

WHITE OAK DISTRICT

PINEWOOD DERBY 2024

ADULT SPECIAL RACE

BUILDERS' GUIDE

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OFFICIAL BUILDING RULES

(almost no rules)

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1. Purpose

The purpose of this document is to give directions for the ADULT SPECIAL PINEWOOD DERBY RACE.

These cars will *****NOT***** race in the regular Cub Scout division races and are only required to meet rules so that they will fit on the WOD track and not pose any safety hazards.

Adults are encouraged to design and build a car using their ingenuity and engineering skills and develop a purely gravity powered car.

Read these rules carefully to ensure your car will qualify for the District race.

2. Car Chassis and Dimensions

The car may be made from any material (body, wheels, axels).

Any shape may be used, BUT must conform to the maximum size restrictions in order for the car to fit on the District Race Track.

Choose your own axles; mount them as you wish, BUT they must fit on the track.

The maximum width of the car, including wheels, is $2 \frac{3}{4}$ inches.

The maximum allowed length of the car is 7 inches.

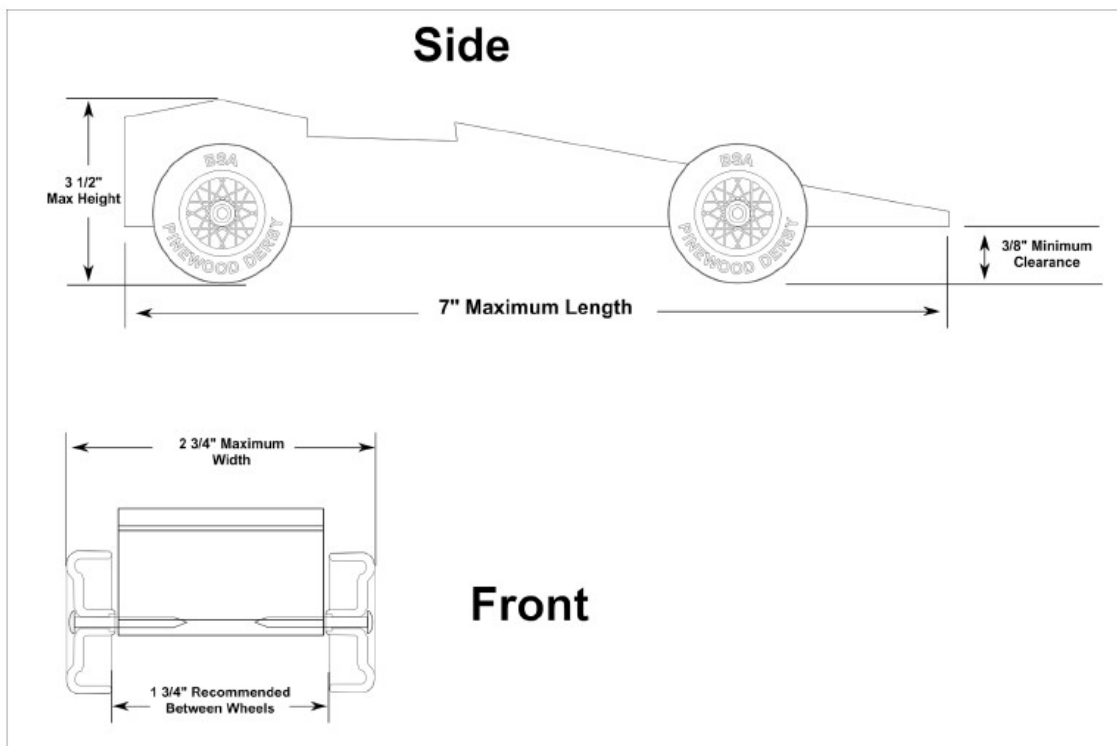
Clearance between the bottom of the car chassis and the track surface should be at least $\frac{3}{8}$ of an inch.

The height of the car must not exceed that of the electronic scoring system, or it will not be able to race. Keeping the height below $3 \frac{1}{2}$ inches will ensure that the car will fit without an issue.

The cars must race on a track with a guide strip that runs between the inner edges of the wheels. The edges of the strip are $1 \frac{5}{8}$ inches apart, so it is recommended that you have at least $1 \frac{3}{4}$ inches between the wheels to prevent binding.

The horizontal shape of the front of the car must be flat or convex, as no part of the car may extend past the starting pin at the beginning of the race. If the front of the car is too narrow to rest on the starting pin without slipping, it will need to be modified or it will be disqualified.

The following chart illustrates the dimensions for various aspects of the car.



3. Weight and Appearance

There is NO specific weight limit for the car, BUT the weight may not be “unreasonable” so that it will not damage the track and electronic devices. A weight of more than 8 ounces is “unreasonable”). Weight will be determined by an official scale at the District racing event.

If lead is used as a weighting material, we strongly advise that it be protected from direct human contact, either by encasing it entirely within the body of the car, or by covering it with paint, a protective coating, or tape.

Mercury and any hazardous material is not permitted to be used.

All paint and glue must be completely dry before pre-race check in.

All accessories and additions to the car must be firmly secured in place. Any accessories must fit within the official dimensions for maximum length, width and height.

4. Wheels, Axles and Lubrication

Use any wheels that will fit the track requirements.

There is NO requirement for number of wheels, BUT your design should consider proper tracking on the track.

Bearings and bushings are permitted to be used inside the wheels.

The car must be free-wheeling, without any sort of propulsion mechanism. Gravity propulsion only!

Magnets of any sort are not permitted.

Wheels may be lubricated with wet or dry lubricants, BUT ****NO**** car that is dripping or leaking lubricant will be permitted to race. If lubrication makes a handlers hands dirty, it is NOT acceptable.

Lubrication should not be present on the running surface of the wheels.

5. Important Things to Know

All cars must have been built in the current Scout year, by the ADULT builder/racer. Any car built for a race in a previous Scout year is not permissible.

Cars purchased pre-built from professional sellers are not permitted.

There has been a recurring issue with builders failing to leave sufficient clearance below their cars. If your car is too low, it will drag on the center section of the race track and not be a race contender. Please be sure to check that there is at least $\frac{3}{8}$ of an inch of clearance between the car body and the trace center guide, otherwise your car will not fit on the track.