

**Official Building Rules: Pine Car Derby**  
**Saturday, March 10, 2018**  
**Native Sons and Daughters**  
**Three Fires Local Longhouse**

### **Dimensions**

1. **Length:** maximum length shall not exceed 7.25 inches
2. **Outside Width:** overall outside width shall not exceed 3.25 inches.
3. **Inside Width between wheels:** minimum width between wheels on each axle shall be 1.75 inches
4. **Bottom clearance:** the bottom of the car should be 3/8 inch above the ground to prevent interference with the center guide track.
5. **Height:** Maximum height of the car shall be 4.75 inches measured from the bottom of the wheels.

### **Weight**

1. **Maximum:** weight shall not exceed 5 ounces on the Official Race Scale.
2. **Securing weights:** additional weight shall be securely built into the body of the car or firmly affixed to it.
3. **Weight materials:** lead and other toxic materials should be avoided.

### **Wheels and Axles**

1. Only the official Three Fires Longhouse Pinecar Derby kit wheels (black) and axles may be used. The kits come with axles and nails, **only use the axles.**
2. Kits must be purchased from the Empire Hobbies located at 3278 Rochester Road, Troy 48083. Let them know you are with the Three Fires Longhouse for a 10% discount.
3. Beveling, tapering, sanding thin, wafering, or lathe turning of the wheels is prohibited.
4. Wheel bearings are prohibited.
5. Wheel covers are prohibited.
6. Spacer washers are acceptable.
8. Original axle body-block grooves must be used and cannot be moved.

### **Nose**

1. The nose shall not be concave as viewed from above.
2. A minimum of 0.25 inch wide flat surface at the front of the car is required to insure proper starting.

### **Lubrication**

1. Cars may not be lubricated after inspection.
2. There are no restrictions on the type of lubricant. Graphite powder, silicone, etc. are all acceptable.

### **Inspection**

1. Each car must pass inspection by the official inspection team before competing.
2. The inspection team has a right to disqualify cars that do not meet those rules.
3. Car owners will be informed of the violation and given an opportunity to modify the car to meet the above rules. Check in and inspection will be held Thursday March 9<sup>th</sup> details to follow.

## Racing

1. If a car does not stay in its track while racing and in the process interferes with another car, that heat shall be rerun. If the same car does not stay in its track and interferes with another car a second time in the same heat, it will be removed from the heat and the heat shall be rerun without the offending car. The offending car will be given the DNF time for that heat.
2. 3 Fire members are eligible to win medals there will be race for K-5 and 6<sup>th</sup>+. Adults or other family members not in the program or older may race in a “special class” heat.
3. Medals are awarded for design and speed for age/grade and overall winner.

## Miscellaneous

1. Paint must be dry at the time of inspection.
2. The cars must be freewheeling with no starting device or others means of self-propulsion.
3. Cars made for a previous year are not permitted. Parts or wheels from a previous year are not permitted.
4. On occasion a racer may desire to use a car built recently for another organization (i.e. boy scouts). These cars MUST use the axle system or be modified to use the same axle system used by 3 Fires. Acceptance of these cars will be determined by the Race Committee.
4. The Race Committee shall be the final arbiter of all rules and results

## Build Tips

1. If you use a scale we recommend you build your car to 4.9oz and add final weights during the car check-in. It is much easier to add final weights during check in than try to remove weight. Many home scales will not match the official race scale.
2. A limited selection of tools will be available at check in for final weight modifications.
3. **Make sure YOU DO NOT push the axles in fully.** The car will bottom on the track and slow down or stop. We try to check this during check-in, but it can be very difficult to correct the axle depth at this time. Make sure you maintain at least 3/8” clearance from the bottom of the car to the track.