

# Southern Iowa Speedway

## Non-winged Sprint 2023 Rules

### **Article 1 Dimensions and Weight**

- A. The wheelbase must be at least 83 inches and no more than 90 inches. Centerline rear axle to front king pin center line.
- B. The overall length will be limited to a maximum of 14 feet.
- C. Outside the right rear wheel, the outside bead seat cannot exceed 46 inches from the centerline of the rear axle center section.
- D. The right front tire cannot be further out than the right rear tire when the right rear wheel is set at maximum offset. (as measured straight line along the outside of RR and RF). Overall width is not limited.
- E. Overall weight rule is minimum is 1450 pounds. No tolerance!!!!
- F. All bolt on ballast (or weight) must be mounted and fastened to the frame and/or chassis in a secure manner. Weight must be mounted in an area between bottom frame rails, front and rear axles and no higher than the mid rails at the cockpit. All weight must be mounted within confines of the frame and MUST be painted WHITE. No weight will be allowed to be added during a yellow/red flag.

### **Article 2 Car Construction and Body**

- A. All cars must be rear wheel drive only.
- B. Only torque tube type drivelines only utilizing 1(one) u-joint allowed. The torque tube must be bolted directly to the face of rear axle center section without any interruptions and the torque tube must 1 (one) solid piece. All cars must be equipped with a drive shaft restraining hoop or strap that is securely attached to the chassis. Minimum hoop material is 1 (one) inch by .065 steel tubing. A driveline containment system utilizing steel shield bolts to engine plate or containment blanket to cover torque bar and u-joint is highly recommended.
- C. Radius rods may not be attached within the confines of the cockpit. All radius rods must be 1 (one) piece. No spring rods or shock dampers are allowed.
- D. The driver shall be seated directly behind the engine. The centerline of the top of seat at the driver helmet can be no more than 1 (one) inch of centerline of roll cage.

- E. Only standard type sprint car bodies, tail tanks, and hoods will be permitted.
- F. The front part of body (nose assembly) shall not be wider than the parallel lines of the body. The nose assembly may not be extended forward beyond the confines of the front bumper.
- G. Any item added to resemble, imitate, and/or specifically design to deflect, trap, and/or form a pattern for air to travel in a directed manner, except those used to cool and/or protect engine or brake systems will not be permitted.
- H. All cars are required to run a full sprint-type hood. Side panels covering the sides of the engine and/or vertical spill plates may not extend vertically more than 1 (one) inch higher than any part of the hood covering the engine bay behind the front engine mount.
- I. Radius rod protectors will be permitted. Vertical opening 10 (ten) inches in height by 24 (twenty-four) inches long and extend no more than 4 (four) inches from outside edge of lower frame rail.
- J. Right side cockpit panels must have a minimum opening of 100 (one hundred) square inches. Panels that restrict the driver's vision at the discretion of SIS (Southern Iowa Speedway) officials will not be permitted.
- K. Left side cockpit panels may be 34 (thirty-four) inches high as measured from the bottom of main frame tubes at the engine plate and projected rearwards 21 (twenty-one) inches.
- L. An effective firewall must be installed between the engine compartment and the cockpit. It must be as leak proof as: practical.
- M. The motor plate must be steel. No carbon fiber or any type of composite material made motor plates are not permitted.
- N. All paneling must not extend past edge of frame rails more than the thickness of panel material.
- O. One (1) inch turnout allowed on all body and sail panels edges, except the sun visor.
- P. Sun visors must not extend forward more than nine (9) inches from the front of the forward most edge of the roll cage, halo tube, and may not be wider than the width of the roll cage. Sun visors must be flat on both sides. For fan recognition all teams are encouraged to place the drivers name on their visors in large letters.
- Q. Airfoils, wings, spoilers, or other aerodynamic appendages will not be permitted. SIS (Southern Iowa Speedway) or technical director may have any panel removed if deemed to be violating this rule.
- R. Water radiators, oil coolers, battery, and any remote engine accessory, must be within the confines of the main frame tubes located between front axle and rear engine mounting plate.
- S. Panels attached to the nerf bars will not be permitted.
- T. Rear view mirrors are not permit.

### **Article 3 Roll cage and Chassis**

- A. All cars must have a roll cage which is integral with the frame and does not encroach upon an imaginary cylinder. A 20 (twenty) inch diameter extending through the top cockpit opening directly above the seat is required. The roll cage must extend 4 (four) inches above the top of helmet when driver is in seat and in racing condition.
- B. Slip joints are NOT permitted.
- C. Maximum width of main frame tube is 29 (twenty-nine) inches.
- D. No cockpit adjusters for anything will be allowed.

### **Article 4 Fuel and Fuel Systems**

- A. Conventional tail tank, fuel cell, and the contained fuel must be carried on the centerline of the chassis. Must be located behind the driver. All cars must be equipped with a tail tank and fuel cell bladder meeting the requirements of SIS and the SFI specification 28.2.
- B. All tanks must have a minimum of 4 (four) mounts secured to the chassis.
- C. Fuel tanks may not be mounted to the chassis utilizing any portion of the access plates or the nut plates bonded into the fuel bladder. Only exception will be is a secondary mount attached to the top plate to prevent the fuel tank from separating from the chassis in the event of a failure of the primary mounts.
- D. Fuel shut off valve within the reach of the driver is mandatory. Must be labeled clearly on/off for safety reasons.
- E. Rollover valves in the fuel system is mandatory.
- F. Pure methanol ONLY.
- G. No additives are allowed including upper cylinder lube.
- H. All fuel is subject to testing at any time. Any fuel that does not conform to these rules and standards will be deemed illegal. The use of illegal fuel will result in a disqualification from that event and possible loss of season track points.
- I. A minimum of 2 (two) return springs must be utilized on fuel system.
- J. If the throttle actuating mechanism is a cable-type then it must be encased.

### **Article 5 Bumpers/Nerf Bars**

- A. All cars must be equipped with a rear bumper at all times.
- B. Nerf bars must be constructed of magnetic and or stainless steel. (NO TITANIUM). Tubing used must be a minimum of 1 inch OD and a wall thickness

of minimum of .065. Front and rear bumpers must follow same guidelines as nerf bars.

- C. All cars must have a tubular front bumper extending no more than 23 (twenty-three) inches from the leading edge of the front axle and no more than 8 (eight) inches from the frame. Bumpers must be constructed so as not to cause a safety hazard.
- D. Nerf bars cannot extend beyond the outside edge of tire at any time.

## **Article 6 Steering and Suspension**

- A. Removable steering wheels incorporating a quick release mechanism conforming to SFI 42.1 are mandatory.
- B. Rack and pinion steering will not be permitted.
- C. Welded aluminum or titanium suspension parts are not allowed with the exception of the Jacobs ladder (watts link).
- D. Drag link strap is mandatory.
- E. Drag links and tie rods must be constructed with 4130 steel 1 inch in diameter and a minimum of .058 wall thickness with no wedging of ends. Magnetic heim joints (rod ends) mandatory on drag link and tie rods.
- F. No electronic weight, shock, sway bar, or any other suspension part adjusters allowed.
- G. Independent suspension is not allowed.
- H. Front axles must be made of magnetic steel. The minimum sizes permitted will be 2.156,2 x 2.120,2 or greater x .095.
- I. Front axle tether systems are mandatory. 1 kingpin to kingpin and axle to frame on each side.
- J. No adjusters of any kind allowed in the cockpit or within reach of driver in race ready form.

## **Article 7 Wheels, Tires, and Brakes**

- A. Plastic and/or carbon fiber wheels are not permitted.
- B. Wheel diameter must be fifteen (15) inches.
- C. Front wheel width is limited to ten (10) inches.
- D. The wheel width for driven wheels is limited to a maximum of eighteen (18) inches on the right rear and a maximum of fifteen (15) inches on the left rear.
- E. Bead lock must be used on the outer bead seat on the right rear tire and wheel assembly.
- F. All bolts are mandatory in the bead lock and wheel centers.

- G. Digital bleeders are allowed. Air may not be introduced to the tire. Bleeders may not be controlled remotely.
- H. A Hoosier 105/16-15 MEDIUM, 105/18-Hard and F85A H20, H15, HR15, Racesaver are allowed. Also American Racers 34-17x15 MC2 for the right rear and the American Racer SD33 for the left rear are allowed.
- I. No 94 inch left tire rule.
- J. All solvents or chemicals applied in a way that alter the chemical makeup of the compound or have the affect of altering tire durometer is prohibited.
- K. No softening, and branding of tires. Violation of this rule is an automatic disqualification of that event.
- L. Tire sampling will be checked at random and sent into an independent lab. If deemed illegal the cost of that tire sample will be charged to the driver of illegal tire. Must be paid to SIS (Southern Iowa Speedway) before you race the next event. All track points will be stripped of driver using tire dope or other softening compounds that could/may alter the original tire compound.
- M. Carbon fiber or carbon composite brake discs or components are not allowed.
- N. If at any time during a competition it becomes evident that a car is without brakes, the necessary repairs must be completed before the car continues in competition.

## **Article 8 Engine Size Limits**

- A. Open motor size.
- B. Two (2) valves and one (1) spark plug per cylinder.
- C. Cylinder heads must retain the traditional valve pattern. Rotation of valves is not permitted.
- D. Only normal aspirated engines will be permitted. No turbo chargers, super chargers, No2, or forced induction.
- E. Sixteen (16) fuel nozzles maximum, two (2) per cylinder. One (1) located in the cylinder head and one (1) in the injector manifold.

## **Article 9 Ignitions and Electronic Equipment**

- A. All cars must be equipped with one (1) ignition switch or emergency shut off located easily within reach of the driver.
- B. Electronic controlled fuel systems are not allowed.
- C. Only magneto type ignitions will be permitted. A single crank-trigger type system as back up ignition system will be permitted. One (1) switch that alternates the current between the magneto and the crank trigger may be mounted to the dash within drivers reach.
- D. Electronics that provide traction control are prohibited. All electronic components may be inspected, sealed, or confiscated by SIS (Southern Iowa

Speedway) at any time. The maximum penalty for utilizing traction control is a one (1) suspension from competition and loss of all points at SIS (Southern Iowa Speedway).

- E. The use of any data collection device is not permitted. Only exception will be is the tachometer and it will be RPM only.

## **Article 10 Exhaust Mufflers**

- A. The car may be required to have mufflers if local condition warrant. If so, this will be stated on entry forms. The track promoter/tech official may disallow a muffler that in their opinion is not within the spirit or intent of this rule.

## **Article 11 Safety Equipment**

It shall be the responsibility of the driver to check all safety equipment prior to the start of each event. Any participant not complying in full with all safety requirements in this Article (11) will not be permitted to compete. Safety is our number 1 priority. Any car deemed unsafe will be disqualified from that event by track officials.

- A. Approved aluminum and composite FULL CONTAINMENT seats will be allowed. Non-full containment seats or plastic, fiber glass seats are not allowed. Seats must be mounted with four (4) 3/8 grade 8 or better. Must use washer in between bolt head and seat to help secure the seat. All seats must be installed and used in accordance by manufactures instructions.
- B. It is mandatory all cars must have a headrest of high impact, shock absorbing material behind the drivers head with a minimum of one (1) inch thick.
- C. Seats belts must be properly installed and must be 3 years old or less. Seat belts must meet the SFI 16.5 or SFL 16.1. No expired seat belts will be allowed to compete.
- D. Helmets are mandatory and must be certified SA2010 or SA2015. Helmets must accompany the driver and racecar at time of inspection. Fire proof head sock is required during all racing events.
- E. All drivers must wear fire resistant underwear, socks gloves and a one piece drivers suit fitted snugly around the neck, wrist and ankles. Fire resistant driving shoes are required to be worn during all racing events.
- F. Arm restraints are mandatory and must be worn at all racing events.
- G. Roll cage padding is required around where the drivers head could come in contact with the roll cage.
- H. A SFI approved head and neck restraint systems are highly recommended.

- I. One way radio is mandatory and set to default channel. Any driver not utilizing a one way radio during a race may be disqualified for that event. Two way radio's are not allowed.
- J. WI-FI, cellular or satellite devices including cell phones and smart watches in or attached to race car or driver will not be permitted.
- K. All forms of vehicle position systems or GPS are not permitted.
- L. Drivers that wins the A feature will start in the back of the invert the following week or the next time he/she races at SIS (Southern Iowa Speedway)

FOR QUESTIONS CALL-

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