2020 BIG APPLE DISTRICT PINewood DERBY

Saturday, March 14, 2020
10:00 a.m. to 3:00 p.m.
(time approximate depending on the number of entries)

The Brick Presbyterian Church
62 East 92nd Street
(between Park and Madison Avenues)
New York, NY 10128
Tel: 212.289.4400

Directions by Subway
Take the # 4, 5, or 6 to 86th Street or the #6 to 96th Street. Walk to 92nd and Park Avenue.
Entrance on 92nd Street close to Park Avenue. Follow signs to Pinewood Derby.
Check MTA for bus routes.

Registration: $7.00 per scout and includes the 2020 Big Apple District Pinewood Derby Patch and racer name tag.

Check-in and Car Inspection: 10:00 a.m. – 11:30 a.m.

Racing starts at 11 a.m.

Please register online: https://nycscouting.org/event/bapinewood
Contacts: Jason Toledano
212.651.2868 (cell) 516.761.0098, Jason.Toledano@scouting.org
Bob Vitral
212.477.1982 (cell) 917.558.0045, rvitral@gmail.com

REMEMBER, ALL CUB SCOUTS SHOULD WEAR THEIR UNIFORM!

Boy Scouts of America, GNYC
475 Riverside Drive, Suite 600, New York, NY 10115
Account #: 1-6801-320-20
Dimensions and weights:

- Cars must have been built during the 2020 Big Apple District Pinewood Derby racing season (September 2019 through March 2020) using an Official BSA Pinewood Derby Kit or official BSA components purchased through an authorized BSA retailer such as a Scout Shop. Non-official BSA parts sold by an official BSA retailer are prohibited. Aftermarket car kits, non BSA precut kits, or cars purchased whole or in part from another racer, company, internet entity, or other are prohibited. **Cars MUST be constructed by the RACER with help from an adult if necessary. Scouts Honor.**
- Width, including wheels, axles, and any fenders or cosmetics, must not exceed 2¾ inches (6.99cm).
- Length shall not exceed 7 inches (17.78cm). If fenders are present, they cannot extend beyond the front or rear car body.
- Weight shall not exceed 5.0 ounces (141.75 grams) measured on a scale accurate to 1/10th of an ounce. Overweight cars must be reduced to running weight or below before they can be entered. The official race scales shall be considered final.
- Cars must clear the center rail of the track, which is 1 5/8 inches wide by ¼ inch tall along the entire length of the car. Minimum clearance between the entire bottom of the car and the bottom of the wheels shall be 3/8 of an inch.
- No part of the car may protrude beyond the track start gate starting pin. The front edge of the car must not be more than 1 inch above the track surface and be at least 1/2-inch-wide at the center of the car.
- Any details added must be within length, width, and weight limits.
- All cars must have a wheelbase no less than 4 inches (101.6 mm), with the two rear wheels being positioned directly across the body from one another and the two front wheels being positioned directly across the body from one another. Wheels cannot extend beyond the front or rear of the car body proper. The car body proper is defined as the contiguous wood body itself and excludes attached wood parts, accessories of any material, or decorations. As an example, a bumper shaped from the original wood block that has not been dissected from the block and reattached is part of the car proper. A bumper that was cut away from the block and re-attached is not part of the car proper.
- No part of the car or any attachment to the car may be capable of coming into contact with the track other than the wheels.

Examples of Prohibited Items which CANNOT be used:

- Any type of magnets, springs, washers, bearings, bushings, nylon shims, axle guards, wheel weights, wheel well weights, inner wheel air dams (also known as air deflectors or air shields), inner or outer wheel covers – clear or otherwise, or any item internal or external to a factory BSA wheel, moving weights, liquid lubricants actively wet or dried, or suspension systems of any type.
- Any item not included in an official BSA Pinewood Derby Car Kit or not purchased through an authorized BSA retailer, except cosmetic items or fenders. Aftermarket axles are not permitted.
- Starting devices, finish line devices, propellants, or propulsion systems.
- Wet paint, sticky substances, glass, excessively fragile parts, electronic or lighting devices (if lights are on the car they must be turned off).
- Bearings or solid one-piece rod style axles or aftermarket purchased axles.
- Axles and wheels attached to any device that mechanically alters rotation or spin.
- Loose objects on or in the car. All weight must be securely fastened or embedded in or on the car.
Wheels and Axles:

- Use of only Official BSA Wheels from an authorized BSA retailer; colored wheels are permitted. Only official BSA wheels from an authorized BSA retailer can be used. Note, wheels with the letters BSA and China or any other indication other than a standard BSA wheel from a BSA authorized retailer is not permitted.

- All lettering and numbering, both inside and outside, must remain complete and unaltered from factory diecasting, and be completely visible with no obstruction of any kind. No wheel covers of any type or any name, inside or outside, may be used.

- The fluting and other BSA markings on the outside wheel area must remain visible and unaltered.

- Outer wheel surface (tread area only) may be LIGHTLY sanded, shaved, or polished to remove minor surface imperfections, mold casting burrs, and correct off center wheel bores; but total wheel diameter may not be reduced below 1.170 inches (29.72mm). Outer wheel surface must not be reshaped or have the contour changed in any way in an attempt to minimize tread contact or alter aerodynamics. Wheels with ANY flex to the tread or sidewall when squeezed or twisted in inspection will not pass. Lathing outer wheel tread is allowed within the confines of the above specs.

- Tread surface must be flat and parallel to the wheel bore and have a thickness of 0.036 inches consistently across the tread.

- Wheels may not be reversed (hub facing away from the car body) and must be mounted in standard position.

- Coning the hubs and truing the inside tread edge is allowed, as long as overall wheel width is not reduced below 0.36 inches (9.14 mm). Removal of outer hub step down is only allowed in Pro Stock Class.

- NO MATERIAL may be removed from the inside wheel tread, sidewall, hub surfaces.

- Minimum outside diameter of wheel must be equal to or greater than 1.170 inch (29.72mm) and must maintain the ridges on the outer edge.

- Inspectors reserve the right to measure the wheel with calipers to verify dimensional compliance with official wheel size restrictions. If graphite is not present or oil is suspected, graphite will be applied to all wheels. The weight of the wheel shall not be increased or decreased. No material such as glue, fingernail polish, or tape, may be added to the inside of the wheel increasing its weight.

- Wheel Bore treatment is allowed including polishing and/or tapping. Wheel bores may not be filled and re-drilled to alter bore diameter or to achieve better fit with the axle (no material may be added to the wheels).

- Axles may be canted for alignment purposes.

- Axles may not be bent.

- If axles are suspect, the racer will be asked to pull them for inspection and that racer will be responsible to re-install them.

Please note:

There are after-market modified wheels available that have been LIGHTENED. This is usually done by turning the wheels on a lathe and removing material from the inside of the wheel. These wheels are NOT allowed and can be EASILY RECOGNIZED at inspection. Cars with third party manufactured or modified wheels will not be permitted to race.

Wheels determined by the Inspectors to be out of compliance must be replaced to compete. Official BSA wheels will be available.
The following diagram offers wheel measurements and examples of disqualifying wheel modifications.

<table>
<thead>
<tr>
<th>Standard Wheel Diameter</th>
<th>Rounded Wheel</th>
<th>&quot;V&quot; Wheel</th>
<th>Cupped Wheel</th>
<th>Reduced Diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.380&quot; (1.170&quot;)</td>
<td>FAIL</td>
<td>FAIL</td>
<td>FAIL</td>
<td>FAIL</td>
</tr>
<tr>
<td>PASS</td>
<td>&quot;H&quot; Wheel</td>
<td>RIBBED WHEEL</td>
<td>SPEED WHEEL</td>
<td>SLANTED OUT</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>SLANTED IN</td>
<td>KNIFE EDGE</td>
</tr>
</tbody>
</table>

**NO LIGHTENING OF THE WHEEL IS ALLOWED**

Light sanding of wheel tread to remove irregularities is permissible, wheel tread must be flat!

Minimum wheel diameter allowable is 1.170 inches.
Minimum wheel weight of each wheel is 2.45 grams.

As a point of reference, below is an image of Official BSA wheels and axles purchased at an official BSA retailer.
Wheels, Axles and Suspension  
(in addition to Basic Car Specifications):

- All Basic Car Inspection rules and specifications apply.
- The Stock Car Division is intended to maintain a level of competition of which most boys are capable of achieving with minimal adult intervention. This division is the essence of the Pinewood Derby and in the sense of fair play we’ve kept the rules simple. Any car that passes the basic qualifications above but doesn’t pass the Stock Car rules will be subject to Pro Stock inspection.
- Only official BSA Pinewood Derby Kit wheels, or official BSA wheels purchased from an authorized BSA retailer, and BSA axles may be used. Wheels may be lightly sanded to remove any mold projection (also known as flash). This very light sanding is the ONLY wheel modification allowed. All markings must be intact on the inside and the outside of wheel. Colored BSA wheels are permitted.
- All 4 wheels must always be in contact with the track. The wheel tread does not have to be flat on the track.
- BSA axles may be polished, deburred and dry lubricated but must be left otherwise untouched – period. No lubricating oil or liquid lubricant of any kind may be used.
- Inspectors will visually inspect and use magnets to ensure BSA factory axles are present.
- Factory axle slots must be used and visible, with the factory standard 4- & 3/8-inch wheelbase. Axles are positioned 1 inch from one end (usually the front bumper), and 1 & 5/8 inches from the other (usually the rear bumper). Slots may be trued or straightened. Axels cannot be drilled into the car body proper with the exception of into the factory slot. A factory slot may be filled with wood putty or other material and drilled only for axle placement.
- The tip of the nail axle must be visible to allow inspectors to verify nail axles are being used.

Check-in and Registration:

There will be TWO registration stations for this year’s Pinewood Derby: 1ST STATION - PRE-PAID/ PRE-REGISTRED CUB SCOUTS & 2ND STATION - WALK IN REGISTRATION ONLY.

The pre-registered station will have all your materials pre-printed and the process will be much faster so you can get to the Check-in/Inspection station faster. This new system will alleviate the backups experienced in previous years.

It is highly recommended to register either through your pack or individually before the race.

Happy Racing!!

Rules adopted from GNYC World Championship Pinewood Derby
Helpful Hints:

**Shaping the Car’s Body:** It is up to the Cub Scout and his partner as to how detailed the car is built. Keep in mind the tools you have available. *Remember the safety of the Cub Scout.* Generally, the adult makes the major cuts with power tools or a coping saw and the scout can file and sand the block. *To avoid splintering the wood when the axles are driven in, pre-drill the axle groove with a drill bit just under the size of the axle.* Consider the aerodynamics of the car’s overall shape.

**Wheels:** Only the officially supplied wheels can be used. The wheels cannot be modified except for slightly smoothing each wheel by removing the rough seams around its edge. Removing this seam is suggested.

**Insert Axles into Body Block:** To insert axles into the body block, it is suggested that you pre-drill the axle groove. Check each axle to see if there is a burr on the underside of the head. If so, smooth the burrs with fine emery cloth or a file. Do not install the wheels yet.

**Design:** Feel free to paint and color the car in any style. When adding accessories, consider how much drag they may add.

**Install Wheels and Axles:** Now put the axles and wheels on the car but **DO NOT** glue the axles on yet. Weigh your car, being sure to place the car and accessories (windshields, spoilers, pipes, etc) on the scale. In order for your car to do well, the nails that serve as axles must be straight. Otherwise, the wheels will wobble. Straighten the nails if necessary.

**Add weights:** The car must not weight more than 5 ounces. As you carve the car and remove wood, you should add weights to get the car as close to the 5 ounce limit as possible. Weights should not be taped on. The car may be hollowed out and weights inserted to build it up to the maximum weight. Make sure it is securely attached or built into the body of the car. There are some flat weights that screw on and tube weights that insert into a drilled hole. Either are acceptable. Just make sure that any weights on the underside of the car are fit into hollowed out spaces, so the weights don’t drag against the drag (likely ruining your chances at victory.)

**Lubricate the car:** Lube and mount the wheels permanently. Dry, fine, powdered graphite seems to work the best. Liquid and spray lubricants often mix with the paint on the car and form a material that gets clogged in the wheels.
Registration & Inspection Form

BIG APPLE DISTRICT
PINEWOOD DERBY

MARCH 14, 2020

Racer: ___________________________ Pack No: _____

INSPECTION REPORT

☐ PRELIMINARY  ☐ FINAL

- Maximum Overall Width - 3”

- Minimum Width Between Wheels - 1-7/8”

- Maximum Length - 7”

- Maximum Height – Not to exceed 3”

- Minimum Track Clearance - Bottom clearance between car and track - 3/8”

- Wheelbase – The distance between axels must NOT be changed.
  Car uses the existing Axel Grove.

- New Car - Scout certifies he or she built the car THIS SCOUT YEAR.

Front of Car - No part of the car can extend beyond the starting post and the front of the car must be no higher than 1/2” where it contacts the starting post.

OFFICIAL MATERIALS USED - WHEELS, AXELS, & WOOD

PARTS SECURELY ATTACHED - ALL PARTS SECURELY ATTACHED TO CAR

WHEEL CONTACT - All four wheels MUST be in contact with a flat surface when the car is placed on it.

WHEEL SHAPE - THE SHAPE AND FORM OF THE WHEELS CANNOT BE MODIFIED OR RESHAPED, however wheels may be sanded to remove molding burrs. Wheels may not be tapered or rounded.

Maximum Weight - Not over 5 Ounces (141.75 grams)

Inspected by: _______________________________
2020 BIG APPLE DISTRICT PINewood DERBY REGISTRATION FORM

☐ YES! Count our Pack in!

We want to attend the 2020 Big Apple District Pinewood Derby.

Please register and submit payment online at:

https://nycscouting.org/event/bapinewood

The registration fee is $7.00 per Scout. You may also pay at the Derby. Cash Only.

Note:

Pay in advance and submit your scout’s names and den. Their name tags and registration form will be pre-printed for faster check-in at the Derby.

There will be two check-in tables at the Derby entrance; Pre-paid/ Pre-registered and Walk-ins.

Account #: 1-6801-320-20