

CHIPPEWA DISTRICT

2024 PINEWOOD DERBY OFFICAL RULES

GENERAL

These rules have been adopted by the Chippewa District Activities Committee for the 2024 Pinewood Derby race and supersede all previous rules.

The primary aim of the race is for the Scouts to have FUN. The secondary aim of the race is to determine the order of finish of the cars for purposes of presenting awards. Parents are encouraged to keep this in mind!

NOTE: In the interest of fairness to all Scouts, including those without access to specialized tools and jigs, the following modifications to cars are specifically prohibited:

1. **Modifying the wheelbase**
2. **Creating a car that rides on three wheels.**
3. **Creating a car with wheel camber by bending the axle nails or drilling holes at an angle.**

See the rules below for more detailed information.

ELIGIBILITY

1. A Cub Scout must be registered in a Pack in Chippewa District, Michigan Crossroads Council (MCC).
2. Each Pack may send up to three (3) Scouts from their Pack to the District Race. It is suggested that the top three finishers in the Pack race be the ones chosen. However, it is up to each Pack to determine which Scouts are sent. Note that this is three Scouts in total, NOT three Scouts per rank.
3. The race will be divided into six (6) separate divisions –
 - 1) Lion Scouts (Kindergarten)
 - 2) Tiger Scouts (First Grade)
 - 3) Wolf Scouts (Second Grade)
 - 4) Bear Scouts (Third Grade)
 - 5) Webelos Scouts (Fourth Grade)
 - 6) Arrow of Light Scouts (Fifth Grade)Note that all Scouts will race at the same time. The computer software will keep ranks separate.
4. Awards will be presented to the top three finishers in each rank. The race committee may elect to combine two or more ranks depending on the number of entries in each rank.

LENGTH, WIDTH, CLEARANCE, AND MATERIAL

1. Maximum overall width (including wheels and axles) shall not exceed 2 ¾ inches.
2. The minimum width between wheels shall be 1 ¾ inches so the car will clear center guide strip.
3. The minimum clearance between bottom of car and track shall be 3/8 inch so the car will clear center guide strip.
WARNING: Weight glued to bottom of wood car block will not clear center guide strip.
4. The maximum length shall be 7 inches.
5. The maximum height shall be 2 ¾ inches.
6. The Wheelbase (distance from front to rear axles) shall not be altered from the pre-cut grooves in the wood block. There is minor variation in the wood blocks as supplied in the kits. Therefore, the range for the wheelbase shall be from 4 1/8 inches minimum to 4 3/8 inches maximum. Holes may be drilled in the car body to mount the wheels in place of the axle grooves.
7. The use of pre-cut wood blocks from Scouts BSA or other sources (Pinecar® for example) is permitted so long as they meet the above dimensions.
8. The main body of the car must be wood. Bodies made primarily from machined aluminum, tooling resin, or other non-wood material are not permitted. Metal, plastic, or other material may be added to the wood body to achieve the final weight or to add details such as fenders, spoilers, hood scoops, etc.
9. The car is held in the starting gate by a pin rising from the center of each lane. When the car is at rest against this starting pin, no portion of the car (body or wheels) may protrude past this peg down the track. Cars shall have a leading edge which is flat and parallel with the axle grooves. This leading edge shall be between ½ and ¾ inch above the track.

Since an electronic finish line is used, extreme needle-nose designs should be avoided since this may not be sensed by the electronics. Cars that do not stage properly at the start line may be run backwards if that remedies the problem. If neither end of the car will stage properly, the car shall be excluded.

WEIGHT AND APPEARANCE

1. Weight shall not exceed 5 ounces (141.75 grams). The reading of the Official Race Scale shall be considered final. The car may be hollowed out and built up to the maximum weight by the addition of wood, plastic, or metal, provided it is securely attached to the car body. No loose material or sliding weight is permitted in or on the car.
2. The car must be freewheeling without any form of sliding weight, starting device, or means of propulsion other than the force of gravity.
3. **The use of lead or mercury for adding weight is prohibited.** Tungsten, pewter (which is mostly tin), zinc, copper, steel, or aluminum may be used to add weight.
4. Details such as steering wheel, driver figure, spoilers, decals, painting, and interior details are permissible if the addition of these details does not cause the car to exceed the maximum length, width, height, and weight specifications.
5. Cars with wet paint at the time of inspection will not be accepted.

WHEELS AND AXLES

1. Only the official Grand Prix Pinewood Derby wheels and axles (nails) manufactured for the Scouts BSA and provided in the kit may be used. **DO NOT use substitute wheels or axles available from hobby shops (e.g. Pinecar®) or other sources.** The use of wheels in various colors available from the BSA supply division IS permitted.
2. The axles (nails) may not be modified by reducing the diameter of the head or shaft of the nail or by making any other dimensional change. The axle may not have any type of coating or finishing process applied (e.g. chrome-plating). The axle MAY be *lightly* sanded or filed to remove any burrs or ridges on the underside of the head. The axle may be polished.
3. **The axles (nails) must be installed in the car parallel to the track surface reference plane when viewed from the front or rear of the car. The axles may not be angled or bent to create camber on the wheel (i.e. causing only an edge of the wheel to contact the track).**
4. **The stock wheel may not be modified in any way.** No beveling, crowning, rounding, thinning or other dimensional change to the wheel is permitted. No hubcap or other covering over the wheel center is allowed. Wheels may not be painted.
5. The tread surface of the wheel (the portion that contacts the track surface) may not be sanded or otherwise modified. The tread and other exterior portions of the wheel may not be coated with graphite or any other substance. **The intent of the rules regarding the wheels is that they be used *exactly* as received in the kit without any modification whatsoever.**
6. Wheels that show scratches or marks beyond normal wear and tear will have to be replaced.
7. Adhering hubcaps, stickers, polish, paint, or glue to any wheel surface is prohibited.
8. No wheel bearings, washers, or bushings are allowed.
9. The car shall not ride on any type of spring or moveable suspension.
10. **The car shall have four wheels. Each wheel shall be attached to the car's wood body with a legal axle (nail). When placed on a flat surface, all four wheels must touch that surface or be within 1/32nd inch of that surface. No deliberate attempt to raise one wheel will be allowed.**
11. The front and rear axle nails must be positioned directly across the body from one another on each side. They cannot be staggered when viewed from above.

LUBRICATION

1. Only dry powdered lubricants, such as graphite or Teflon®, may be used on the interface between the axle and wheel. Regular oils and silicone are not permitted and may soften the plastic wheels. Lubricants may not be applied to the outside surface of the wheels or tread area.
2. Cars must be lubricated prior to inspection and impoundment. Lubrication on the day of the race is not permitted (lubricants are not permitted at the race venue).

RACE PROCEDURE

1. The Scout must be present for their car to run. We realize that families have busy schedules and that a Scout may have to attend another event (sports or school event, etc.) on race day. Under the current race format, it is not possible to delay racing a particular car in the schedule.
2. The car must arrive by the close of the inspection time to race. Late entries will not be accepted.
3. The Scout must arrive by the start of racing.
4. There will be three judges appointed by the race committee to rule on problems that may arise during the race. In the event of a failure of the electronic timing system, these judges will decide the order of finish of races. In the event of a problem with a particular race (track problem, electronics malfunction, incorrect car or lane assignment, or other problem) the judges may elect to void the results of that race and run the race over. Majority vote (2 out of 3) rules. The judges' decisions are final.
5. If a car jumps the track (interfering with another car or not) the race will be run again. If the same car jumps the track a second time, that car will automatically place last in that race. If, in the opinion of the judges, a problem with the track caused the car to jump the track, the race may be re-run as many times as needed to correct the problem. The judges may elect to assign one or more cars to different lanes to correct the problem or declare a particular lane unsuitable for further racing.
6. If the car loses an axle, breaks a wheel, or suffers some other mechanical failure, and the repair can be made in a reasonable amount of time, the Scout will be given an opportunity to repair the car and the race will be run again. If the repair cannot be made in a reasonable time, the car will place last in that race. NOTE: Since lubricants are not permitted at the race venue, no further lubrication of a repaired axle or wheel will be possible.

INSPECTION AND DISPUTES

1. The Race Committee will consist of three adults that do not have Scouts racing in the event. They are charged with the fair and equitable interpretation of these rules. Each Scout will be treated with respect and in an impartial manner in the event of a dispute. Parents are reminded that this is intended to be a fun and friendly competition.
2. Each car must pass inspection by the official inspection team before it may compete. After inspection and prior to the race, the cars will be impounded by the race committee. The inspection team has the right to disqualify any car that fails to meet any of these rules. Car owners will be informed of the violations and given an opportunity to modify the car to meet the rules, if possible.
3. The race committee reserves the right to re-inspect any car for any reason including, but not limited to:
 - a. After mechanical repairs have been made due to breakage or failure.
 - b. If the race committee suspects that a deliberate attempt to deceive the inspection team by concealing infractions of the rules has occurred. If the race committee discovers infractions during re-inspection, it reserves the right to disqualify that car with or without giving the car owner an opportunity to make repairs.
4. Any participant (including a parent/guardian of the participant) has the right to appeal to the race committee for an interpretation of these rules. The race committee, by majority vote, will be the final judge of any dispute. The decision of the race committee is final. By entering a car in the Chippewa District Pinewood Derby race, the Cub Scout and parent(s)/guardian(s) agree to abide by all the rules in this document.
5. Conduct contrary to the Scout Oath and Law by any participant or member of the audience will be grounds for expulsion from the competition and/or the race venue.