

# Pack 152 - Pinewood Derby Rules

*Read the rules before starting to build your car!*

## General:

1. You must build a new car each year. Cars and/or tires from previous years are not to be modified and/or reused.
2. The car must be free-wheeling with no starting devices.
3. Weight adjustments, the application of graphite/dry lubricants, or other car modifications can only be done prior to checking in the car at registration.
4. Hint / Front of car design: The starting mechanism consists of a pin that rotates forward in the direction the car will be rolling. This pin is only about an 1/8<sup>th</sup> inch in diameter. Please design the front end to accommodate the starting mechanism. Example: If you design the front end of the car to look like an arrow (looking down from above the car) it may be difficult to stage the car at the starting line.
5. Hint / Front vs. Back: If your car does not have an obvious front and back it would be advisable to add some visual indication at the front of the car to help the Starters stage your car. Otherwise your car may end up running backwards for a few of the heats. The rear axel slot is closest to the end of the block of wood.
6. Watch YouTube Videos and search Google for car building hints and weight distribution.
7. We encourage families to cut cars with their scouts, but pre-cut cars are okay if there are no other options. Pre-built, pre-painted, or pre-weighed cars are not allowed.
8. PackMaster has final say.

## Wheels:

1. Only the wheels that come with the kit **MUST** be used and **NOT ALTERED!**
2. They cannot be sanded, except to remove mold flashing and to true-up the tires.
3. They cannot be lightened or weighted.
4. They cannot have washers on either side.
5. Bushings and bearings are not allowed.
6. They **MUST** remain full width and **FLAT**.
7. Hub caps are not allowed.
8. At least 3 wheels must roll on a flat surface.

## Axles:

1. Only the axles that come in the kit **MUST** be used and **NOT ALTERED** (except as described below).
2. Solid axles or replacement nails (other than from another Pinewood Derby kit) are not allowed.
3. You may remove the burrs on the head of the axle with a file/emery cloth. Be careful not to damage the shaft of the axle.
4. You may polish the axle with steel wool and/or polish.

## Wheelbase:

1. The distance between the front and rear axle **MUST** be kept the same as in the car supplied. (That distance is approximately 4 3/8 inches).

## Wheel Spread / Ground Clearance:

1. The distance between the wheels from inside to inside must be 1 3/4 inches. The car rides over a strip that is 1 5/8 inches wide).
2. The distance from the bottom of the car to the track **MUST** be a minimum of 3/8 inches. This is to allow the car to ride over the guide strip that is 1/4 inch high. Do **NOT** put weights directly under a car unless you drill holes or hollow out with a Dremel or similar tool.
3. The car shall not ride on any kind of spring(s).

(continued other side)

### Weight:

1. The total weight of the car at registration must not exceed 5 ounces. (It is advisable for your car to weigh as close to 5 ounces as possible).
2. Make your car weight adjustable to add or remove additional weight at registration. Poster tack and some BBs work great in an open hole or two for this.
3. It's much easier to add weight than take it away so plan accordingly to adjust the car at registration. You can cause damage to the car the day of registration if you need to drill out more holes in the wood.
4. Weight can be adjusted at registration. Please note that graphite adds weight.
5. At registration, graphite may only be added at the official graphite table. Graphite is messy and sticky. We designate one spot with tarps for using graphite to avoid extra messes, food contamination, and excessive cleaning fines.
6. No loose weight(s) will be allowed. They must be secured.
7. No liquid weights are permitted.
8. The scale used at registration on race day is final. All other scales do not count.

### Dimensions:

1. Total width of the car must not exceed 2 3/4 inches.
2. Total length of the car must not exceed 7 inches.
3. Total height of the car must not exceed 3 inches (to avoid hitting the electronic timing device).

**HAVE FUN!**