



## APPENDIX C

### 2011 Sprint Car Division Technical Specifications

#### 301 Design and Construction

All phases of design and construction are subject to the approval of the Technical Director.

The Chief Steward and the Technical Director may exclude any car, design or construction, which they deem unsafe or not meeting the specifications, the spirit and/or the intentions of the rules contained herein.

Any component used in the construction or assembly of the chassis and/or accessories, if constructed of carbon fiber material, must be approved for use by the USAC Technical Director prior to entering a competition.

#### 302 Dimensions and Weight

- A. The wheelbase must be at least 84 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. The maximum width of the main frame tubes, as measured at the rear of the engine, will be 29 inches for a vertical distance of 24 inches.
- D. Chassis and Wheel Offsets:

FOR PAVED EVENTS ONLY The maximum wheel offset allowed, for both front and rear wheels, is four (4) inches (8 inches overall) **measured from the centerline of the rear axle center section to the inner wheel bead seat.**

The outside bead seat of the right rear wheel cannot exceed 43 inches from the centerline of the rear axle center section.

The outside bead seat of the left rear wheel cannot be less than 31 inches from the centerline of the rear axle center section.

The outside of the right front wheel cannot be more than 43 inches from the centerline of the chassis **to the furthest part of tire.**

The overall width will be limited to a maximum of 78 inches.

FOR DIRT EVENTS ONLY The outside of the right rear wheel, at the outside bead seat of an 18-inch wheel, cannot exceed 44 inches from the centerline of the rear axle center section.

The outside of the left rear wheel, at the outside bead seat of a 15-inch wheel, cannot be less than 31 inches from the centerline of the rear axle center section.

The outside of the right front wheel cannot be more than 43 inches from the centerline of the chassis **to the furthest part of tire.** The overall width is not limited.

#### F. Weights

Cars may be weighed prior to and/or following any event. **The scales will be available to all before hot laps.**

**All cars will go directly to scales post qualifying, if car found to be light will be scored last position.**

**Cars in transfer position from heat race, B main will go directly to scales, if found light in heat that car will go to B main but retain its qualified lap time. If found light in B main that car will scored last, awarded last place points and money.**

**Top three (3) cars from feature go to scales after winner circle activities, if car found to be light that car scored last, awarded last place points and money.**

**Extenuating circumstances will be considered.**

FOR PAVED EVENTS ONLY - All pavement sprint cars must weigh a minimum of 1,475 lbs., including water, oil, fuel and the driver

FOR DIRT EVENTS ONLY - All National Series sprint cars must weigh a minimum of 1,325 lbs., including water, oil, fuel and the driver. USAC/CRA Series sprint cars must weigh a minimum of 1,325 lbs., including water, oil, fuel and the driver.



All ballast, excluding floorpans, used must be securely bolted within the confines of the frame tubes, no farther than 16 inches forward of the front engine mount and no further rearward than the engine plate. **NO BALLAST IN NERFS, BUMPERS, FRONT AXLE.**

## 303 Car Construction and Body

- A. All cars shall be rear drive only. The engine must be on the chassis centerline. The driveline and rear axle center section must be on the chassis centerline. A maximum of 1/2 inch offset (one inch overall) from center and one degree from vertical will be allowed.

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 **or strap** securely attached to the chassis. Minimum hoop material is 1inch x.065 steel tubing

Radius rods may not be attached within the confines of the cockpit.

Chassis using front torsion bars can not have the bar tubes below the horizontal centerline of the front spindles.

- 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. 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.

- D. The front part of the body, known as the nose assembly, shall not be wider than the parallel lines of the body and may not exceed the width of the frame. The nose assembly may not extend forward beyond the confines of the front bumper.

FOR DIRT ONLY: The top surface of the nose may not be dished or concave more than five and a half (5 ½") inches. This dimension will be measured from a straight edge lying on the longitudinal axis of the car or downtubes. This five and a half inch (5 ½") dimension includes any flairs or wicker bills. Vertical spill plates are not allowed.

FOR PAVEMENT ONLY: The top surface of the nose may not be dished or concave more than one (1) inch. This one (1) inch dimension includes any flairs or wicker bills. Vertical spill plates are not allowed.

- E. Any air deflector that is used to direct air for cooling shall be completely inside the confines of the nose and the solid sides of the nose shall cover this deflector. This deflector will not be movable.

- F. The engine must be covered with a cowling or hood secured in place. The hood or cowling need not enclose the sides of the engine.

Side panels covering the sides of the engine may not extend vertically any higher than any part of the hood covering the engine bay behind the front engine mount. A maximum overlap of two inches is allowed for proper fastening.

Side panels that include exit ducts may not extend more than 5 inches from the frame rails and may not extend past the front engine plate. These ducts must start behind the front axle.

FOR DIRT EVENTS ONLY - Lower cockpit side panels will be permitted to flare out only for the purpose of covering rear radius rod mounting points. The panel may not flare out more than four (4) inches from the side of the frame. The flared portion of the panel is limited to seven (7) inches in height.

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

- G. Right side cockpit panels may be a maximum of thirty-eight (38) inches high at the rear and a maximum of thirty-six (36) inches high at the front as measured from the top of the bottom main frame tube at the engine plate and projected rearward.

Left side cockpit panels may be thirty (30) inches high as measured from the top of the bottom main frame tubes at the engine plate and projected rearward.

Any hood or cowl panels higher than thirty-six (36) inches from the top of the bottom main frame tube may not extend rearward past a point twenty-eight (27) inches forward of the rear vertical (or most forward) roll cage tube on pavement cars and twenty (20) inches on dirt cars.



Side panels cannot extend rearward more than 9 (nine) inches past the trailing edge of the rear axle and must end at an imaginary line between the back edge of the rear torsion tube and the back edge of the rear roll cage cross member. The rear roll cage cross member is defined as the top tube behind the driver where the a-frame connects.

Regardless of the imaginary line, side panels may not extend horizontally beyond the most rearward cage uprights.

Side panels may be flared outward on the trailing edge no more than one inch.

Any panel extending above the maximum side panel height will be considered a sail panel.

Sail panels may extend to rear down tube.

Sail panels may not extend forward past a cross plane established by the most rearward part of the seatback.

Sail panels may wrap around the roll cage uprights providing they are no larger than stated above.

Sail panels may not be flared outward.

- H. All cars must have a floorboard or bellypan, utilizing aluminum or equivalent alloy, under the cockpit area. The bellypan must extend from the engine plate to a point six inches past the leading edge of the seat

Bellypans or floorboards must be bolted to the chassis in the cockpit area and should be mounted above the frame mounting tabs.

Bellypans may not extend rearward past the leading edge of the rear axle and must be flat from side to side without any aerodynamic aids. Horizontal panels must not extend below the plane of the underpan.

**It is recommended that a fireproof absorbent pad be used under the engine on pavement.**

- I. Sun visors are limited to seven inches from the top to bottom including any tabs, extensions, etc. and cannot be wider than the cage. Sun visors cannot extend above the cage. Sun visors must be flat on both sides without any bends, wickers or aerodynamic advantages.

For fan recognition, it is recommended that all teams place the driver's name on the visor in large letters.

Side visors will be allowed, they will be limited to seven (7) inches in height. The minimum right side opening must be twenty-one (21) inches wide at any point and eight (8) inches tall at any point. Side visors cannot restrict driver vision. Left side visor may not be larger than right side visor.

**FOR PAVEMENT ONLY:** Panels may be attached to the inside of the nerf bars providing they are parallel to the centerline of the chassis, perpendicular to the ground and not lower than the bottom frame tube. These panels must be securely bolted within the confines of the nerf bar on all sides and not be more than 12 inches in height and 46 inches in length. Nerf bar panels may be no thicker than .125 inch. **Aluminum.** Any loose or damaged panels during an event could subject the car to a black flag penalty. **If you choose to run nerf bar panels must use on right and left.**

- J. Airfoils, wings, spoilers, or other aerodynamic appendages will not be permitted. The Chief Steward or the Technical Director may have any panel or part removed which in their opinion is not within the spirit or intent of this rule.

- K. 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.

Oil tanks mounted behind the engine plate/firewall may be mounted outside the main frame providing they do not protrude more than eight (8) inches from the main frame tubes. Cylindrical oil tanks mounted outside the frame, behind the engine plate/firewall, must be mounted as close to the frame as practical.

For the purpose of this rule, the main frame tube will be considered a straight line between the front and rear attachment point.

- L. Non-aircraft flip-type caps are not permitted on any tank carrying liquids. For pavement races, the coolant system must incorporate a catch tank or closed system to prevent spilling of coolant.

- M. Rear view mirrors are not permitted.

## 304 Roll Cage (See Illustration)

- 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.

Any manufacturer wishing to produce a design that is a departure from standard sprint car construction must submit a finite analysis report for the roll cage structure proving their design is equal in strength.

- B. All cars constructed after 1/30/2004 are required to have roll cages constructed of SAE 4130 tubing with a minimum OD of 1 1/2 inches and a minimum wall thickness of .095.

For all construction after 10/01/2004, the main uprights supporting the roll cage must be minimum 1 3/8 O.D. and .095 minimum wall thickness.

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

## 305 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. All cars must be equipped with a fuel cell and tail tank meeting the requirements of USAC and the SFI Specification 28.2.

The conventional tail tank shape cannot be modified.

No spill plates, skirts or air deflectors may be attached or used to aerodynamically enhance the tail tank.

- B. The tail tank must be constructed and supported in a manner that will insure every possible precaution has been taken to avoid rupture or breakage.

All tanks must have a minimum of four mounts to the chassis. Mounting points, between the tail tank and the chassis, must have inner and outer plates attached to the tank shell. These plates must be of adequate size to insure the tank being secure to the chassis.

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.

All access covers must be made of material equal to or greater than 2024-T4 aluminum, 3/16" thickness.

It is highly recommended that the fuel tank have an adequate supporting structure under the forward section of the lowest portion of the tank. This structure should follow the contour of the tank and be welded or securely attached to the frame of the car on each side.

- C. The main fuel supply line must use high performance fittings and hose. Braided stainless steel AN line is recommended.

- D. A flush or screw type cap is mandatory. The top access cover must be installed in direct contact with the fuel cell.

A protective cover may be used on the top of the tail tank providing it is no more than 9 inches in height, 12 inches in length and not wider than the top (head rest) of the tank.

- E. The tank vent must have a check valve.

- F. The engine must be equipped with a shut-off device located within easy reach of the driver.

## 306 Firewall

An effective firewall must be installed between the engine compartment and the cockpit. It must be as leak proof as practical.

The motor plates may not be made from carbon fiber or any type composite material.

## 307 Revolving Parts

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

## 308 Bumpers

- A. The car must be equipped with a rear bumper securely fastened to the structural components of the chassis.

- B. The bumper should follow the contour of the tail and have adequate clearance to permit moving the car by the bumper.

- C. Multiple tube, basket style, bumpers must be constructed of magnetic and or stainless steel (NO TITANIUM) tubing with a minimum of 1.0 inch O.D. and 0.065 inch wall thickness.



- D. All cars must have a tubular front bumper with a minimum O.D. of 3/4-inch extending forward not more than 23 inches from the leading edge of the front axle. Bumpers must be constructed so as not to cause a safety hazard.

## 309 Nerfing Bars

- A. All cars must be equipped with rear wheel nerfing bars. The right rear nerfing bar cannot extend beyond the outside edge of the tire when the right rear tire is set at maximum offset.
- B. Nerf bars must be constructed of magnetic and or stainless steel (NO TITANIUM) tubing having an O.D. of one (1) inch, a minimum wall thickness of .065 inch and a maximum wall thickness of .120 inch. A maximum of three horizontal and/or three vertical tubes are allowed in the construction of nerf bars. No ballast is allowed in the nerf bar tubing.
- C. With the exception of the exhaust system, no components or accessories may be attached to the nerf bar assembly. See 303 I regarding nerf bar panels.

## 310 Steering and Suspension

- A. The steering mechanism must be engineered and assembled in accordance with sound engineering principles.
- B. All highly stressed steering parts must be made from SAE 4130 steel or an alloy, specified by the manufacturer of the part as equivalent in necessary strength for its intended use.
- C. The steering wheel hub suggested to be padded with a resilient material of not less than three-fourth (3/4) inch thickness.
- D. Removable steering wheels incorporating a quick release mechanism conforming to SFI Specification 42.1 are mandatory. Pip pin type mechanisms are not allowed.
- E. 2-way adjustable shocks, 1 bump or compression adjustment and 1 rebound with 1 external reservoir on each shock will be allowed.  
Shock absorbers cannot operate or be adjusted electrically.
- F. The use of carbon fiber or composite material as a structural component or suspension component is not allowed. Carbon fiber torque tubes are prohibited.
- G. Welded aluminum or titanium suspension parts prohibited for the exception of Jacobs ladder (watts link)
- H. Drag link straps mandatory on dirt.
- I. Highly suggested that drag links and tie rods be made from 4130 or magnetic steel 1.0 inch O.D. and 0.58 inch wall thickness with no swedged ends. The use of magnetic steel rod ends also suggested. Will become mandatory 2012

## 311 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.
- D. The rear end gear assembly must be of conventional design with only one set of spur gears located behind the ring and pinion.
- E. For paved events only, Steel front spindles and hubs are recommended. Steel or one (1) inch aluminum torsion bar arms and stops are recommended for the right front suspension.

## 312 Wheels

- A. The number of allowable wheels is restricted to two (2) front wheels and two (2) rear wheels only on each car.



- B. The rim diameter must be fifteen (15) inches.
- C. The rim width for front wheels is limited to a maximum of ten (10) inches.  
The rim 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.**
- D. FOR DIRT EVENTS ONLY: A USAC approved tire bead locking device must be used on the outer bead seat of the right rear tire and wheel assembly.
- E. Wheel assemblies, which utilize a separate wheel cover that attaches to the wheel, must have a register that is continuous with the outside diameter of the wheel cover to prevent slippage. The cover must be securely attached to the wheel assembly at a minimum three positions. Small bolts or sheet metal screws will not be acceptable. Access holes in the center of wheel covers may be plugged or covered with a soft material such as a plastic plug with a register.
- F. All wheels are subject to the approval of the United States Auto Club. Wheel manufacturers shall submit a certified test report from an independent testing laboratory approved by USAC, showing dynamic radial fatigue, dynamic cornering fatigue test and minimum burst tests. All tests must meet or exceed USAC specifications.
- G. For paved events only,  
Any car using a lug nut type right front hub must use all six lug nuts. A 360-degree pressure plate of either 1/8" steel or 3/16" aluminum must be used between the lug nuts and the wheel face.
- H. Direct mount or spindle mount wheels are not allowed on the right front at pavement races.
- I. The use of splined right front hubs/wheels will not be allowed.
- J. The use of full-face brake scoops and/or wheel covers on the inside of wheels is not allowed.

## 313 Tires

- A. All tires must be designed specifically for automobile racing, and must be approved by the manufacturer for its intended use.
- 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.  
Any tire that is found to deviate from the original factory specifications will be confiscated. The maximum penalty for chemically altering a tire is a one year suspension from competition and loss of all points earned for the season.
- D. FOR PAVED EVENTS ONLY All tire sizes and compounds must be selected from the approved list for the event. Tire rules for specific events will be disclosed in the Official Entry or by USAC Bulletin.

## 314 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 actuating mechanisms is the cable type, the cable must be encased.
- 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.

## 315 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. Brake discs are limited to being manufactured of steel, ferrous or aluminum alloy, (and titanium for dirt only).  
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.



## 316 Engine Size Limits

- A. Any engines not covered by the following specifications must be submitted to and approved by the Technical Director prior to entering a competition.
- B. Stock production block design, single non-overhead camshaft, removable head, normally aspirated engines will be limited to a maximum piston displacement of 410.000 cubic inches. V-6 engines are limited to a maximum of 315 cubic inches.

**WESTERN STATES SPRINT CARS** are limited to V-8 engines with a maximum of 410.000 cubic inches in 2009; all cars utilizing a 410 cubic inch engine will be required to use a restrictor. 360.0 C.I.D. +1% cleanup without restrictors will remain the same. **Schwanke Spec LS3 Sealed Engine 377 C.I.D, 12.5 compression ratio, RPM limit 7900 legal for use in Western States Sprint Cars.**

On one mile paved ovals and at events co-sanctioned by the National Sprints and Western Sprints, intake restrictors may be required for all 410 cubic inch engines. These restrictors will be supplied by USAC.

- C. Stock Block Engine Rule:
  - 1. Aluminum cylinder blocks may be utilized with certain restrictions.
  - 2. Cylinder heads for V-8 and V-6 configuration engines may be manufactured from aluminum alloy components providing that the original factory configuration is maintained. All after market cylinder heads are subject to the approval of the USAC Technical Director.
  - 3. The location of the camshaft must be in the cylinder block. Camshaft timing must be fixed. Any device used to alter camshaft timing during engine operation is prohibited. Severe penalties will be issued to the entrant and engine builder if such devices are found.
  - 4. The location of the crankshaft may not be changed or altered. The use of titanium crankshafts is not allowed.
  - 5. The number of main bearings may not be changed.
  - 6. Standard production harmonic balancers are prohibited. Engines utilizing harmonic balancers must use a high performance harmonic balancer meeting SFI Foundation Specification 18.1.
  - 7. **No Titanium connecting rods or rod caps a -12 or 1inch inspection plug in oil pan/no plug may remove pan for inspection. (Starting 2012 race season)**

## 317 Fuel - Air

- A. Fuel is restricted to methanol only. 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 strictly prohibited.
- D. All fuel is subject to testing at any time. Any fuel that does not conform to the USAC standards, as administered at the track, will be considered illegal. The use of illegal fuel could result in disqualification from the event and/or the entire program.

## 318 Ignitions and Electronic Equipment

- A. All cars must be equipped with **one (1) ignition switch** or emergency shut off located within easy reach of the driver.
- B. Electronically controlled fuel injection systems shall not be permitted. **Exception Western States Sprint Cars Schwanke sealed spec engine L92 intake and 102mm throttle body.**
- C. **Any ignitions other than magnetos must be approved by USAC prior to use in competition. It's the obligation of the participant, not the manufacturer, to obtain proper approval. Schwanke sealed spec engine with serial numbered electronic control units (ECU) are approved for Western States Sprint Car.**
- D. **Magneto type ignitions will be permitted a single crank-trigger type system as back up ignition system. One (1) switch that alternates the current between the magneto and the crank trigger may be mounted to the dash within drivers reach.**
- E. **All engine electronics must be mounted under the hood.** Electronic tachometers may be in the cockpit providing all connectors are on the engine side of the firewall.



- F. Electronics that provide traction control are prohibited. All electronic components may be inspected, sealed or confiscated by USAC at any time. The maximum penalty for utilizing traction control is a one year suspension from competition and loss of all points earned for the season.
- G. 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.
- H. 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.

## 319 Radios and Spotters

### A. FOR ALL EVENTS

- 1. One-way radios will be required for all cars. No two-way systems
- 2. The use of in-car radio transmitting devices is prohibited.
- 3. USAC one-way frequency is 464.5500

## 320 Oil Supply

- A. The entire engine lubricating system must be of the dry sump type.
- B. Oil tank vents and/or breathers must be located so as not to endanger the driver.

## 321 Exhausts

- A. Exhaust systems must be designed to create a minimum fire hazard and a minimum hazard to other competitors.
- B. The car may be required to have a muffler if local conditions warrant. If so, this will be stated on each entry blank. Muffler tubes should be bolted to the exhaust collector in addition to clamps. Mufflers should be attached so they follow the angle of the nerfing bar as closely as possible. **The technical director may disallow a muffler that in their opinion is not within the spirit or intent of this rule.**
- C. FOR DIRT EVENTS ONLY: If the entry form states that mufflers are required, it will also be required to have a windshield screen mounted to the front of the roll cage.

## 322 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. It is recommended that the seat provide left and right lateral support for both the shoulders and head. 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. Each mounting hole in the seat must have a steel (minimum .060 thickness) or aluminum (minimum .125 thickness) doubler with minimum 2-inch diameter.
- 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. Adequate padding is highly suggested under the buttocks to absorb impact.
- E. Seat Belts - The use of an approved seat belt is mandatory. 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. All belts must have a label showing that they meet SFI specification 16.1 or 16.5.





1. Seat belts must be worn as tight as possible.
  2. Seat belts must be worn in such a manner that it passes around the pelvic area at a point below the anterior superior iliac spines. Under no condition may it be worn over the area of the intestines and abdomen.
  3. Seat belts must come through the seat at the bottom of each side thereby wrapping and holding the pelvic area over the greatest possible area. At any point where the belt passes through the sides of the seat, the seat edges must be rolled and or have grommets to prevent chafing or cutting of the belt material.
  4. Five or six point (crotch) belts connected to main belt quick release mechanism and securely attached to the chassis are mandatory.
- F. Shoulder Harness - The use of double over the shoulder straps is mandatory. Both the fastening design and condition of the straps are subject to the inspection of the Technical Committee. Life of the shoulder straps in use shall not exceed two (2) years and must be date stamped by the manufacturer. All straps must have a label showing they meet SFI specification 16.1. **If using head and neck restraint highly suggested use of over and under shoulder belts.**
1. Shoulder straps must be attached directly to a strong structural member of the chassis close behind the driver's head and neck. At points of attachment they should be four (4) to six (6) inches apart. They should be attached in a line approximately 90 degrees to the seat back and be approximately level with the top of the driver's shoulders. They should not be more than two inches below the through hole in the seat back.
  2. Where the straps pass through the seat or body structure of the car, the edges must be rolled or have grommets to prevent chafing or cutting of the strap material.
  3. Shoulder straps must be secured behind the driver's shoulders so that they are prevented from sliding sideways more than one (1) inch in either direction.
  4. Two belts joining in a "Y" behind the neck to form one strap may not be used.
  5. The shoulder harness should be worn as tight as possible.

## 323 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.

## 324 Fire Prevention

- A. No smoking will be permitted in the pit area whenever fuels may be exposed to the atmosphere. Anyone found violating this rule will be removed from the pit area and will be subject to fine.
- B. Extreme care should be taken in the handling of fuels. Where local regulations are posted, they become a part of the United States Auto Club rules. Any individual found violating these regulations will be subject to fine and may be removed from the pit area. The car entrant will be responsible for the actions of his crew.

## 325 Safety Equipment

- A. It shall be the responsibility of the Technical Committee to inspect all safety equipment prior to each event. Any participant not complying in full with all safety requirements in this Rule Book will not be permitted to compete.
  1. Helmets - All participating drivers must wear safety helmets designed specifically for auto racing that meet or exceed the 2000 or 2005 Snell Foundation or SFI Foundation 31.1 Specifications and are labeled as such. Helmets will be subject to inspection at each event by the Technical and/or medical representative.
  2. Uniforms - All drivers must wear fire resistant head sock or helmet skirt, underwear, socks, shoes, gloves and a one-piece uniform fitted snugly around the neck, wrist and ankles. It is recommended that these items meet SFI Foundation Specifications 3.2A and 3.3.
  3. Arm Restraints - Arm restraints are mandatory and must be worn at all times during competition.
  4. Roll Cage Nets - It is mandatory that all cars be fitted with roll cage nets on both the left and right sides of the roll cage for all events. All roll cage nets must conform to SFI Specification 37.1, which specifies a functional quick release opening mechanism. The life of the roll cage nets shall not exceed two (2) years. Caution should be used



when positioning head restraining nets to be certain that the driver's head cannot get under the net in case of an accident. The bottom of the roll cage nets should be as close to the top of the shoulders as possible.

5. Roll cage nets will not be required if USAC approved full containment seats are utilized.
6. Roll Cage Padding - All chassis protrusions, roll cage tubes and roll bars in close proximity to the drivers' helmet must be padded with a securely attached high impact material conforming to SFI Foundation Specification 45.1. This includes any vertical anti-intrusion supports alongside the driver.
7. **A SFI approved head and neck restraint system is highly suggested.**

## 326 Dentures

All drivers are required to remove all dentures before starting an event.

## 327 Car Numbers

- A. All car numbers are assigned by the Director of Competition or his designate.
- B. Every car must carry its assigned number prominently displayed on the nose and on each side of the tail.
- C. Numbers 2 through 99 will be assigned to entrants on a permanent basis providing a car registration has been received prior to January 15 of each year. To be eligible to retain a number an entrant must have entered and/or made an effort to compete in 51% or more of the scheduled races in the previous season. The number 1 is reserved for the National Champion driver and will not be reassigned. The use of number 1 is not cause to relinquish the competitor's permanent number. The Director of Competition may reassign numbers at the conclusion of the season. Any number released by a competitor must be reassigned by the Director of Competition. Numbers may be reassigned if the number was not actually used the previous season. Other numbers will be assigned in the order that requests are received.
- E. After a number is assigned to a particular car and entrant, it will remain with the entrant until the end of the racing season unless reassigned by the Director of Competition.
- F. 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 renumbered.

## 328 Car Names

- A. A car may not be named after a manufacturer or organization, unless the manufacturer or organization has given its written consent.
- B. A car may not be named after a car manufacturer unless at least the engine was designed by the manufacturer.
- C. If a car is named after an automotive product, other than a car, the product must be used in its proper relationship to the car.
- D. A car may be named after a person, who is its entrant.
- E. Names, which are undignified, might confuse the public or might detract from the interest in competitions, are prohibited.
- F. **The following decals are mandatory on both right and left side panels of car. *USAC, Amsoil Sprint car, Hoosier, Road to Indy***

## 329 Appearance

Cars, crews and all pit personnel, whose appearance detracts from the character of the program, may be excluded.



## **APPENDIX D**

### **Sprint Car Division Procedures**

#### **1301 Qualification Order**

All entries in the race, including post entries, are eligible to participate in a single drawing for qualifying order. This drawing will be closed no later than the start of qualifications.

At certain events, cars might qualify in groups using the fastest timed lap in a predetermined period as the official qualifying time. In the event of a tie, the tie breaker will be the competitor with the second fastest time. Specifics will be covered in the Entry Form or at the driver's meeting.

#### **1302 Qualification Procedures**

All qualifications will be held in accordance with PART VIII in the current USAC Rule Book and the Official Entry for the event with the following additions and exceptions.

1. Any car not able to qualify within three draw positions of its original position in the qualification draw order may line up at the end of the qualifying order with the loss of one lap from the qualification attempt.
2. Any replacement(s) or alternate(s) necessary to complete the starting field for a race will be based upon the posted results of the qualifying race(s) and/or the fastest official qualification time, or by draw order if no times are posted, and will be lined up at the rear of the starting field.
3. When the field of cars is insufficient to comprise a complete program, a car unable to qualify will be able to start last in the first available event. If more than one such car qualifies for the feature, these cars will be placed at the rear of the field in the order of their qualifying draw.
4. The Chief Steward is empowered to change the event format, including the number of laps run, as set forth in the Official Entry when unusual circumstances arise that demand this action.

#### **1303 Drawing for Starting Positions**

In the event qualifications cannot be held or completed, the starting positions shall be determined by a random draw to determine the starting order of the heat races or by the current season point total of the driver and the entrant combined as they are listed on the official qualification draw list. The specifics of the random draw are outlined in Part VIII, 8.9 and starting lineup based on point totals is as follows:

1. Starting lineups will be determined as if the point totals were actual qualification speeds. The driver/entrant with the most points will assume the fast qualifier position. Driver/entrants without points will line up behind driver/entrants with points, in the order of their qualification draw. Qualification points will not be awarded when points and/or draw determine the field.
2. If more than a full field of cars is eligible and ready to qualify, the Chief Steward will, at his discretion, provide a modified format to include additional and/or all participants.
3. The Chief Steward will, at his discretion, provide a starting place at the rear of the semi-feature, or qualifying race, for any USAC National Sprint Car Driver Champion not previously qualified for this event.
4. If qualifications are held and the feature is run before the heat races and semi-feature, the feature will line up according to qualification times and started in accordance with the Official Entry Blank.
5. In the event it is necessary to run the feature event before the semi-feature or in the event the semi-feature is not run, the necessary starters to complete the feature line up will transfer according to the starting lineup of the semi-feature.

The Chief Steward has the authority to select and/or amend these procedures in unique situations.

#### **1304 Provisional Starting Positions**

The National Sprint Car Series will include a maximum of two provisional starters in each feature event providing there are eligible entrants who accept this option.

The Western, USAC/CRA and Regional Sprint Car Series will include a maximum of one provisional starter in each feature event providing there is an eligible entrant who accepts this option.

The following conditions apply to provisional starters:



1. The top 20 in Entrant points are eligible for a maximum of four provisional starts per season with the top Entrant in points, not qualifying for the feature, being the first recipient. If an eligible Entrant elects not to use a provisional, his/her position will be taken by the next highest in point standings.
2. For the Western and USAC/CRA Series the top 15 in Entrant points are eligible for a maximum of two provisional starts per season with the top Entrant in points, not qualifying for the feature, being the first recipient. If an eligible Entrant elects not to use a provisional, his/her position will be taken by the next highest in point standings.
3. Prior to June 1st, "Provisionals" will be based upon the seasons ending points from the previous season. After June 1st "Provisionals" will be based on the current point standings as posted prior to the event.
4. Starting positions, point allocations and additional eligibility requirements can be found in 5.4C, 5.10 and 9.10 C.

## **1305 Stopping on the Course**

A car that stops for any reason after leaving the grid and impedes the start of the race, will be placed at the rear of the starting field.

## **1306 Pushing**

1. Push starts at any time are subject to the availability of authorized push vehicles and at the discretion of the Chief Steward.
2. Push starts under green flag or yellow flag conditions will be at the discretion of the Chief Steward.

## **1307 Laps under Yellow Flag**

1. In events of 60 laps or less on tracks of less than one mile in length, laps where the yellow flag is displayed will not be scored.
2. In events of 30 laps or less on tracks of one mile in length or longer, laps where the yellow flag is displayed will not be counted.
3. Cars stopped on the course and restarted will be placed at the rear of the field.
4. If the yellow flag is displayed before the field completes the first lap, a complete, two abreast restart will be made with the exception that any cars not completing the first lap, or stopping, will be placed at the rear of the field.
5. If the field completes the first lap under green, the first lap shall be scored. Any subsequent yellow flags will result in a single file restart lineup. This lineup will be determined by the last completed lap scored under the green flag.
6. Any car not completing the lap in which the yellow was first displayed, shall be considered involved in the incident and placed at the rear of the field.
7. If an incident occurs on the first lap where the yellow is displayed, and after running laps under yellow it becomes necessary to display the red flag, the restart lineup will be based on the yellow flag procedure and cars involved must start at the rear of the field.
8. A car unable to start a race that is later red flagged can enter the restart lineup at the rear of the field.
9. During a caution period a car may be called into the "designated pit area", using the Black Flag, for inspection by the Officials. If the car is determined to be safe to resume racing, and no work of any kind is performed, it may return to its previous position.

## **1308 Yellow Flag Procedure – Feature Event Only**

1. If you leave the racing surface to perform a necessary repair you will need to be in the designated push off area with all work completed before the leader receives the one to go green signal from the starter at the start/finish line.
2. Necessary repairs are defined as something that would prevent you from being able to continue, such as a flat tire, lost muffler, no rear bumper, safety issue, etc. (car damage)
3. Not defined as necessary is changing a worn tire, adding fuel, or chassis adjustments.

## **1309 Red Flag Procedure**



Red flags will be opened up at the discretion of the Chief Steward. The white flag will be displayed, signaling to the crews that they may go out to the cars. Specifics of a red flag procedure will be given by the Chief Steward at the Drivers Meeting.

Drivers are to remain buckled in during red flags, unless otherwise instructed by a USAC official. Drivers will also be allowed to remain buckled in while refueling, with the engine off.

**1310 Hazardous Mechanical Conditions**

All cars must have nerf bars, rear bumper, hood and air cleaners (if exposed) in order to start or continue in a competition. Competitors must start the main event with these items but, may continue without nerf bars during the main event if damaged.

**1311 Repositioning**

Any driver who improves his or her position during a start or restart by passing other cars before a designated point on the track shall be guilty of a violation. The penalty will be a repositioning of the car rearward two positions for each car passed. This penalty will be assessed at the next yellow caution period, if possible, or in the Official Finish of the race.

**1312 Testing**

As per the sanction agreement with the USAC Race Organizer, practice and/or testing during the three calendar days prior to a racing event is not permitted. The term "racing event" means all official USAC sanctioned functions at the track in conjunction with this race, beginning with the first day of USAC sanctioned practice. Teams who engage in such unauthorized practice or test runs will be subject to disciplinary action by USAC

Exceptions: USAC schedules a sanctioned practice before date of "racing event" 3 calendar day rule not in effect.

**1313 Motorized support vehicles** are required to have a plainly visible number on the front and back of the vehicle corresponding to the race car number.