



# Powder Puff Derby

## Car Construction Rules

### DIMENSIONS

- The total weight of the car may not exceed 5 ounces (141.7 grams). Be careful about using store scales. Most digital scales are fairly accurate, but only the official scale will be used for the official weigh-in.
- The maximum width of the car, including wheels, may not exceed 2.75".
- The maximum length of the car may not exceed 7", but there is no minimum except that the wheelbase must be at least 4.5".
- The minimum ground clearance from the bottom of the wheels to the bottom of the lowest part of the car other than the wheels must be at least 3/8" (.375"), including weights and accessories.
- Minimum width between wheels is 1.75".
- The maximum height of the car is 3.5" including accessories.

### ATTRIBUTES

- The car must have been made during the current year (the year in which derby is being held). You may not use a car from a previous derby. Derby Car kits are available at the Derby Prep event or may be purchased online or in stores.
- Wheel bearings, washers, and bushings are prohibited.
- Lubricants: Only dry graphite/molly lubricants may be used for lubrications. No liquid lubricants, waxes, polish, soap, or other lubricants are permitted. The axles, axle holes, and where the wheel contacts the body of the car are the only points where lubricants may be applied.
- Cars must be powered by gravity only! This means no engines, rubber bands, windup motors, fans, springs, rocket motors, CO<sub>2</sub> cartridges, thermonuclear reactors, plasma boosters, rodents on hamster wheels, or any other thrust generation or enhancement devices.

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### **DURING THE RACE**

- Each car must pass inspection by the official inspection committee at registration time before it may compete.
- If a car does not pass inspection, the owner will be informed of the reason for failure, and will be given time within the official weigh-in time period to make the adjustment. The car will then be re-inspected.
- After final approval, cars will not be re-inspected unless the car is damaged in handling or in a race.
- All four wheels of your car must be on the track.

### **ACCESSORIES AND ACCOUTREMENTS**

- Other materials such as wood, plastic, or metal may be added to the original block of wood from the official kit as long as the car is within the allowed specifications as noted above.
- Projectiles are not allowed. No part of the car may intentionally detach from the car during the race, come into contact with any other car, or extend outside the allowed dimensions at any time.
- Movable or liquid weights that shift the center of gravity of the car when the car is tipped or rolled are prohibited.
- Electronics are allowed as long as they do not provide any propulsion. Examples of acceptable electronics include LEDs, phototransistors, microprocessors, batteries, electromagnetic coils, transistors, relays, transmitters to cause lights or effects, etc. You may use electronics to enhance performance or just to make your car look cool. However, you may not use the electronics to create any kind of propulsion or inertial force.

If you have any questions about these rules, please contact Service Unit 93 at [gssu93@gmail.com](mailto:gssu93@gmail.com).