



Cub Scouts Pack 4 Pinewood Derby Racecar Specifications

General:

Racecars must be built using the wooden block, axles and wheels contained in the official Cub Scout™ *Grand Prix Pinewood Derby® Kit*. Racecars must be built for the current-year Pack 4 Pinewood Derby. Racecars built for a previous Pinewood Derby are not allowed. Pre-cut, pre-fabricated, commercially cut or other forms of professionally made racecars and/or parts are not allowed. Starting devices, propulsions, adhesives, magnets, rubber bands, motors, jets, fans, etc. are not allowed. Metal frames and axle supports are not allowed.

Racecar Weight:

The maximum allowable racecar weight is 5.00 ounces as measured by a Pack 4 Race Official using an official Pack 4 Pinewood Derby racecar scale. There is no minimum allowable racecar weight. The racecar may be hollowed out and built up to the maximum allowable weight by the addition of weighting materials such as metal, hot glue, wood filler, plastic, etc. Weighting materials may be added to the exterior of the racecar. Weighting materials added to the interior and/or exterior of the racecar must be securely attached and must comply with all other racecar specifications. Weighting materials added to the underside of the racecar must be recessed flush with the racecar body and must comply with all other racecar specifications. Mercury is a potential health hazard and its' use on Pinewood Derby racecars is not allowed.

Racecar Length:

The maximum allowable racecar length, including wheels, axles, and any protrusions, is 7 inches as measured by a Pack 4 Race Official using an official Pack 4 Pinewood Derby racecar template. The center of the racecar front bumper area must be the furthest point forward on the racecar. Indented noses, raised "barge" noses, or any other device that contacts the starting gate pin above, below, in front of, or behind, the center of the racecar front bumper area are not allowed.

Racecar Width:

The maximum allowable racecar width, including wheels, axles, and any protrusions, is $2\frac{3}{4}$ inches as measured by a Pack 4 Race Official using an official Pack 4 Pinewood Derby racecar template. The minimum allowable width between racecar wheels is $1\frac{3}{4}$ inches as measured by a Pack 4 Race Official using an official Pack 4 Pinewood Derby racecar template.

Racecar Height:

The maximum allowable racecar height, including wheels, axles, and any protrusions, is 3 inches as measured by a Pack 4 Race Official using an official Pack 4 Pinewood Derby racecar template.

Racecar Underbody Clearance:

The minimum allowable racecar underbody clearance is $\frac{3}{8}$ inch as measured by a Pack 4 Race Official using an official Pack 4 Pinewood Derby racecar template.

Racecar Wheelbase:

The allowable distance between the front and rear axles is 4 3/8 inches, center to center, as measured by a Pack 4 Race Official using an official Pack 4 Pinewood Derby racecar template. The official Cub Scout™ *Grand Prix Pinewood Derby*® Kit has pre-cut axle slots which meet this specification. New axle slots or axle holes may be cut / drilled into the racecar body as long as the 4 3/8 inches center to center distance is maintained.

Racecar Wheels:

Only the wheels supplied in the official Cub Scout™ *Grand Prix Pinewood Derby*® Kit may be used. The wheels may be lightly sanded to remove the mold projection and to make the wheels as smooth and true as possible. The wheels must retain the original ridge bumps on the outside edges. No beveling, coning, tapering, thin sanding, perforating or other modification to the wheels or wheel hub is allowed. Raised ridges or cut channels on the wheel tread are not allowed. "Wheel covers", "hub caps", or anything else that would serve as a lubricant "well" or "tap" are not allowed.

Racecar Axles:

Only the axles supplied in the official Cub Scout™ *Grand Prix Pinewood Derby*® Kit may be used. The burrs under the axle head and the ridges on the axle shaft may be removed. The axles may be polished. Beveling, rounding, tapering, thinning, perforating, or other significant altering of the shape or performance of the axle or axle head are not allowed. Axles must be mounted into the racecar wooden body. Axles may be glued if desired. Washers, bushings or springs are not allowed.

Racecar Lubrication:

Only dry powdered graphite (Dark Grey/Black) lubricant may be used. Oils, silicone sprays, and white powders are not allowed. Racecars may only be lubricated before inspection, no further lubrication is allowed.

If there are any concerns or uncertainties about these Pinewood Derby Racecar Specifications, please contact the Pack 4 Pinewood Committee Chairman (Bear Den Leader, Rich Cundra, Ph# 908-1992, e-mail richc@cubspack4.com), or the Pack 4 Cubmaster (Joe Treanor, Ph# 433-0661, email cubmaster@cubspack4.com).