

## **5 -RACE CAR SPECIFICATIONS, WHEELS & AWARDS**

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The competitors should receive their official race car specifications and wheels (provided by NAA) at the time they register to compete for the National Championships or indicate interest in the race car competition. *All cars entered in the race car competition must use the wheels provided by the Association.*

Photos of race cars from various affiliates can be found on the NAA website at [www.naahq.org](http://www.naahq.org). Go to the Maintenance Mania section of the website to see the photos.

### **Race Car Materials & Axles**

1. The race car must use at least one maintenance supply part
  - Use maintenance supplies to build body parts, accessories, engines, scoops, whatever!
  - The cars will be raced down a ramp, so also keep speed in mind if you want to win the Maintenance Maniac award.
2. Axles are not provided by the local affiliate
  - Alignment is very important in ensuring the race car will run straight down the track.
  - Axles need to be parallel to each other and perpendicular to (square to) the car for the best performance by staying off the sidewalls which increases the run times.
  - Axles are typically a 1/8" diameter rod (purchased at hobby store, welding rod, 8d nail, etc).
  - The rod can be placed in a hole drilled in the body.
  - Participants can add a bearing sleeve of some sort (1/8" diameter brass or nylon tubing) and attach the sleeve to the body.
  - Participants may drive nails through the wheels and into the body of the car for a simple axle.
  - The wheels will usually "friction fit" onto a 1/8" diameter rod and stay attached to the axle
  - Participants may glue the wheels on to the axle
  - Participants can lubricate their wheels with solid lubricant such as powdered graphite or Teflon. (Many hobby shops carry lubricants for Pinewood derby cars.)
  - Liquid lubricants such as wd-40 and 3 in 1 are not allowed as they create a mess on the track and the overall venue.

### **Race Car Track**

- The cars will race down an official two-track Pinewood Derby style race track
- Automatic timers are installed on the track to ensure accurate timing.
- The side walls only extend approximately 1/2" above the track surface

## **Race Car Specifications**

1. To qualify for the race car competition, race cars must not exceed the following size limits:

- Length – maximum 18”
- Width – maximum 6”
- Height – maximum 6”
- Weight – Maximum one and one-half pounds or 24 ounces
- Race cars can only be gravity powered

## **Fast Car Secrets**

- Have well aligned wheels
- Have low center of gravity
- Be close to but not over the weight limit.
- Some attach bumpers or rollers to keep the car from getting caught on the side walls.
- If using a bumper or roller, keep them low so they will hit the race track side walls which are only ½” high.

## **Race Car Testing and Check-In Requirements**

- Participants will have the opportunity to conduct test runs on the track prior to the official competition
- Participants may make adjustments to their race cars during the trial runs.
- Race cars must be checked in prior to the competition
- Race cars that do not meet the size, power or material specifications will be disqualified.
- The race cars will be quarantined after check-in to prevent any alteration prior to the competition

## **Competition Requirements**

- Competitors will race their race car twice – once in each lane.
- Total event time is the total of the two runs
- Race Car Competition is complete when the car crosses the finish line under its own power.
- Cars that do not cross the finish line receive the maximum time of 10 seconds for that run.

## **Race Car Awards**

- Maintenance Maniac Awards are presented to the 3 fastest race cars.
- Additional awards for the Race car competition may be awarded for “Best Use of Maintenance Supplies” and “Peoples Choice”.
- **“Best Use of Maintenance Supplies”** – The race car design must include the use of at least one plumbing, one electrical, and one hardware part to be considered for the “Best Use of Maintenance Supplies” award. These can be used in any manner, as long as the vehicle meets the size restrictions.
- **“Peoples Choice”** – Voters will consider the use of maintenance supplies, overall design, creativity and originality. All attendees at the Maintenance Mania event will have an opportunity to vote for the Peoples Choice Award