Pinnacle Soapbox Specifications & Rules for 2026

Soapbox Derby racing is a distinctive form of gravity-powered competition that highlights ingenuity, teamwork, and creativity. Racers build their cars *without* motors or engines, relying only on design, weight, and gravity to propel them down the course. This approach keeps the focus on skill and resourcefulness rather than speed from a motor. The experience is exciting for both participants and spectators as each car reflects the builder's ideas and problem-solving abilities. It is an exhilarating event where the laws of physics take center stage and everyone has a chance to compete on equal footing.

ELIGIBILITY

Participants will have to complete and sign the waiver in order to drive/ride in a derby car down the track.

Cars:

- Constructing your own racer is open to all ages.
- Loaner cars MIGHT be available for use in the Open Class.

Drivers:

- Driving a racer is open to ages **8** to **99**, as long as they are able to steer and that all rules can be followed.
- Drivers under 16, must have a **Crew Chief** that is an active member of their **Pit Crew** .
- Must sign a waiver, or if under 18, have a parent/guardian sign the waiver, before racing down the hill.
- All rules apply to all drivers, and **Pit Crew**, whether in the **Competitive** **or** **Open Classes**.

COMPETITION CATEGORIES & AWARDS

Racing Classes:

- **Competitive Class** –

  Senior Class – Ages 16 and up

- **Open Class** –

Awards:

- **Competitive Class** – Awards based on race results.

  Senior Class – 1st, 2nd, and 3rd places.

- **Paint & Polish Award** - People's Choice: Voted on by spectators.
- Open Class -– 1st, 2nd, and 3rd places.

CAR SPECIFICATIONS

Construction:

Soapbox cars can be homemade of original design or from a kit. New and used soapbox cars of any age are welcome. Any use of materials is welcome but must be strong and secure, and no sharp protrusions. The car should be built to last the entire morning of racing without continuous breakdowns or repairs.

Wheels:

- Must have 4 wheels, or more.
- Wheels can be different sizes, but adjacent/parallel wheels must be the same diameter (e.g., rear wheels 7" and front 6").
- Minimum diameter: 6 inches.
- Maximum diameter: 12 inches.
- Maximum width: 6 inches.

Ground Clearance:

- Minimum: 3 inches.
- Maximum: 6 inches.

This range allows smooth clearances, maintains a lower center of gravity to reduce the risk of rollovers, and elevates the overall safety standards of the race.

Brakes:

- Functioning hand or foot-controlled brake is required.
- Drivers may not use their feet on the pavement or tire to stop the car.
- Brake pads must not have protruding hardware that could damage the racing surface.

Steering:

- Steering wheel, bars, or yoke designs allowed.
- Use of steering limiters strongly suggested.
- Rope steering and aviation joysticks are prohibited.
- Rear wheel steering is prohibited.

Enclosures and Hatches:

- Must be operable by the driver without assistance.
- No open-bottom cars allowed. A floorboard is required to prevent legs or feet from falling out.
- Must have a roll bar

Turnbuckles and Fasteners:

- Secure turnbuckles with safety wire, jam nuts, or equivalent methods.
- Fasteners must use lock washers, lock nuts, cotter pins, or other devices to prevent loosening.

Weight:

- Weight: no weight restriction

NO “KIT” CARS PERMITTED

SAFETY EQUIPMENT

Helmets:

- Helmets are mandatory. Helmets must come with a functional chin strap (e.g., bicycle, motocross, hockey) for everyone in the car.

Gloves, Suits, and Goggles:

- Long sleeves and pants required if the car does not have a protective body.

Shoes:

- Closed-toe shoes required.

Other:

- Proper brakes.
- Proper steering.

- These should not be afterthoughts. These are part of the car specifications, but I want to make a point. If your car can't effectively steer and brake (as determined by the Race Committee) you will not be allowed to compete.

- Must sign a waiver, or have a parent/guardian sign the waiver, before racing down the hill.

INSPECTION AND DISQUALIFICATION

To run cars down the track, all participants must complete parental/guardian and/or personal liability waivers. Inspections are required for any cars that will be used on the track to ensure the safety of both participants and spectators.

We require you to have your car inspected before race day. Inspections can be coordinated through the Derby Committee Chair, Steve Flach @ sflach@camppinnacle.org. This will help the event run smoothly and prevent any disappointment on race day. We would hate for your car to be disqualified at check-in for being out of compliance.

After inspection, any vehicles found to be out of compliance, may be repaired or modified. If your car's issues are not corrected before race day, the car will be disqualified. In such cases, if the team can find a different car to use on the day of the race, that is complying with all requirements, then drivers will have the option to use it for the race.

If you need to make any last-minute adjustments to the steering or brakes, please do so before proceeding to the starting line. If your car isn't ready when your its called to the starting line, you forfeit that heat.

Practice runs are permitted only until 20 minutes prior to the main event. Additional, you and your car must be checked in and with your wavier on file before taking practice runs.

SUMMARY OF SPECIFICATIONS

- Max Length: 84 inches
- Max Height: 32 inches
- Max Overall Width: 48 inches
    - Single Seater: 48 inches
    - Double Seater: 48 inches

- Ground Clearance:
    - Min: 3 inches
    - Max: 6 inches
- Front Axle Width:
    - Min: 20 inches
    - Single Seater Max: 48 inches
    - Double Seater Max: 48 inches
- Max Axle Protrusion: 1 inch
- Wheelbase (Front Axle to Rear Axle):
    - Min: 32 inches
    - Max: 48 inches
- Max Car Weight: No restriction

Part of the Derby experience is to see what you can come up with under these constraints. Though if a rule seems overburdensome, you can petition the Derby Committee Chair, Steve Flach @ Sflach@camppinnacle.org and plead your case. Being the first year of this derby, a certain case can be made that the rules are too restrictive. Though they seem to the Race Committee to be inline with other derbies of this style (Red Bull derbies are a whole different thing).

There are items that won't be negotiatable, particularly anything to do with overall safety of participants and spectators.