



2020 Big Rig “B-Class” - Rules

I. Eligibility – Registration

- This is open to anyone that would like to build a Big Rig
- **Pre-race registration** can be completed on www.mac-bsa.org website Go under the Cub Scout Activities section find Mid-America Pinewood Derby– **Cost is \$5 if attending \$10 if Proxy Racing. Race day registration can be done at the event – cost is \$10**

II. Body Specifications

- You can use any type of Kit or you can **make your own** as long as it meets the Body Specifications. Bodies can be made out of Pine, Balsa, Basswood, Aspen, to name just a few any material may be used that does not interfere with the equipment or the other Big Rigs
- **Width** - Not to exceed 3 3/8 inches
- **Length** – Minimum length is 17 inches long ** Maximum Length of not to exceed 19 inches
- **Height** – Must have clearance under Finishing Gate – not to exceed 6 ½ inches, Minimum height requirement of 3 inches
- **Center Rail Clearance** – Big Rigs must clear the center rail which is 1 5/8 inches wide by ¼ inch tall along the entire length of the vehicle.
- **Weight** – The overall weight is not to exceed 25.0 ounces – **711.5 grams measured on Official Race Scale**
- **Body Design** – may be enhanced by adding other stable materials such as plastic, metal, or details. All additions must be firmly attached and conform to size specifications. No loose materials will be allowed.
- **No Part of the Big Rig can extend beyond the starting peg on the track what so ever.**

III. Prohibited Items that can NOT be used

- No magnets, springs, propellants, or propulsion system, no wet paint or sticky substances, no glass or excessively fragile parts, electronic or lighting devices must be turned off during race, No bearings, or any device that mechanically alters the rotation or the spin of the wheels.

IV. Wheels

- **Only Official BSA Wheels are allowed (either new style & old style) all markings must be intact on inside and outside of wheel.** You may use the Official BSA Colored wheels
- **Outer wheel surface may be sanded, shaved, lathed or polished to remove any imperfections, true roundness, remove mold castings and burrs, but must not be reshaped in any way to minimize tread contact or alter aerodynamics.**
 - **The fluting (small decorative dots on the edge) must remain visible around the entire circumference.**
 - **The tread / contact surface must remain flat and parallel to the bore.**
 - **The width of the tread must not be less than 7.5mm**
 - **No removing or reducing the letters or spokes or drilling additional holes.**
- **The following wheel modifications are NOT Allowed**
 - **No Rounding of the wheel treads – they must remain flat.**
 - **No Grooving, H-cutting, V-cutting, Crowing, Tapering or Dishing**
 - **No Altering the wheel profile**
 - **No Drilling sidewalls**
 - **No Filling of any wheel surface with any type of material**
- **Officials will remove wheel(s) if lettering is not completely visible**
- **Coning the hubs, truing the inside edge of the wheel, and removing the outer hub step down is allowed.**
- **Wheel Bore treatment is allowed including polishing, sanding and / or tapping.**
 - **Wheel bores may not be filled and re-drilled**
- **8 Wheels must be on the Big Rig in the following Configuration**
 - **Wheels must be attached to the side of the body at no more than a 10 degree angle.**
 - **All Wheels do not have to touch**



2017 Big Rig “B-Class” - Rules

V. Axles

- ***Any Nail Type Axle may be used*** – modifications to the Axles are allowed, including grooving, canting, beveling, tapering of axle head as long as the Diameter of the Axle is not reduced less than 0.84 inches. Axles must have Nail Type head –bushings, spacers, and / or washers can be used

VI. Lubrication

- ***Approved lubricants include (but are not limited to) Graphite, Teflon, Nyoil, Krytox***

VII. Race Operations and Miscellaneous Rules

- ***All Big Rigs MUST pass inspection before being allowed to race based on the rules stated in I. through VI.***
 - *An approved inspected Big Rig will then be checked in and not be touched by anyone but the race officials. Until the Big Rigs are released by Race Officials.*
 - *All lubrication of wheels must take place prior to final inspection check in and before Final Race (see below)*
 - *Officials have the Right to Disqualify Any Big Rig, which does not meet all of the stated rules and specifications. The Officials Decision is Final.*
 - *Appealing a decision – if a Race Official makes a ruling and you wish to appeal it – all Officials will be assembled and based on majority rule the decision will be upheld or overturned.*
- ***Each Big Rig will race twice in every lane (4 times)***
 - *Each race is timed with electronic equipment.*
 - *In the event the equipment fails, the race(s) will be re-run.*
 - *The slowest time will be dropped and the average of the remaining 3 times will determine the results for each racer – **Composite Time***
 - *In the event of a tie(s) a run-off will be run between any of the Big Rigs needed to fill the 4 slots for the finals race for each Division using the same method of running once in each lane and taking the average of the fastest 3 times.*
 - ***4 Fastest Big Rigs will advance to Finals Race*** *Based on total number of entries will determine if a finals race is needed... determined the day of the event
 - ***Finals*** - Prior to the “Finals” ***Finalist Big Rigs will be allowed to be “re-lubricated”*** – *at the Official Race Table only* – under the supervision of the Race Officials. ***No other modifications will be allowed***, except spinning of the wheels to work the lube in and cleaning lube from Big Rig and wheels.
 - *Final Races awards will be based on the average of 3 times in this Final Race – dropping the slowest time – composite time.*
 - *In the Event of a Tie a run-off as described above will be run*
- ***Trophies will be awarded to 1st***
- ***During Races***
 - *If a car jumps the track and interferes with another car then the race will automatically have to be re-run.*
 - *If the same car jumps the track again, then it is disqualified (after interfering)*
 - *If a car jumps the track and does not interfere with another car, and finishes the race it will not be re-run.*
 - *If a car jumps the track and does not interfere with another car, but does not cross the finish line a time of 9.9999 seconds will be assigned to that car’s race.*
 - *If an item affixed to a car falls off during a race, and in the opinion of the race official the car is still able to race, repairs will not be allowed.*
 - *If a car suffers a mechanical failure or is unable to finish, the individual will be allowed 3 minutes to make the repair under the supervision of a race official. No weight can be added to the car as part of the repair action. If the car is unfit to race after the 3 minute period, or becomes disabled after further racing, it will be disqualified and taken out of the race. No other modifications are allowed – such as re-lubing, only the repair to the item(s) can be preformed.*
 - *Any car that is discovered to be illegal during the competition by a Race Official will be disqualified from competition.*

