

Maintenance Mania® 2009-2010 Phillips Race Car Competition

1. The cars will race down a Pinewood Derby style racetrack with two lanes.
2. Automatic timers are installed on the track to ensure accurate timing.
3. The sidewalls extend ½" above each lane.

Race Car Check-In Requirements

1. Maintenance Mania National Championship Qualifying and local competitors must build a race car individually.
2. Competitors are all allowed to conduct trial runs on the track prior to the official competition to make adjustments to their alignment.
3. Once car testing is complete the check-in process begins.
4. All cars are to be measured and weighed and must conform to the following specifications:
 - 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
 - Race cars must use at least **three** maintenance supply parts (wood does not count)
 - Approved competition wheels must be used
5. Race cars that pass the check-in process are placed in quarantine.
6. Make sure the race car is not tampered with after the check-in is complete.
7. Race cars that do not meet the size, power or material specifications will be disqualified. National Championship Qualifying participants will receive a total time of 20 seconds for the race car event if their car does not qualify.

Race Car Competition Completion Requirements

1. Competitors race cars twice, once in each lane.
2. The car crosses the finish line under its own power, otherwise it receives a total time of 10 seconds for that run.
3. Total event time is the total time of the two runs.

Race Car Awards

Competitors may be recognized with awards for the fastest car as well as these categories:

“Best Use of Maintenance Supplies” – The race car must include the use of at least one plumbing, one electrical, and one hardware part to be considered.

“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 if offered by the Association.

Game Rules and Reset Responsibilities

PHILIPS

Philips Race Car Competition

(Average Race Time: 3 seconds per run)

1. The cars will race down a Pinewood Derby style racetrack with two lanes.
2. Automatic timers are installed on the track to ensure accurate timing.
3. The sidewalls extend 1/2" above each lane.



Race Car Check-In Requirements

1. Competitors must build a race car individually.
2. Competitors are all allowed to conduct trial runs on the racetrack prior to the official competition to make adjustments to their alignment.
3. Once car testing is complete, the check-in process begins.
4. All cars are to be measured and weighed by the Start Judge and must conform to the following specifications:
 - Length – maximum 18"
 - Width – maximum 6"
 - Height – maximum 6"
 - Weight – maximum 1 1/2 pounds or 24 ounces
 - Race cars can only be gravity powered.
 - Race cars must use at least three maintenance supply parts (wood does not count)
- Approved competition wheels must be used.
5. The Start Judge will record each participant's race car status on the Car Check-In List.
6. Cars that pass the check-in process are placed in quarantine.

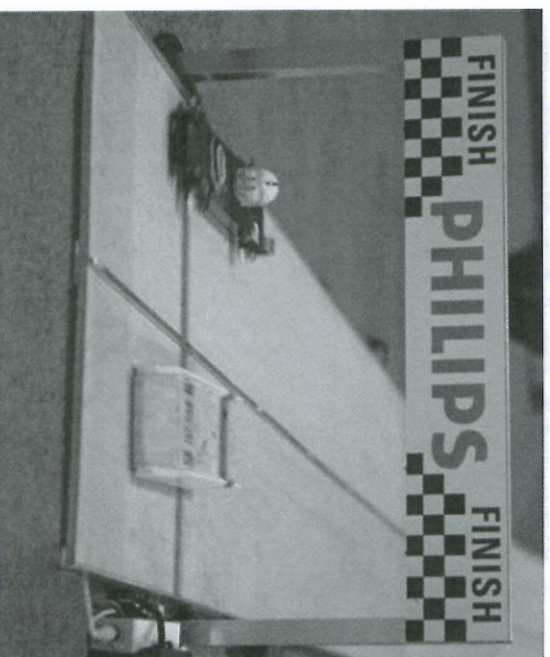
7. Race cars that do not meet the size, power, or material specifications will be disqualified. Participants will receive a total time of 20 seconds for the race car competition if their car does not qualify.
8. Race cars cannot be tampered with after the check-in process is complete.
9. The Start Judge delivers the Car Check-In List to the event MC once the check in process ends.

Race Car Competition Completion Requirements

1. Cars are set and aligned within the light tree countdown.
2. Competitors race cars twice, once in each lane.
3. The car crosses the finish line under its own power; otherwise it receives a total time of 10 seconds for that run.
4. Total competition time is the sum of the two runs.

Judge Reset Responsibilities

1. Note the time for the first run on the designated race car lane label.
2. Reset the start gate and initiate the light tree count down.
3. Set the car in the opposite lane from the first run.
4. Run the race car a second time and note the time on the designated race car lane label.
5. Return the race car to the quarantine area after the two runs are complete.



Game Structure

Race Car Materials

The official race car wheels are provided by HDS to the local affiliate. Affiliates then distribute the wheels as competitors register to participate in the event. All cars entered in the race car competition must use the wheels provided by the Association.

- The race car must use at least *three* maintenance supply parts.
- Participants can use maintenance supplies to build body parts, accessories, engines, scoops or whatever!
- The cars will be raced down a ramp, so participants must keep speed in mind if they want to win the Maintenance Mania® award.
- 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. This keeps cars off the sidewalls, which decreases the run times.
- Axles are typically a 1/8" diameter rod, which can be purchased at a hobby store (or a 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 onto 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 in1 are not allowed as they cause an irregular racing surface and may cause permanent damage to the track.

Photos of race cars from various affiliates can be found on the NAA web site at www.naaHQ.org.

Fast Car Secrets for Participants

- Have well-aligned wheels.
- Have a low center of gravity.
- Be close to but not over the weight limit.
- Attach bumpers or rollers to keep the car from getting caught on the sidewalls.
- If using a bumper or roller, keep them low so they will hit the racetrack sidewalls, which are only 1/2" high.

