

2024

Pack 150 Pinewood Derby

Car Specifications and Rules

Revised 2024-Mar-03

Yellow Highlight = Optional for Pack 150. Enforced at World Pinewood Derby Championship.

Cyan Highlight = Pack 150 Only

Parents and leaders are reminded that the goal of the Pinewood Derby is to help the Scouts learn how to use basic tools and execute their own design! Parents should help but are reminded that the real value of the Pinewood Derby isn't in the trophy but the experience.

1. Dimensions

- **Height:** Maximum of 3.0 in. Width: Maximum of 2 3/4 in.
- **Length:** Maximum of 7 in.
- **Weight:** Maximum of 5.0 oz. (141.75 grams), rounded to the 1/10th of an ounce
- **Center Rail Clearance Height:** 3/8 in.
- **Center Rail Clearance Width:** Minimum 1 3/4 in. inside wheel to wheel

****World Championship Requirement (ONLY):**

- The front edge of the car must not be more than 1 inch above the track surface and be at least 1/2 inch wide at the center of the car.
- All cars must have a wheel base no less than 4 inches (101.6 mm), with the two rear wheels being positioned directly across the body from one another and the two front wheels being positioned directly across the body from one another. Wheels cannot extend beyond the front or rear of the car body proper.

2. Axles

- a. Axles must be official BSA axles as provided in the Grand Prix Kit or Wheel/Axle replacement kit.
- b. Axles may not be significantly reduced in size.

3. Wheels

- a. Only "Official BSA Wheels" may be used. (Included "Official Colored Wheels")

- b. Wheels may be sanded and polished to remove surface imperfections, to true the roundness of the wheel and to flatten the tread/contact surface. Coning the inside hub or truing the outside hub face is allowed.
- c. Weight reduction or wheel modification is not allowed.
- d. Wheel tread must remain flat across the entire width and parallel to wheel bore with a minimum width of 7.5mm.
- e. The ribs on sidewall must remain visible around the entire circumference.

****World Championship Requirement (ONLY):**

Wheel Bore treatment is allowed including polishing, sanding and/or tapping, however wheel bores may not be filled and re-drilled

4. Lubrication

- a. Lubrication cannot be falling off the car at check-in.

****World Championship Requirement (ONLY):**

- Graphite is the only lubricant allowed at the World Championship Pinewood Derby.

5. General

- a. The car must be newly built for the current Cub Scouting Year using Official BSA components. The main part of the body must be made of Pinewood. Block. Car must have at least 4 wheels and 4 axles.
- c. Additional materials may be added, as long as they meet the race requirements.
- d. All car parts and materials must be firmly attached.
- e. Weight shown on the Official Race Scale is final.
- f. The car must be freewheeling with no springs, magnets, starting devices, or propellants of any type.
- g. Washers, bushings, bearings, or inserts are prohibited.
- h. Each car must pass inspection by the race day Pinewood Derby Committee before it may compete.
- i. It is the responsibility of the Scout to present their car for inspection.
- j. A Scout whose car fails inspection will be allowed to make adjustments to the car.
- k. After the car has passed inspection, it will be impounded by the Race Officials to await the race. Cars may not be handled after inspection, except by Race Officials, until all races are completed.
- l. Paint and glue must be dry at check-in with no sticky surfaces on the car body.

m. No part of the car can extend beyond the starting peg.

n. In the event of a breakdown during the race, the Scout may make an attempt to repair the car within a reasonable time. The car must pass inspection again prior to another attempt to race. If, after 3 attempts, the car cannot complete the heat, it will be given the maximum heat time.

o. A car that jumps off the track or interferes with another car will be allowed to re-run the heat. A car jumping off the track or interfering with another car 3 times will be given the maximum heat time.

p. in the event the car fails to navigate the track, a re-run of the heat will be permitted. If, after three (3) attempts (cumulative across heats), the car cannot complete an assigned heat, it will be given the lesser of its elapsed time or the maximum heat time.

q. any scout asking for re-run due to any interference with the car due to any of the above (n, o, or p) must do so immediately, i.e. prior to the next heat.

All determinations by the Race Committee are final.