

Cub Scout Pack 135

2020 Pinewood Derby

Vehicle Check-in & Specifications



Vehicle Check-in

Saturday, January 11, 2020, 10:00 AM – 1:00 PM in the St. Veronica cafeteria.

***If you are unable to make the check-in time, please contact the Cubmaster immediately to setup an alternate check-in:**

Jason Schuster
Cubmaster Pack 135
schustjn@gmail.com
513-313-3491

Inspection

- Each car must pass inspection by the Cubmaster and the Pack inspection team.
- After inspection all cars will kept overnight until race time.
- If a car does not pass inspection it must be brought into spec before it is registered. The Pack will have the following supplies available for fixes: *(Please bring your own supplies from home if you prefer)*
 - Simple weights (washers, scrap metal)
 - Hand tools, electric drills, Dremel, hot glue
 - Graphite dry lubricant
 - Extra car kits \$5/each
- After approval, cars will not be re-inspected unless the car is damaged while handling or during a race.

Vehicle Specifications

General

- All cars are to be built by the Cub Scout and his/her adult partner(s). Let the Cubs help. Get them involved! I may ask your Scout what they did to help out during the build.
- Cars must be made for the 2020 Pinewood Derby. Cars raced in prior year's competitions are not permitted.

Dimensions – *Total* dimensions. Includes fenders, decorations, weights, etc.

- Maximum weight – 5 oz. (< 5.05 oz. on the Pack 135 digital scale)
- Maximum width – 2 $\frac{3}{4}$ "
- Maximum length – 7"
- Maximum height – 5"
- Width between wheels – 1 $\frac{3}{4}$ " (stock wood block width)
- Wheelbase – Must use the stock axle slots
- Minimum clearance - $\frac{3}{8}$ " (between track and the bottom side of the car)

**The wheels are the only part of the car allowed to touch the track.*

** Be mindful of the clearance if you place weights underneath your car.*

Body

- Only the body (raw wood block) provided in the official Cub Scout Pinewood Derby Car Kit may be used.
 - No precut blocks or 3rd party body/body kits may be used.
- Details, decals and decorations are almost all permissible (and encouraged!) as long as these do not exceed the maximum car dimensions previously stated, and do not impede the car's ability to race, interfere with other cars or damage the track.
 - No loose materials of any kind are allowed on/in the car.
- All cars must have a flat section in the front so that nothing protrudes beyond the starting gate.
 - Extremely pointed or notched front-end designs may be disqualified, as they may not work properly with our starting gate or result in inaccurate timing of race results.
 - No part of the car may extend past the starting gate when the cars are staged.
- Weights (steel, iron, lead bars, pellets, shot, nails, plates, melted lead, washers, coins, etc.) are approved for getting your car up to weight. Weights may be recessed, inserted, or attached to any part of the car as long they do not exceed the maximum car dimensions previously stated, and do not impede the car's ability to race, interfere with other cars or damage the track.
- Weights must be passive, i.e. non-movable, non-magnetic, non-electric, non-sticky, etc.

****For optimal performance, make your car as close to 5 oz. w/o going over.***

Wheels and Axles

Wheels

- Only the wheels provided in the official Cub Scout Pinewood Derby Car Kit may be used.
 - ONLY the official BSA wheel and axle replacement kit that are sold at the Scout Shop or scoutshop.org, ex. <https://www.scoutshop.org/pinewood-derby-blue-wheels-and-axes-647826.html> may be substituted.
- Wheels may be trued if out-of-round.
- Material may be added to the inner hub to balance them.
- Wheel bores, hubs and “**treads**” (the wheel surface that touches the track) may be deburred, polished and trued.
 - **Note** – The intent is to remove wheel’s manufacturing imperfections and to smooth them, not to remove obvious mass or to reshape the wheel. Ex.:
 - Don’t sand so much as to reduce the diameter of the wheels.
 - Don’t remove material from the face of the wheels (don’t sand off BSA badging or drill holes in the wheel walls).
 - Don’t narrow the wheels (tread width or tread thickness).
 - Don’t groove, round, H-cut or V-cut or otherwise reshape the tread surface.
- 4 wheels must be used, one wheel per axle.
 - At least 3 wheels must be in contact with the track at all times.

Axles

- Only the axles provided in the official Cub Scout Pinewood Derby Car Kit may be used.
 - ONLY the official BSA wheel and axle replacement kit that are sold at the Scout Shop or scoutshop.org, ex. <https://www.scoutshop.org/pinewood-derby-blue-wheels-and-axes-647826.html> may be substituted.
- Use the existing stock axle slots
 - "Straight through" axles and drilled axle holes are prohibited
- Axles may (*should*) be deburred, sanded and polished
- Axles may be canted (bent slightly & tactically) for rail-riding strategies as long as the modification does not impede the car’s ability to race, interfere with other cars or damage the track.
- Only dry lubricant is permitted - powdered graphite or silicone. No oils or sprays!
 - Some Graphite dry lubricant will be available at check-in.
- ***There will be no additional opportunities for lubrication after vehicle check-in.**

Wheels and axles potpourri

- The car cannot ride on springs.
- Use of bearings, bushings, spacers, or the like between the wheel and car body are prohibited.
- The car must be free-wheeling, with no starting devices.

Official Checklist

This is the checklist that will be used at check-in to verify the car conforms to the above rules.

Cub Scout Information:						
Den	Lion	Tiger	Wolf	Bear	Web	AOL
	6	5	4	3	2	1
Name						
Main Car Color						
Assigned Car #						
Car Checklist:						
	Maximum weight – 5 oz.					
	Maximum width – 2 ¾"					
	Maximum length – 7"					
	Maximum height – 5"					
	Width between the wheels – ~1 ¾"					
	Minimum clearance - ⅜"					
	Wheels (official BSA, from kit or replacement)					
	Axles (official BSA, from kit or replacement)					
	Dry lubricant only					
	Suspension (none)					
	Free wheeling					
	Flat front					

Car Specification Questions?

- Please contact the Cubmaster with any questions about the specifications.
- Please ask the Cubmaster before taking any action that could be contrary to the rules.
- The decisions of the Cubmaster and Pack Committee are final.

Jason Schuster
 Cubmaster Pack 135
 schustjn@gmail.com
 513-313-3491