowed out and built up to the maximum weight by the addition of wood, plastic or metal only, provided the material is securely built into the body or firmly affixed to it. No liquids or loose materials of any kind are permitted in or on the car.
4. All weight must be securely fastened to the car, (e.g. by permanent glue, nails or screws) but **not by "sticky substances" such as tack spray or tape.**
5. Weights shall be passive, (i.e. non-moveable, non-magnetic, non-electric, non-sticky, etc.)



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### Wheels

1. Wheels **must** either be the Official B.S.A. wheels provided in the Pinewood Derby Kit or the new multi-colored Official BSA Pinewood Derby wheels that are available online at [www.scoutstuff.org](http://www.scoutstuff.org) or at local Scout Shops. **The new colored wheels (pictured to the right) are available in the following colors: Ragin' Red, Screamin' Yellow, Outrageous Orange, and Blazin' Blue. Other Non-BSA wheels, such as the black spoked wheels that are available from PineCar, are not allowed.**
2. Except as specified by rules #3 and #4 below, **removal of ANY material from the wheel sidewalls, tread, or face, whether on the inside or outside, is not allowed.** The outside wheel sidewalls and face must remain intact. All wheels must have the “BSA” and “Pinewood Derby” words on the sidewall completely intact. The picture of the wheel to the right is what the judges will expect to see on the cars. Anything else will result in disqualification.
3. Truing the wheels round by sanding or lathing is allowed. Wheel treatment (hub and tread smoothing and polishing), however, may not result in **substantial** removal of mass or in reducing the wheel width or thickness from the original kit wheels.
4. The mold mark may be removed from the wheels.
5. The wheels may not be cut, drilled, beveled or rounded. The portion of the wheel surface that contacts the track must remain parallel to the axle.
6. U or H or V grooving of the wheel treads **is prohibited.**
7. Wheels must be able to come into direct contact with the body of the car.
8. All cars must have four wheels; at least three need to touch the track surface.
9. The wheels must be placed in the slots provided. If a slot is broken and a new one is needed, the slot cannot exceed ¼ inch from the original position (the original slots are cut





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at 4½").

10. Hubcaps are not permitted.



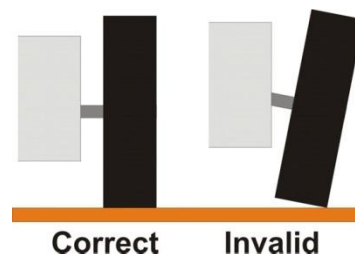
# Pinewood Derby Mania!

A CUB SCOUT PHENOMENON



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1. Axles (nails) **must** be the Official B.S.A. axles provided in the Pinewood Derby Kit. **Solid axles are not permitted** (i.e., axles that go completely from one wheel to the wheel on the other side).
2. Machined axles with cut grooves, slots or other similar modifications are **not permitted**. See the axle pictures at the bottom of this page for examples of modifications that are not permitted.
3. Bearings, washers or bushings on the wheels or axles **are prohibited**.
4. Springs or suspensions of any kind **are prohibited**.
5. Axles must be set to allow the wheels treads to be flat on the track, they cannot be angled (see diagram to the right).
6. **Axles must be visible** when the underside of the car is examined. The entire axle must be fully visible.
7. The axles may be straightened and removal of the imperfections, such as pinch marks and mold ridges, by filing, sanding and polishing is allowed.
8. Only dry-lubricants are allowed. Petroleum-based lubricants are not allowed. Powder Graphite is the most popular. Graphite will be used OUTSIDE ONLY at the provided pit area.



Compliant With Rules	Examples of Machined and Non-BSA Axles That Are Not Permitted	
