

Pack 354 - Dundalk Maryland

2016 Official Pinewood Derby Rules & Regulations

Each participating Cub Scout is to build a completely new car each year using the official pinewood derby car-kit (BSA Part #17006 or equivalent). The car must have been built in the current scout year (since September 2015). Cars made in previous years may not be raced. The dimensions of the car must meet the below minimum and maximum standards. The cars will run on an aluminum or wooden track. The cars will be released from a starting point at the top of the track and race down the track with the use of natural gravity only. No motorized starters, enhancers or bearings will be used to give the car an unfair advantage. No car or any portion of a car including, but not limited to, wheels and axles, may be used from a previous derby's car. To minimize unnecessary costs, only weights from previous cars may be used. At the request of any judge or race official, the scout may be required to provide proof of a car being newly built.

PARTS AND MATERIALS: Official pinewood derby car kits, weights, wheels, axles and other optional accessories may be purchased from a BSA approved distributors, including Baltimore Area Council Scout Store, Broad Creek Camp Trading Post, Michael's, Hobby Lobby or www.scoutstuff.org. There are hundreds of websites that sell pinewood derby parts and accessories that claim to be BSA approved. Please bring it to the attention of a race official for verification and approval prior to purchasing any items from these sites. We do not want to disqualify a scout's car for unapproved parts.

WIDTH: Maximum overall width allowable, including wheels, is 2 $\frac{3}{4}$ inches. After market side rails are permissible as long as they do not extend past the wheels.

LENGTH: Maximum overall length allowable is 7 inches. No portion of the car will be allowed to extend forward of the starting pin/gate. The furthest most point on the front of the car **MUST** make contact with the starting pin.

CLEARANCE: Minimum clearance under the body is $\frac{3}{8}$ inch. This is measured by placing the car on a flat surface with the wheels mounted and measuring from the lowest point of the wood block to surface. This will prevent the car from bottoming out on the track. The minimum clearance between the inside of the wheels is 1 $\frac{3}{4}$ inches. While the wheels are mounted, measure the front wheels from the inside of wheel to its opposite front wheel. Repeat for rear wheels. This will prevent the cars' wheels from rubbing on the side of the track's center riser guide.

WHEEL BASE: Wheel base is to be approximately 4 $\frac{1}{4}$ inches. This is measured from the center of each axle, front to back.

WEIGHT: Weight cannot exceed 5.0 oz. (141.75 grams). The car may be hollowed out and built up to the maximum weight by additional wood, metal or any other **SOLID** material, provided they are securely attached to the body of the car. No loose material of any kind is permitted in or on the car. At no time can liquids be used as a weight as it will give an unfair advantage to that car by using inertia as an additional means of movement. Gravity is the only means of power that is permissible. Lead is permissible for weight provided that it is completely enclosed within the body of the car.

MATERIAL: The car body, wheels and axles must be from the official pinewood derby car kit (BSA Part #17006 or equivalent). 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 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 official pinewood derby car kit (BSA Part #17006 or equivalent) or from the optional colored Cub Scout derby wheels & axle kit (BSA Parts #17553, 17554, 17555, 17556 and 17557). Wheels may be lightly sanded only to remove bumps, burrs and ridges. They may not be shaved or reduced in diameter or width. Wheels may not be beveled, tapered or in any other fashion, or modified from the original size and shape. Wheels may not be painted. Wheel covers, hub caps, bearings, washers, and bushings are strictly prohibited.

AXLES: The axles (round head nails) must be from the official pinewood derby car kit (BSA Part #17006 or equivalent) or from the optional colored Cub Scout derby wheels & axle kit (BSA Parts #17553, 17554, 17555, 17556 and 17557). Axles 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. One piece axles that extend the entire width of the car or any other substitute axles are not permitted.

LUBRICATION: Pinewood derby axle lubes (BSA Part #17106 and 17019) are permissible lubricators. Graphite lubricant will be allowed, however do not use an excessive amount. Graphite will stain most surfaces and could cause the cars to not travel down the track properly. Lubricant must be applied prior to inspection and registration of the car. No lubrication is permitted after registration or during the derby. To get the most out of the cars this year, the pit stop crew will reapply lubricant to all the cars that qualified for the finals.

INSPECTION: The car must meet weight, clearance and size requirements as stated above and use only the materials listed in the 2016 Pinewood Derby Rules for Pack 354 or approved by authorized race officials. A pit stop (or repair table) will be provided on race day and for the use of all participants. The only tools that will be authorized to use will be the tools at the pit stop area. If there is a tool that the pit stop crew does not have and you have it, you may request verbally for its use. Determination will be made by the Race committee only. A car with illegal parts may have them replaced or removed prior to registration and the car will be allowed to participate in the race providing it passes re-inspection. Any car using illegal lubricants will be automatically disqualified. If the car is broken down and the illegal lubricant is completely cleaned off the car, the car may be re-inspected by the race chairman for a determination on reinstatement.

DISQUALIFICATION: A car or scout could be disqualified from the race if any of the following occur:

- Any use of improper material as outlined above, including, but not limited to, lubricant, wheels, axles or body. Adjustments or repairs made in accordance with what is stated in the "Inspection" paragraph will permit scout or car to remain in race.
- Changing the car after registration, except for authorized repairs.
- Handling any car without permission of the judge(s) or race official(s)
- Not following the instruction of the judges(s) or race officials(s)
- Not following any other rule specified for the pinewood derby

HANDLING: Only the Cub Scout who has entered the car or a race official may handle the cars being raced.

RACE PROCEDURE: We have an electronic timing system and a software program to manage the race. All cars will race a minimum number of races that will be determined and announced on race day (depending on the number of entrants). The cars will be timed from the starting gate, when released, to when the cars cross the finish line. Their times will be recorded in the racing software program. At the completion of all race heats, the elapsed times for each race will be displayed on a screen so that all spectators and scouts can keep track. All elapsed times for each car will be added together and the cars with the four lowest times in each den will move on to the final round. At the conclusion of each den race segment, we will have a mini awards ceremony, at which time the four scouts moving on to the final round will be notified. The finals will follow the same format. Upon completion of each heat, the times again will be displayed on the screen. All race elapsed times will be added together and cars with the three lowest times will qualify for District and race in the District Race at a time to be determined. The final award ceremony will follow immediately after the last race heat is run.

RERUNS: If the starter declares a mis-start or a car leaves the track, the race heat will be rerun. When a car has left the track and requires repair, the scout will be allowed up to five minutes to repair the car at the pit stop area only. The pit crew will assist the scout as much as needed. At no time will a parent or other scout be allowed in the pit stop area to assist. If the car is damaged again in the same heat, it will be deemed un-repairable and withdrawn from the race. If a car leaves the track, the car will be allowed to rerun up to three times before it is declared un-raceable and withdrawn from the race.

PROTESTS: In the event that a scout believes he should have a rerun, he may make a protest to the Race Chairman as to why he should be allowed to rerun. The Race Chairman will review the protest and make an immediate determination. Reasons for reruns would include, but not limited to:

- car riding up on center guide;
- hit by another car during race;
- debris on the track;
- track came out of alignment;
- etc.

All protests will be considered and the determination by the Race Chairman is final.

PARTICIPATION: Every Cub Scout must be present to race his car and receive any award. Should the need arise, the judge(s) and/or race official(s) reserves the right to allow substitutes. This will be on a case by case basis.

**THE DECISIONS OF THE JUDGE(S) AND/OR RACE OFFICIAL(S) ARE FINAL.
THESE RULES WILL BE USED BY PACK 354
FOR ITS 2016 PINEWOOD DERBY RACE.**