

Greater Yosemite Council

Pinewood Derby Rules

To participate, cars must be powered only by gravity, safe for the track and participants, and not interfere with other cars. There are two divisions, Stock and Open. The Stock Division is more limited in what it permits which makes it easier for younger scouts to build cars. The Open Division allows for rail riding, canted axels, shaved wheels, etc. and can be more fun for our more experienced participants. If for some reason your car does not meet the requirements for the Stock Division it can be moved to the Open Division. To participate, cars must be powered only by gravity, safe for the track and participants, and not interfere with other cars.

RULE 1: The Pinewood Derby is about having fun with your scout while learning basic physics, tool usage and good sportsmanship.

RULE 2: Disqualification is at the sole discretion of race judge(s) and/or race official(s).

STOCK RACE RULES

Cars in this category are the most restricted. In general, they must fit on the track, use BSA Pinewood Derby Kits, not interfere with other cars, not cheat the start/stop mechanisms, and be propelled ONLY by gravity.

PARTS AND MATERIALS: Each participant is to build a completely new car each race year using the official pinewood derby car kit (BSA Part #17006). No car or any portion of the car including wheels and axles, may have been used in any previous year's derby. Official pinewood derby car kits, wheels, weights, and other optional accessories and kits may be purchased from Boy Scouts of America approved distributors. **YOU MAY NOT USE SHAVED OR DRILLED WHEELS, OR MODIFIED AXELS** regardless of source.

WIDTH: Maximum overall width allowable, including wheels, is 2.75 inches.

LENGTH: Maximum overall length allowable is 7 inches. No portion of the car will be allowed to extend forward of the starting gate.

CLEARANCE: Minimum clearance under the body is 3/8 of an inch. Minimum clearance between the wheels is 1.75 inches.

HEIGHT: 5 inches.

WHEEL BASE: Wheel base is to be approximately 4.25 inches. This is measured from the center of each axle, front to back as present in the official pinewood derby car kit (BSA part #17006).

WEIGHT: Weight cannot exceed 5.00 oz (141.75 grams). The car may be hollowed out and built up to the maximum weight by additional wood, metal or any other material, provided they are securely attached to the body and chassis. No loose material of any kind is permitted in or on the car including, but not limited to, liquids. Materials that could potentially be health hazards are not to be used as weight. Lead is permissible for weight provided that it does not need to be touched to place the car on the track.

MATERIAL: The car body, wheels, and axles must be from the official pinewood derby car kit (BSA Part #17006), or the full weight decorative wheels available from the Scout Shop. (i.e. BSA Part #647054). The car may not ride on any type of springs. Details such as decals, pin stripes, cockpit accessories and interior detailing are permissible as long as the car does not exceed the maximum dimensions or weight. Plastic and metal detail parts are allowed as long as they are securely attached to the body and chassis and do not exceed the maximum length, width, and height.

WHEELS: Wheels must be from the officially pinewood derby car kit (BSA Part #17006) or from the optional decorative wheel and axle kits available from BSA (i.e. BSA Part #647054) and may be polished using files, sandpaper, etc., or by using the pinewood derby high performance kit (BSA Part #16988) to remove burrs, scratches and ridges. They may not be shaved or reduced in diameter or width. Wheels may not be beveled, tapered on in any way modified from the original size and shape. Wheels may not be painted. Wheel covers, bearings, washers, and bushings are strictly prohibited. The bore of the wheels may be reamed, coned, and polished, but not otherwise altered. All 4 wheels must rest on a level surface so that the car does not rock when a corner is gently pushed on.

AXELS: The axles (round head nails) must be from the official pinewood derby car kit (BSA Part #17006) for from the new optional colored Cub Scout derby wheels and axles kit and may be polished using files, sandpaper, etc. or by using the pinewood derby high performance kit (BSA Part #16988) to remove burrs, scratches, and ridges. The axles may not be machined or reduced in diameter anywhere along the axle shaft. Substituted axles will not be permitted. The axles should not be mounted at an angle or deliberately bent in order to tip any of the wheel treads to an angle relative to the track surface (rail riding is allowed, but canting the wheels at an angle or lifting one of the wheels off the track is not allowed in this division).

LUBRICATION: Dry lubricants such as Pinewood Derby axle lube (BSA Part #17106), powdered Teflon “white lube” and graphite are the ONLY permissible lubrication. All other forms of lubricant (oils, etc.) are strictly prohibited. Any lubrication on exposed surfaces of the wheels, body or chassis is prohibited. Lubricant, if used, must be applied prior to inspection and registration of the car. No lubrication is permitted after registration or during the derby.

INSPECTION: The car must meet weight, clearance and size limitations as stated above and use only the materials specified in the parts and materials sections above. A repair table may be made available to adjust prior to registration. A car with illegal parts may have them replaced and will be allowed to participate in the race with only legal parts. Any car using illegal lubricants will not be allowed to participate.

DISQUALIFICATION: Per the judge(s) or race official(s), a car or scout will be disqualified and not allowed to race if any of the following occur:

1. Any use of improper material as outlined above, including, but not limited to: lubricant, wheels, axles or body wood.
2. Changing the car after registration, except for authorized repairs.
3. Removing the registration sticker from the car.
4. Handling the car without permission of the judges or race official(s).
5. Not following the instruction of the judge(s) or race official(s).
6. Not following any other rule specified for the pinewood derby.

THE DECISIONS OF THE JUDGE(S) AND/OR RACE OFFICIAL(S) ARE FINAL. IF ANY SCOUT OR SPECTATOR SHOW UNSPORTSMAN LIKE CONDUCT OR ARE DISRUPTIVE TO THE FLOW OF THE RACE THEY WILL BE ASKED TO LEAVE THE RACING LOCATION IMMEDIATELY.

OPEN RACE RULES

The general guiding principal is that the car must fit on the track, not interfere with other cars, not cheat the start/stop mechanisms, and be propelled ONLY by gravity.

PARTS AND MATERIALS: Each participant is to build a completely new car each race year using the official pinewood derby car kit (BSA Part #17006). No car or any portion of the car including wheels and axles, may have been used in any previous year's derby. Upon the request from a judge or race official, the participant will need to provide proof of a car being newly built.

WIDTH: Maximum overall width allowable, including wheels, is 2.75 inches.

LENGTH: Maximum overall length allowable is 7 inches. No portion of the car will be allowed to extend forward of the starting gate.

CLEARANCE: Minimum clearance under the body is 3/8 of an inch. Minimum clearance between the wheels is 1.75 inches.

HEIGHT: 5 inches.

WEIGHT: Weight cannot exceed 5.00 oz (141.75 grams). The car may be hollowed out and built up to the maximum weight by additional wood, metal or any other material, provided they are securely attached to the body and chassis. No loose material of any kind is permitted in or on the car including, but not limited to, liquids. Materials that could potentially be health hazards are not to be used as weight. Lead is permissible for weight provided that it is completely enclosed within the body of the car.

MATERIAL: Details such as decals, pin stripes, cockpit accessories and interior detailing are permissible as long as the car does not exceed the maximum dimensions or weight. Plastic and metal detail parts are allowed as long as they are securely attached to the body and chassis and do not exceed the maximum length, width, and height.

LUBRICATION: Dry lubricants such as Pinewood Derby axle lube (BSA Part #17106), powdered Teflon “white lube” and graphite are the ONLY permissible lubrication. All other forms of lubricant (oils, etc.) are strictly prohibited. Lubricant, if used, must be applied prior to inspection and registration of the car. No lubrication is permitted after registration or during the derby.

INSPECTION: The car must meet weight, clearance and size limitations as stated above and use only the materials specified in the parts and materials sections above. A repair table may be made available to adjust prior to registration. A car with illegal parts may have them replaced and will be allowed to participate in the race with only legal parts. Any car using illegal lubricants will not be allowed to participate.

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1. Any use of improper material as outlined above, including, but not limited to: lubricant, wheels, axles or body wood.
2. Changing the car after registration, except for authorized repairs.
3. Removing the registration sticker from the car.
4. Handling the car without permission of the judges or race official(s).
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