

2024 Sprint Car Rules * Changes for 2024

ENGINE

1. BLOCK

- A. Any 350 c.i. stock iron block that was available in a passenger car or truck.
- B. Any 351 w c.i. stock iron block that was available in a passenger car or truck.
- C. High performance cast iron blocks including but not limited to those manufactured by G.M., Ford, Mopar or Dart will be permitted. If these high performance blocks are used no weight reduction machining on the block is allowed.
- D. Maximum cubic inch not to exceed 360.
- E. GM 604 Crate engine may be used, but must follow and maintain all Wisconsin Wingless series rules.

2. CRANKSHAFT

- A. 350 c.i. O.E.M. or O.E.M. replacement (Stock specifications) 3.48" stroke - iron or steel for GM engines.
- B. 351 w c.i. replacement (stock stroke specifications) - iron or steel for Ford engines.
- C. No knife edge.
- D. No weight reduction except as required for proper balancing.
- E. No offset grinding for stroke alteration.
- F. No light weight cranks
- G. No undercut counter weights (except rear counter weight can be cut to fit coupler)
- H. No drilled centers on main bearing journals.
- I. No billet steel
- J. Inspection window in pan required. Either a 1-inch pipe thread fitting or a #10 fitting. Plug must be in line with a crankcase journal and cannot be obstructed by a windage tray. The plug must be accessible with the engine in the car. (We recommend that the inspection window be located on the left side, centered with the number 2 connecting rod.)

3. RODS

- A. Any steel 5.7" or 6" long for GM products.
- B. Any steel 5.956" long for Ford products.
- C. Any steel, stock length, Mopar Rods
- D. No titanium/No aluminum.
- E. No titanium bolts or nuts.

4. PISTONS

- A. Any 12 to 1 compression max for all makes. A .3 tolerance is allowed.
- B. No titanium.

5. CAMSHAFT

- A. Solid lifter only.
- B. .555 max lift at valves.
- C. Only lifters of engine make can be used.
- D. No roller cams.
- E. Steel push rods only.
- F. Roller rockers are allowed
- G. Timing chain, belt or gear driven permitted.
- H. Titanium valve spring retainers are permitted.

6. CYLINDER HEADS

- A. World Products Sportsman II angle plug and World Products 351 w cylinder head, Mopar part# P5249769 only.
- B. 64 cc, 2.02/1.60 valves No. 1115 (Chevy) and No. 5304 (Ford). (Clarified 5-01-09) ***Valve must have continuous diameter from the top of the valve through the bottom of the guide. A minimum of .310 to a maximum of .346.
- C. No porting or polishing.
- D. Stock as manufactured
- E. No combustion chamber modification.
- F. No angle milling. Standard cylinder head reconditioning procedures are ok, including head surfacing to correct warping, valve guide reconditioning and valve seat reconditioning. All repair work done on valve seats must not extend more than 1/4" away from the valve seat.

7. INTAKE

- A. 2-3/16" diameter - 8 port fuel injection, i.e. Hilborn, Crower, Kinsler.
- B. Large diameter injectors are acceptable when used in conjunction with 2-3/16" diameter reducers.
- C. No relief hole may be drilled above the butterfly on any injector. No alteration of injector manifold mounting holes will be allowed.
- D. No down nozzle injector.
- E. No timed fuel injectors will be allowed.

- F. Electronic fuel injection shall not be allowed.
- G. Only one injector nozzle and one injector line per cylinder and must be in the injector casing. Injection unit shall have one shaft operated butterfly per cylinder. The immediate area of the butterfly must be round.
- H. No slide or barrel type injectors will be allowed.
- I. Applies to all manufacturers (Ford, GM and Mopar).

8. EXHAUST

- A. HEADER TUBE 1 3/4" outside diameter maximum.
- B. Muffler mandatory. Schoenfeld 112535 or 112530 recommended.
- C. All cars must comply with track's decibel rule.
- D. The following exhaust headers are required: 1054L, 1014L, 1024L or DynaTech, Ford or Mopar equivalent to these numbers.
- E. One collector per side.
- F. No merge collector.
- G. No TRY Y header
- H. No step header
- I. No slip on collectors
- J. No modification to header except to make room for mufflers.
- K. At Tech Inspectors discretion, muffler or collector may be cut off to look for modifications.
- L. No heat coating.

9. IGNITION

- A. Vertex original style magneto only.
- B. No external coils will be allowed.
- C. No electronic traction control devices.

10. GENERAL

- A. Wet sump only, pump must be in pan
- B. Fuel - Methanol only. No additive. Upper lube additive only. No gas.
- C. No titanium parts other than valve spring retainers
- D. No flammable liquids or anti-freeze allowed in cooling systems.
- E. All engines must be sealed before racing.
- F. All engines must be inspected before pay will be issued.

Car Construction Guide - Chassis Specifications

Cars must resemble traditional sprint car design. Anything different (including chassis, body panels, bumpers, nerfs, etc.) must meet pre-approval from PDTR Officials prior to competition. Any car deemed unsafe by PDTR Officials will be denied competition at any time, including attempting to re-enter the track from the work area.

1. FRAME

- A. The following measurements are minimum suggested material: 4130 normalized. T.I.G. welded.
 - TOP RAILS 1-1/2 x .095
 - BOTTOM RAILS 1- 3/8 x .095 or 1-1/2 x .083
 - ROLL CAGE UPRIGHTS 1-3/8 x .083
 - ROLL CAGE CROSSMEMBER 1-1/2 x .095
 - UPPER RAILS 1-3/8 x .083
 - REAR END SAFETY "BUTT" BAR Mandatory 1 x .083 or 1 x .065
 - BRACE 1 x .065
- B. Wheel base no less than 83" and no more than 90".
- C. A fully enclosed fire wall must separate driver from engine compartment, belly pans in driver compartment mandatory.
- D. Slip joints will not be allowed in any form. Bolted or clamped slip joints will not be allowed. If a current chassis has a slip joint, it will have to be welded the full circumference of the tube.
- E. All chassis will be required to have additional bars installed to support and decrease the span between the front and rear uprights in the drivers area. The new support bars must be in addition to the front and rear uprights. Any attempts to manipulate the front and rear uprights to conform to these measurement will not be allowed at the discretion of PDTR Officials. These additional bars will be minimum 1.375 x .083 ASTM4130 normalized steel or equivalent material. Left and right side support bars do not have to be of the same design.

Left and right side support bars may be one of these three options:

Option1: Support bar may be designed similar to what was known as a "safety bar". It must be attached to the top rail at a point 15" to 20" from the rear of the front upright. It must attach to the hip rail and have a gusset

attached to the rear upright near a point opposite of the rear brace/shock mount bar. The curve must be between 4" and 7" measured from outside of the rear upright tube to the outside of the support bar. See WoO Diagram#16.12.1

Option2: Existing chassis with a left side support bar installed (formerly called safety bar) that do not meet the option one specification above, may add a gusset that attaches to the top rail 15" to 20" from the rear of the front upright and angle to the support bar. The existing support bar tubing must meet the minimum as described above (1.375 x .083 ASTM4130 normalized steel or equivalent material). See WoO Diagram #16.12.2

Option 3: A support bar may be added to the top rail at a point 15" to 20" from the rear of the front upright and to the rear upright near a point of the rear brace / shock mount bar but no higher than 7" above the hip rail. This bar may have a slight curve near the rear upright to accommodate elbow room and ease of fitment. See WoO diagram#16.12.3

2. WING

- A. 25 square foot cage mount maximum.
- B. Only one driver actuated wing slider permitted, horizontal-acting only.
- C. Industry standard only.
- D. 2' x 3' nose wing (optional).
- E. Top wing mandatory.
- F. Wicker bill maximum height is 3".
- G. No vent holes, dimples, ridges, etc. are allowed anywhere on top or nose wings. No split or bi-wings allowed.
- H. No foils or rudders will be permitted anywhere on wings.

3. WHEELS

- A. Front 8" wide, beadlock optional.
- B. Left rear maximum 15" beadlock optional, minimum 4", maximum 6" back spacing.
- C. Right rear maximum 18" wide, outer beadlock required, minimum 4", maximum 6" back spacing.
- D. Back-spacing is defined as the distance between the mounting surface for the hub (to the inner wheel) and innermost wheel flange lip.
- E. Valve stem only - no pressure regulators, bleeders or bleeder bases.
- F. Any hub style.
- G. Wheel covers must have a minimum of 5 Dzus points, anything less than five must be bolted. All fasteners must be steel. Wheel covers allowed on right side wheels only. Damaged wheel covers will be confiscated. Wheel covers that are lost from a car while on track will not be returned.

4. RACING TIRES

- A. American Racer manufactured tires required

Left rear	
28.0 x 15.0-15"	SD30
28.5 x 15.0-15"	SD30
29.0 x 15.0-15"	SD30
30.0 x 15.0-15"	SD30
30.5 x 15.0-15"	SD30
Right rear	34.0 x 17.0-15" GT MC2

- B. No softening agent.
- C. No altering or defacing of manufacturer's marking permitted.
- D. Check with Durometer or sniffer (100 parts per million maximum)
- E. Driver is responsible for tires being legal.
- F. * Wisconsin wingLess Sprint cars may run one night using their tires, all remaining nights they must follow PDTR tire rules.

5. GENERAL

- A. No titanium.
- B. Front axles must be steel. Minimum sizes 2 ¼ x .120, 2 3/8 x .095, 2 ½ x .095.
- C. Front axle and King pin tethers are required. Tethers systems must be WoO approved and must be mounted and used per manufacturer recommendations. Axle tethers will either wrap around or clamp to the axle. Axle tethers must attach to the front engine plate post or the rear bolt of the front radius rod and not the radiator post. No aluminum rod ends on steering components. Drag links must be tethered to the frame. 1" diameter steel construction with .058 sidewalls are suggested for drag links and tie rods. Steel Left Front Radius Rod and Rod Ends are recommended.
- D. Fuel bladder required.
- E. Seats with FIA and/or SFI rating **STRONGLY RECOMMENDED**. All seats are **STRONGLY SUGGESTED** to meet SFI 39.2 specifications. Driver seat must be bolted in place; no Dzus buttons. Seat mounting to be done per manufacturer recommendations.
- F. Window nets on the right side are mandatory, and highly recommended for the left side. If containment seat is

- used with adequate headrests on both sides, window nets are not required.
- G. Rock screens are required in front of driver with no larger than 2"x2" (industry standard). minimum wire diameter of screen to be 3/16".
- H. No carbon fiber body parts except wing caps.
- I. No bolt on weights.
- J. No driver activated weight or shock controlling devices.
- K. Torsion arm and stop retainers are required on both sides of front torsion bars and recommended on rear
- L. All rear bumpers must be steel, minimum 1" diameter and minimum .065 thick.
All left and right side nerf bars must attach to the chassis at 3 points.
- M. No data acquisition systems allowed.

Miscellaneous

1. BRAKES
 - A. All cars must be equipped with a minimum of two brakes, one front and one inboard rear.
 - B. No carbon fiber or titanium rotors.
2. DRIVE LINE Drive lines must be completely enclosed. Also, a torque tube hoop or strap is mandatory; hoop shall be steel only (magnet must stick). Carbon fiber torque tubes are illegal. A U-Joint blanket/guard is highly recommended.
3. WEIGHT RULE The minimum weight in this class will be 1575 lbs. with the driver after a race.
4. MUFFLERS
 - A. Muffler mandatory; Schoenfeld 112535 recommended.
 - B. Mufflers must be welded on or thru-bolted.
 - C. If car loses a muffler, it will be black-flagged.
 - D. If your car is too loud - we may ask you to tune your exhaust down to stay within noise levels of the city.
 - E. Our officials cannot be held responsible if a city disqualifies a car for excessive noises.
5. DRIVER APPAREL / SAFETY EQUIPMENT
 - A. This is outlined in track procedures.
6. CAR NUMBER DESIGNATIONS
 - A. A car must have a unique one or two digit numeric-alpha designation. Car numbers are to be registered with PDTR officials.
 - B. Car number is to be displayed on the front surface of the top wing, to the left side. Minimum 4" lettering, contrasting and readable by pit officials in the push-off area.
 - C. All car numbers will be protected for one year after driver stops racing with PDTR, unless released by the previous car owner.
7. BODY APPEARANCE
 - A. All panels shall be sprint car appearing. and must resemble a traditional Sprint car. Right side body panel must have a minimum opening of 10"x 21". Maximum distance from frame is 7"
 - B. No carbon fiber body parts except wing caps.
 - C. The nose wing shall be mounted such that the leading edge is less than 21 in. from the front axle (at start of race).
8. DRIVER AGE
 - A. Drivers ages 14 and 15 may be allowed to drive with a written resume summarizing the drivers previous experience in some type of open wheel sprint car. **Experience must be verifiable.** Resume must be signed by both parents and will be forwarded to PDTR's insurance company for approval.
 - B. All Other drivers must be at least 16 years of age.
9. TRANSPONDER LOCATION Transponder must be mounted on the right side of the lower rear bumper tube.