

2012 360 SPRINT CAR TROPHY CUP RULES NON WING

All cars must be equipped with the following:

1. Working Ignition switch in cockpit.
2. Check valve in fuel line vent.
3. Working fuel shut-off valve in cockpit.
4. Brakes: Minimum three wheel working brakes. (In board brakes allowed)
No titanium rotors allowed.
5. Front and rear bumpers, the rear bumper must be steel, attached in a safe manner. No cotter keys or rivets.
6. Quick release steering wheel. Bolts must be safety wired and equipped with a center pad.
7. Roll cage padding in areas that may make contact with head.
8. Headrest with resilient material. It must be mounted behind driver's head and firmly supported. Seats with built in head rests ok.
9. Competition approved 3-inch seat belts, including 3-inch over the shoulder and 2-inch adjustable crotch strap and arm restraints. 2 inch wide over the shoulder belts may be used only with an approved head and neck restraint device. Metal to metal buckles required on seat and shoulder belts. Seat belts not to be more than two (2) years old. No cam lock type latches allowed.
10. Full face Snell SA2000 or newer helmet.
11. All drivers must wear SFI rated fire suite, a minimum two (2) layers, gloves, shoes, socks, hood, and neck brace whenever car is on racing surface.
12. The drive shaft must be fully enclosed. Shaft strap or drive loop mandatory. Must be located at center portion of drive shaft. Buckley joint must be shielded in such a manner to protect the driver from errant fluids.
13. Driver's head must be a minimum of two (2) inches below the lowest section of the top of the roll cage when securely belted into the car with helmet on. A VRA tech approved halo may be added to the top of the cage if needed.

Weight Rule

All cars competing with ASCS specifications cannot weigh less than 1475 lbs. with driver. All other cars must weigh a minimum of 1500 lbs. with driver when weighed as follows: Per official discretion initial Weigh-in will take place prior to qualifying and there will be a mandatory weigh-in for the top three Finishers immediately after finish of that event before going to your pit. Random weigh-in at any time During the program. Scales available any time for checking weight before program begins. Bolted on Weights must be painted white with car # on it.

Car Construction and Body

1. Any sprint car chassis is allowed, but it must pass any test prescribed by safety inspectors to insure its safety of design and construction. No roadster type chassis allowed. Only sprint appearing type bodies, tails, and hood will be allowed. The roll cage must be of a four-post design. The cage must be constructed of 1 3/8"OD x .095 inch wall thickness minimum. No dirt champ cars. No elliptical (oval shaped) tubing used on or as a part of the main structure. Minimum wheelbase of 83 inches, maximum wheelbase 90 inches. No titanium rotating parts allowed. All chassis materials must meet chromoly standards.

- A. All cars shall be rear drive only. The driveline and rear axle center section must be on the chassis centerline.
Only torque tube type drivelines using only one U-joint will be allowed. The torque tube must be bolted directly to the face of the rear axle center section without any interruptions; the torque tube must be one solid piece. All cars must be equipped with a drive shaft restraining hoop securely attached to the chassis. Minimum hoop material is one inch X .095 steel tubing
- B. The driver shall be seated directly behind the engine and on the centerline of the chassis. The cockpit must be located directly behind the engine compartment. The cockpit opening must be at least five hundred (500) square inches measured on a plane parallel to the ground and level with the uppermost part of the body or windscreen.

- C. The body must be sprint type and style, including the nose*, hood*, cowl* (*may be one piece), cockpit, side panels and tail. All body panels must be readily removable. Body panels rigidly attached to the frame to prevent chassis flex will not be permitted. The car's bodywork must be on the centerline of the chassis.

Body panels forward of the driver's seat shall not be higher than the arm guard. All panels must not extend outside of the frame confines. The rear "v" panels shall have a maximum dimension of 15" wide by 22" high.

Side visors are permissible but must not extend more than 5" down from the bottom of the upper roll cage tubing.

The sides of the frame must be covered from the firewall to the leading edge of the seat.

- D. All cars must have a floor pan, utilizing aluminum or equivalent alloy, under the cockpit area. The floor pan must extend from the engine plate to a point six inches past the leading edge of the seat. Floor pans must be bolted to the chassis in the cockpit area and should be mounted above the frame mounting tabs.
- E. Oil tanks, water radiators, oil coolers and any remote engine accessory, including batteries, must be within the confines of the main frame tubes. Oil tanks mounted forward of the firewall must be behind the front axle and forward of the front engine mounting plate.
- F. Rear view mirrors are not permitted.
- G. All suspension bolts must be a minimum grade 5; titanium bolts are allowed.

Roll Cage

- A. All cars must have a roll cage, which is integral with the frame and does not encroach upon an imaginary cylinder, 20 inches in diameter, extending through the top cockpit opening directly above the seat. The roll cage must be adequately braced fore and aft, and side to side, to secure it in an upright position in case of rollover. The roll cage must be gusseted in all four corners with tubular gussets 1 1/16" OD x .095 wall thickness or 7/8" OD x .065 wall thickness. Gussets must be attached a minimum of 2 inches from the centerline of the angle being gusseted. Roll cage gussets should be constructed as shown in Illustration #1. The roll cage should extend four inches above the driver's helmet when seated in the driving position. An approved halo may be added to the top of the roll cage, if needed.

No water radiators or oil coolers are to be placed above or beside the cockpit opening.

Fuel System

- A. A conventional tail tank, fuel cell and the fuel contained must be carried on the centerline of the chassis and be located behind the driver. The conventional tail tank shape cannot be modified. All cars must be equipped with a fuel cell and tail tank.
- B. Fuel cell securely mounted. Bladder mandatory. May not be pressurized. Fuel cell must be mounted directly to chassis. No spacers. Minimum of four (4) mounting points. All mountings subject to tech inspection and approval.
- C. It is recommended that fuel tank capacity be capable of running 75 combination green and yellow laps. Fuel tanks used in qualifying must be used in remaining events.

Revolving Parts

A suitable guard must shield all revolving parts inside the cockpit.

Bumpers and Nerf Bars

- A. The car must be equipped with a rear bumper securely fastened to the structural components of the chassis. The bumper should follow the contour of the tail and have adequate clearance to permit moving the car by the bumper.

- B. Single tube type bumpers must be constructed of SAE 4130 tubing or the equivalent in structural strength tubing with a minimum of 1.250 inch O.D. and 0.095 inch wall thickness. Multiple tube, basket style, bumpers must be constructed of 4130 tubing or equivalent with a minimum of 1.0 inch O.D. and 0.083 inch wall thickness.
- C. All cars must have a tubular front bumper with a minimum O.D. of 3/4-inch. Bumpers must be constructed so as not to cause a safety hazard.
- D. All cars must be equipped with rear wheel nerf bars. The right rear nerf bar cannot extend beyond the outside edge of the tire when the right rear tire is set at maximum offset.
- E. Nerf bars must be constructed from SAE 4130 or equivalent tubing having an O.D. of one (1) inch, and a minimum wall thickness of .065 inch.
- F. All bumpers and nerf bars, must be securely attached. Cotter pins and wire ties are not permitted.

Steering and Suspension

- A. The steering mechanism must be engineered and assembled in accordance with sound engineering principles.
- B. Removable steering wheels incorporating a quick release mechanism conforming to SFI Specification 42.1 are mandatory. Pip pin type mechanisms are not allowed.
- C. All cars are required to have a drag link strap.
- D. Cockpit adjustable shock absorbers, roll bars or weight jackers are not allowed.
- E. The use of carbon fiber or composite material as a structural component or suspension component is not allowed. Carbon fiber torque tubes are prohibited.

Axles

- A. Independent suspension is not permitted.
The car's axles connecting the wheels must be of one-piece tubular construction without the capability of camber or independent castor adjustment to the wheel assembly. Offset kingpin bushings are allowed.
Any other construction will be considered as independent suspension.
- B. Axle spools attached by the coping method must have the axle wrap around the spool at least two thirds of the spool diameter. Gusset plates are recommended on all spools.
- C. All front axles must be constructed of SAE 4130 or a steel alloy equivalent in structural strength. It is recommended that front axles have a minimum of 2 1/4 O.D. and .120 inch wall thickness. Titanium front axles are not permitted

Wheels

- A. Maximum right rear wheel width is 18 inches, left rear wheel width 15 inches. Wheels may be either aluminum or steel.
- B. No stock, wire, plastic, titanium, or carbon fiber wheels allowed.
- C. May run beadlock on any wheel

Tires

- A. The right rear tire must be a ASCS MED 105x16x15,.
- B. Any device(s) used for warming the tires prior to competition is prohibited.
- C. Any solvents or chemicals applied to the tire that alter the chemical makeup of the compound or have the effect of altering tire durometer is prohibited.

Throttle

- A. Throttle toe straps are mandatory. In addition, a minimum of three (3) return springs must be connected to the throttle and at least one of these must be connected to the butterfly shaft.
- B. If the throttle is actuated by a cable, it must be the push/pull design.
- C. The throttle pedal must have a wide-open pedal stop.

- D. It is recommended that all cars utilize an emergency shut off switch in conjunction with the throttle return strap.

Brakes

- A. All cars must be equipped with an effective braking system.
- B. Master cylinders not fixed to the frame must have flexible lines. Copper tubing is not acceptable anywhere in the system.
- C. Carbon or carbon composite brake rotors and/or components are not allowed. Brake pad material is open.
- D. 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 can continue in the competition.

Engine

- A. 360 Cubic Inches: plus 1% maximum displacement (360 plus 1% = 363.6). Open Motor weight is 1500 lbs
- B. No aluminum blocks. No Titanium in engines, excluding valves and valve retainers.
- C. Injectors: 2 3/16 inch maximum inside diameter of injector stack - 2.187 at least 3 inches in length. Note: Larger injectors may be used, but sleeves a minimum of 3 inches in length must be installed in stacks above the Butterflies. No relief hole may be drilled above the Butterfly on any injector. No Alteration of injector manifold mounting holes will be allowed.

Due to manufacturing process some injector stacks may be slightly larger. There will be a tolerance of .005 allowed on no more than 3 stacks. No throttle body or plenum type injectors allowed, No down nozzle injectors.

No timed fuel injectors will be allowed. Electronic fuel injection shall not be allowed. Only one injector nozzle and one injector line per cylinder. Injection unit shall have one shaft operated butterfly per cylinder. The immediate area of the butterfly must be round. No slide or barrel type injectors will be allowed.

- 1. Spec Heads: Brodix heads part # 27-211, #27223, and #27-222 with ASCS stamp may not have any performance-enhancing alterations in any way. Intake opening no larger than original opening, the only exception being, inlet opening may be ground or polished 3/4 inches or no further into port than the closest edge of the closest letter of the ASCS logo. During this polishing the left side of the letter "A" is sometimes inadvertently brushed with polish wheel. This is permissible as long as letter is still intact. During polishing of inlet port sometimes polish marks may go slightly further than the 3/4 inch. Intake port at no time may exceed 215 cubic centimeters.

Intake port polishing will be allowed no more than 1 1/2 inches below the bottom of the original seat ring on the back side of the bowl area and no more than 1 inch on the short side. Polishing will be allowed in the combustion chamber area to avoid hot spot chaffing. Polishing will be allowed in exhaust ports as long as the original "ASCS" logo is not affected or port shape is not altered substantially.

Absolutely no intake or exhaust port relocation, raising, enlargement or reshaping of any type. Valve angle and placement may not be altered in any way on the ASCS spec head or on any other head. ASCS checking fixtures to check the above specifications and dimensions will be used by sanctioned ASCS tracks.

Any internally repaired ASCS spec head must be re-certified by Brodix.

- 1. All spec heads must remain within 1 degree of the original manufacturing.
- 2. Penalty for altered spec head will be subject to suspension, for one calendar year. Forfeit all points and moneys won, during the race which the infraction was found, and subject to a \$500 fine that must be paid to ASCS before reinstatement. Intake port at no time may exceed 215 cubic centimeters.
- 3. All oil pans must have inspection plug, pans without plug will be subject to pan removal at anytime.
- 4. No Turban driven, Turbo or blower will be allowed.
- 5. Only two valves and one spark plug per cylinder allowed. No big blocks.
- 6. No computer operated or controlled parts, such as fuel injections, fuel systems, crank trigger switches in the cockpit, chassis adjusting systems, shocks, etc.
- 7. No offset motors will be allowed, engine must be directly in front of driver. Driver must straddle drive-line.
- 8. Any car changing a motor after taking an official green flag will start at tail of its qualified group of "A" Main cars
- 9. Owners found to have illegal engines or that refuse to tear down their engine will forfeit points and money

Fuel - Air

- A. Fuel is restricted to methanol. The addition of any unauthorized material(s) to the fuel is strictly prohibited.
- B. The addition of any material(s) to the intake air or the addition of any mechanical device(s) essential to the application of this material(s) is strictly prohibited.
- C. Any device, which artificially reduces the temperature of the fuel, is prohibited.
- D. All fuel is subject to testing at any time.

Ignitions and Electronic Equipment

- A. All cars must be equipped with an ignition switch or emergency shut off located within easy reach of the driver.
- B. Electronics that provide traction control are prohibited. All electronic components may be inspected.
- C. The use of electronic logic processors to control any function of the race car and/or any system for gathering continuous data from any function of the race car is strictly prohibited.
- D. Data may be gathered from the engine; however, this data may not be in communication with ignition electronics except for the tachometer. A throttle position sensor (TPS) may not be part of the engine data collection.
- E. All engine electronics must be mounted in Engine compartment. No engine electronics may be mounted in driver's compartment, except for Tachometer.

Exhausts

Any Muffler that meets 95 decibals @ 100ft requirement

Any car losing a Muffler during an event will be Black flagged from that event.

Seating System

- A. Aluminum and approved composite seats may be used. The seating system should provide a lateral support on both the left and right sides. It is recommended that a suitable shield be installed between the driver and the rear of the cockpit. The seat bottom must be mounted on the centerline of the chassis.
The seat must be mounted to the chassis in a minimum of four positions with a minimum 5/16 inch steel bolt and nut.
- B. It is absolutely necessary to provide a kick-up (roll-up) forward to the buttocks of sufficient height and strength to prevent forward movement and/or rotation of the torso under the seat belt.
- C. It is mandatory that all cars have a headrest of high impact, shock-absorbing material meeting SFI Specification 45.2 behind the driver's head with a minimum thickness of one (1) inch. Seats with built in headrests must also comply with this requirement by having padding on the seat back or on the A-Frame behind the seat.
- D. Seat Belts - All belts must have a label showing that they meet SFI specification 16.1 or 16.5. Both the fastening design and condition of the belt are subject to the inspection of the Technical Committee. Life of the belts in use shall not exceed two (2) years and must be date stamped by the manufacturer.

Fire Equipment

- A. On Board Fire Systems - It is strongly recommended that each car have built-in, operable fire extinguishing equipment with content of five (5) pounds located inside the car and within the wheelbase. Onboard fire systems should meet SFI Specification 17.1.
- B. Fire Extinguishers in the Pits - The entrant or crew chief of each car must have in his pit a fully charged five (5) pound capacity dry powder extinguisher or its equivalent. A gauge or current inspection tag shall be attached to each fire extinguisher.

Car Numbers

- A. All car numbers are assigned at time of pill draw
- B. Every car must carry its assigned number prominently painted on the nose and on each side of the tail at least 12 inches high. The numbers must be legible and in contrasting colors approved by Timing and Scoring.
- C. Numbers will be assigned to entrants
- D. Should two or more cars with the same number be entered in a competition, the Stewards will require one or more cars to be temporarily numbered or affix a letter next to number.

Race Car Eligibility

- A. Any car meeting, the 360 Sprint Car Series specifications will be allowed to compete.
- B. Officials may take competitors out of competition if any car is ruled unsafe for its driver or competition.
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Driver Eligibility

- A. All drivers must be at least 16 years of age to compete. A copy of Birth Certificate with county seal may be required to prove age. A notarized parental consent form must be on file with the Series office if under 18 years of age.
- B. Every driver must attend drivers meeting

Qualification:

- A. Qualifying positions will be determined by drawing a number. Any car more than three cars out of position for qualifying will automatically lose one qualifying lap.
- B. Qualifying will consist of two consecutive laps.
- C. When a tow truck, push truck or race car interferes with the qualifier, they will be given another lap.
- D. When a car spins out or fails to complete a timed qualifying lap, it loses that lap.
- E. Once driver pulls into the pits or off the track after one qualifying lap those still on the green, qualifying is complete.
- F. Qualifying will not be extended to permit re-qualifying of cars in violation of muffler requirements. (95DBA)
- G. All cars will be required to run the muffler used for qualifying for the remainder of the program
- H. An eligible driver can qualify only one car for the program
- I. A driver may not change cars.

Misc. Safety:

- 1. No "Hot Lapping" on track before any event thru-out the night unless being directed to by track officials. If you do hot lap before an event, you will be sent to the tail of the field for that event. **This is a serious safety issue, because of the fact that there are officials on the track before an event!**

Race Procedures:

Original start

- 1. Original start of race will be by flagman waving green flag. Flagman will wave flag at cone or line in turn 4 the event of a caution on the 1 lap of a race, the follow rules apply. In a single car caution, that car is sent to the tail of the field for the complete restart.
- 2. **Restarts**
 - 1. Restarts are to be single file, nose to tail.

2. No passing until after the restart cone
3. Any car passing before the cone will be penalized

Caution Flags

1. Any car that stops on the track will be sent to the back of the field on the restart.
2. Any car that does a 360 and brings out a yellow flag will be sent to the rear on the restart.
3. Any car or cars involved in bringing out a yellow or red flag will restart in the rear.
4. All cars restarting in the rear will be lined up according to the order they were running on the last complete lap. With the exception of the car responsible for causing the caution.
5. Any car that receives 2 charged stops will be black flagged for the remainder of that race.

Red Flags

1. All red flags are closed unless official signals otherwise.
2. Open red: Crewmembers can go to car., driver must stay in car or you will be disqualified. (except for safety reasons) A signal will be given for an open red.
3. Closed Red: No working on car by anyone. Cars will be pushed off as soon as accident is ready to be cleared. (Example: As soon as driver is checked for injury and cars are upright, we will push off. Line up single file so officials can line you up)
4. 2 LAPS WILL BE GIVEN AFTER LAST CAR IN ACCIDENT GETS TO WORK AREA.