



APPENDIX E

2008 National, Western & Regional Midgets Division Technical Specifications

401 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.

402 Inspections

- A. All parts indicated on the USAC inspection forms must be tested by the appropriate non-destructive testing techniques in accordance with the USAC Non-Destructive Testing Manual. This inspection shall be performed by an approved USAC inspection station prior to the start of each year's racing season. The Chief Steward or the Technical Director may require proof that this inspection has been done.
- B. Decorative chrome plating cannot be used on any parts requiring magnetic inspection.

403 Dimensions and Weight

- A. The wheelbase must be at least 66 inches and no more than 76 inches.
- B. The overall width will be a maximum of 65 inches.
- C. FOR PAVED EVENTS ONLY: The maximum rear wheel offset, from center line, is three inches (six inches overall) measured from the inside bead seat to the centerline of the rear end center section.
- D. Front wheel offset is limited to a maximum of 5-1/2 inches (11 inches overall) as measured from the inside bead seats to the centerline of the chassis.
- E. The right front tire cannot be farther out than the right rear tire when the right rear wheel is set at maximum offset.

All cars must weigh a minimum of 900 lbs., including water, oil and fuel, but without the driver.

Cars powered by four cylinder, horizontally-opposed, two valves per cylinder, intake and exhaust valves, in-line and on the same axis, must weigh 850 lbs.

Cars may be weighed prior to and/or following any event.

All ballast, excluding floorpans, must be securely bolted within the confines of the frame tubes and must be forward of the rear engine mounting plate and behind the front axle.

Cars powered by four cylinder, horizontally-opposed, two valves per cylinder, intake and exhaust valves, in-line and on the same axis, must weigh 850 lbs.

404 Car Construction

- A. All cars shall be rear drive only. Engine offset is limited to a maximum of one (1) inch, (two inches overall), from the chassis centerline as measured at the centerline of the crankshaft. Engine inclination is limited to forty-five degrees from vertical as measured from the vertical centerline of the cylinder bore.

V type engines are limited to 45 degrees inclination from vertical as measured from the centerline of the cylinder bore.

Only torque tube type drivelines, utilizing only one u-joint, will be allowed. 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.

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

- B. The driver shall be seated directly behind the engine and on the centerline of the chassis. 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.



The top surface of the nose may not be dished or concave more than one (1) inch. This dimension will be measured from a straight edge lying on the longitudinal axis of the car. This one (1) inch dimension includes any flairs or wicker bills. Vertical spill plates are not allowed. (See Illustration #7.)

The positioning of the nose may not extend above or below the downtube more than two inches. (See Illustration #6.)

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.

- E. 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.

A forward facing scoop, or ducting, supplying "forced air induction" to the injection inlets is not permitted.

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.

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

- F. Right side cockpit panels may be a maximum of 33 1/2 inches high as measured from the top of the bottom frame tube at the motor plate and projected rearwards. (See Illustration #5.)

Left side cockpit panels may be a maximum of 20 1/2 inches high as measured from the top of the bottom frame tube at the motor plate and projected rearward. (See Illustration #5.)

Any hood or cowl panels higher than 33 1/2 inches on the right side and 20 1/2 inches on the left side may not extend rearward past a point 24 inches forward of the rear vertical (or most forward) roll cage tube.

Side panels cannot extend rearward past the rear diagonal roll cage tube/brace or an imaginary line between the back edge of the rear torsion tube and the back edge of the rear roll cage member. The rear roll cage 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.

The trailing edge of side panels may be flared a maximum of one inch.

Sail panels between the rear cage upright and brace are allowed. Sail panels may not extend past the structural rear downtube. Regardless of roll cage construction, sail panels may not extend rearward past a vertical line from the most rearward torsion tube. This rearward vertical line cannot be more than 14 inches from the back edge of the rear axle, also this panel may not be any wider than twelve inches (12) wide above the allowed right side panel height. Sail panels may not be flared outward. (See Illustration #6.)

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

- G. 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 behind 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.

The bellypan 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 may not extend below the plane of the underpan or fuel tank.

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

- H. Sun visors are limited to five (5) inches in length from top to bottom including any tabs, extensions, etc. and may not be wider than the width of the cage. Sun visors cannot extend above the cage. (See Illustration #8.)

For fan recognition, all teams are encouraged to place the drivers' name on their visors in large letters.

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 10 inches in height and 36 inches in length. Nerf bar panels may be no thicker than .125 inch. Any loose or damaged panels, during an event, could subject the car to a black flag penalty.

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



- J. With the exception of suspension components, induction and/or exhaust systems and nerf bars, no accessory or component of the car may extend more than 6 inches from the main frame tubes. Cylindrical oil tanks mounted outside the frame, behind the engine must be mounted as close to the frame as practical.
- K. Rear view mirrors are not permitted.

405 Roll Cage - (See Illustration #1.)

- A. All cars must have a roll cage that 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 11/16 inch OD X .095 wall thickness or 7/8 inches OD X .065 wall thickness. Gussets must be attached a minimum of 2 inches from the centerline of the angle being gusseted. (See Illustration)

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 Midget car construction must submit a finite analysis report for the roll cage structure proving their design is equal in strength.

- B. Roll Cage Construction

- 1. Cars constructed after 1/1/95
4130 steel tubing - Minimum O.D. 1-3/8; Minimum wall thickness .095
- 2. Cars constructed after 1/1/98
Main uprights forming the roll cage must be a minimum of 1-3/8 inches O.D. x .095 wall thickness.

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

406 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 SFI Specifications 28.2.

Tail tanks may not be made from aluminum, carbon fiber or carbon/Kevlar material.

The conventional tail tank shape cannot be modified and must be of one-piece construction.

Spill plates, skirts or air deflectors may not be attached or used to aerodynamically enhance the tail tank.

Any tail tank surface that is modified to provide access for the fuel cell must, when covering this opening, maintain the same shape as the original tank. Any cover used must be securely bolted around its entire perimeter.

- B. The minimum capacity of the tank must be 18 U.S. gallons.
- C. The tail tank must be constructed and supported in a manner that will insure every precaution has been taken to avoid rupture or breakage.

All tanks must have a minimum of four mounts to the chassis. Mounting points must have inner and outer plates attached to the 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 .1875 in 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.

- D. The main fuel supply line must use high performance fittings and hose. Braided stainless steel AN line is recommended.
- E. 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.
- F. The tank vent must have a check valve.



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

407 Firewall

An effective firewall of metal at least 0.0625 inch thick or other approved fire retarding material must be installed between the engine compartment and the cockpit. It must be as leak proof as practical.

The motor plate may not be made from carbon fiber, honeycomb, or other composite materials.

408 Revolving Parts

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

409 Bumpers

- A. The car must be equipped with a rear bumper securely fastened to the structural components of the chassis and designed without any stubs pointing downward.
- B. The bumper should follow the contour of the tail and have adequate clearance to permit moving the car by the bumper. The bumper must be squared at the rear.
- C. The bumper must be constructed of SAE 4130 or equivalent tubing with a minimum O.D. of 7/8 inch and having a minimum wall thickness of .065 inch and a maximum wall thickness of .120 inch. No ballast is allowed in the bumper tubing.
- D. All cars must have a tubular front bumper with a minimum O.D. of 3/4 inch extending forward not more than 21 inches from the leading edge of the front axle. Bumpers must be constructed so as not to cause a safety hazard.

410 Nerfing Bars

- A. All cars must be equipped with rear wheel nerf bars. The right rear nerf bar cannot extend beyond the outside of the right rear tire when the right rear tire is at maximum offset.
- B. Nerf bars must be constructed from 4130 or equivalent tubing having a maximum O.D. of one inch and a minimum O.D. of 7/8 inch. Wall thickness is limited to a minimum of .065 inch and a maximum 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 404 H regarding nerf bar panels.

411 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 as equivalent in necessary strength for its intended use.
- C. All such parts must be heat treated (including stress relieving, normalizing, annealing and hardening when applicable) after forming and/or welding as recommended by the manufacturer of the alloy being used.
- D. Parts may not be joined by brazing, soldering or by dissimilar metals.
- E. All steering parts that are electroplated must be oven-baked at a temperature of 375 degrees Fahrenheit, plus or minus 25 degrees, for a period of not less than three (3) hours after plating.
- F. Parts that have been stripped of plating must also be baked according to the specifications in 411, item "E", unless the parts are to be reprocessed within a three (3) hour period.
- G. Shot peening is recommended for all highly stressed parts. Authorized facilities should be used.
- H. The steering wheel hub must be padded with a resilient material of not less than 3/4 inch thickness.
- I. Removable steering wheels incorporating a quick release mechanism conforming to SFI Specification 42.1 are mandatory. Pip pin type mechanisms are not allowed.
- J. Any welded aluminum or titanium suspension parts are prohibited. Welded aluminum jacob's ladders (Watts linkage) may be utilized.
- K. The use of carbon fiber or other composite material as a structural component or suspension component is not allowed. Carbon fiber torque tubes are prohibited.



- L. Shock absorbers must have all valve mechanisms housed in a single cylindrical unit. Shock absorbers may have only one external adjustment and may be adjusted remotely only by manual methods. Shock absorbers cannot operate or be adjusted electrically.

412 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 steel or a steel alloy equivalent in structural strength. Titanium front or rear 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.

413 Wheels

- A. The number of allowable wheels is restricted to two (2) front wheels and two (2) rear wheels on each car.
- B. The rim diameter must be 13 inches.
- C. The rim width is limited to eight (8) inches for both front wheels and the left rear.
The right rear wheel may be a maximum of ten (10) inches in rim width. Cars powered by four cylinder horizontally opposed, two valve per cylinder, intake and exhaust valves in-line and on the same axis, may use a right rear wheel with a maximum width of twelve (12) inches.
- 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. Manufacturers are required to submit a certified test report, from an independent testing laboratory approved by USAC, showing dynamic radial fatigue, dynamic cornering fatigue and hydrostatic burst tests. All tests must meet or exceed USAC specifications.
- G. All wheels should be inspected, at least annually, by the appropriate non-destructive testing techniques in accordance with the USAC Non-Destructive Testing Manual.
- H. FOR PAVED EVENTS ONLY:
Direct mount or spindle mount wheels are not allowed on the right front at pavement races.
Splined front hubs/wheels will not be allowed.
- I. The use of full-face brake scoops and/or wheel covers on the inside of wheels is not allowed.

414 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. If the right rear tire is changed during an event, under red or yellow flag conditions, the car will restart at the end of the restart lineup. If yellow laps are counted, this restart position could be in addition to the loss of lap/s incurred in the pits. The replacement tire must be the same compound as the tire removed.
- E. FOR PAVED EVENTS ONLY: The use of any device/s to alter the air pressure of the drive tires while the car is in motion is prohibited.

415 Throttle

- A. Throttle toe straps are mandatory. 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 mechanism 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.

416 Brakes

- A. 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.
Titanium, carbon or carbon composite brake discs or components are not allowed.
Brake pad material is open.
- D. If at any time during competition it becomes evident that a car is without brakes, the necessary repairs must be completed before the car can continue in competition.

417 Engine Starter and Clutch

The use of starters and a de-clutching device is optional. If utilized they must have a neutral position in the final drive.

Any removable starter shaft must have a free turning collar, preferable of non-metallic material, securely fixed fore and aft to the shaft and able to rotate independently of the starter shaft.

418 Engine Size Limits

USAC reserves the right to require inlet restrictors in any engine classification for the purpose of equivalency.

- A. Pushrod Type Engines
 - 1. Four cylinder in-line, two valves per cylinder, water cooled, with intake and exhaust ports on the same side of the head using an aluminum block and approved non-cross flow aluminum "Fontana" cylinder head.
— Maximum of 174 CID (2852cc)
 - 2. Four cylinder in-line, two valves per cylinder, water cooled, utilizing an aluminum block and/or head.
— Maximum 166 CID (2721 cc)
 - 3. Four cylinder horizontally opposed, two valves per cylinder. Intake and exhaust valves must be in-line and on the same axis.
— Maximum 174 CID (2852 cc)
 - 4. Maximum of six cylinders, V-type, (maximum 90 degrees), two valves per cylinder, in-line, water cooled,
— Maximum 174 CID (2852 cc)
 - (a) Same as (4) above, utilizing an aluminum block and/or heads. - Maximum 166 CID
— Maximum 166 CID (2721 cc)
- B. Single Overhead Camshaft Type Engines
 - 1. Maximum of six cylinders in-line or V-type (maximum 90 degrees), water-cooled two valves per cylinder.



- Maximum 146 CID (2393 cc)
- 2. Four cylinder horizontally opposed, rocker arm actuated four valves per cylinder, water-cooled engine.
 - Maximum 122 CID (2000 cc)
- 3. Four cylinder in line, aluminum block and head, "Pinto" engine. Alteration of the basic design of the head or block is prohibited.
 - Maximum 161 CID (2639cc)
- C. Double Overhead Camshaft Type Engines
 - 1. Four cylinder in-line, water-cooled, maximum of four valves per cylinder.
 - Maximum 122 CID (2000 cc)
- D. The preceding engine sizes are maximum permitted. No clean up allowed.
- E. All engines must be normally aspirated, internal combustion, four cycle, reciprocating piston type, incorporating a maximum of six cylinders. Only one spark plug per cylinder will be allowed. 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.
- F. Complete engines and/or major components must be available in a reasonably sufficient supply to all competitors at comparative prices.
- G. USAC reserves the right to disallow any engine for competition, which in its judgment does not meet the spirit and intent of competitive racing, in regards to cost and/or performance. Any engines not covered by the preceding specifications must be submitted for approval prior to entering a competition.

419 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.

420 Ignition 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. Electronically controlled fuel injection systems are not permitted.
- C. Any ignition, other than magnetos, must be approved by USAC prior to their use in competition. It is the responsibility of the participant, not the manufacturer, to obtain proper approval.
- D. 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.
- E. 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.
- F. 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.
- G. 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.

421 Radios

- A. The use of in-car radio transmitting devices is prohibited.
- B. Only one-way communication from USAC Race Control will be allowed and is mandatory.
 - 1. Each participant is required to have a radio with two receiving channels.



Channel #1 Frequency 464.5500

Channel #2 Frequency 466.6875

422 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.
- C. Oil may not be added to the engine supply during a race, without first receiving permission from the USAC Technical Director or Chief Steward.

423 Exhaust

- A. Exhaust systems must be designed to create a minimum fire hazard and a minimum hazard to other competitors.
- B. Cars having exhaust pipes passing the cockpit in close proximity to the driver must have raised metal guards adjacent to the cockpit to afford protection to the driver and mechanics.
- C. The car may be required to have a muffler if local conditions warrant. If so, this will be stated on each individual entry blank. Mufflers should be bolted and clamped to the exhaust collector. Mufflers should be attached so as they follow the angle of the nerfing bar as closely as possible.
- D. 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.

424 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 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 steel bolt and nut. Each mounting hole in the seat must have a steel (minimum .060 thickness) or aluminum (minimum .125 thickness) doubler with a 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 must be used under the buttocks to absorb impact.
- E. Seat Belts - The use of an approved seat belt with a latch/lever release mechanism is mandatory. Rotary mechanisms are not allowed. 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.
 - 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 on each side thereby wrapping and holding the pelvic area over the greatest possible area. At any point where the belt passes through the side of the seat, the seat edges must be rolled or have grommets to prevent chafing or cutting of the belt material.
 - 4. Five or six point (crotch) belts connected to the 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. The minimum width of shoulder straps is three (3) inches. 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 that they meet SFI specification 16.1. (See Illustration #9)
 - 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, 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 drivers 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.

G. If using approved composite seat, approved bracketry must be used and installed according to manufactures specifications. (A list of approved composite seats and hardware is available through the USAC office.)

425 Fire Equipment

The entrant or crew chief of each car must have in his pit a fully charged five-pound dry powder extinguisher or its equivalent. A gauge or current inspection tag shall be attached to each fire extinguisher.

426 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.

427 Safety Equipment

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.

- A. Helmets - All participating drivers must wear safety helmets designed specifically for auto racing that meet or exceeds 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. The use of an approved head and neck restraint is highly recommended.
- B. Uniforms - All drivers must wear fire resistant head sock/helmet skirt, underwear, socks, shoes, gloves and a one-piece uniform fitted snugly around the neck, wrists and ankles. It is recommended that these items meet SFI Foundation Specifications 3.2A and 3.3
- C. Arm Restraints - Arm restraints are mandatory and must be worn at all times during competition.
- D. 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 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 net should be as close to the top of the shoulder as possible. Mandatory for 2008 season - both nets required; LHS and RHS. (See Illustration #10.)

Roll cage nets will not be required if USAC approved full containment seats are utilized. (See illustration # 12)

- E. Roll Cage Padding - All chassis protrusions, roll cage tubes and roll bars in close proximity to the driver's helmet must be padded with a securely attached high impact material conforming to SFI Specification 45.1. This includes any vertical anti-intrusion supports alongside the driver.
- F. A SFI approved head and neck restraint system is required for the 2008 season. (See illustration #11.)

428 Dentures

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

429 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 painted on the nose and on each side of the tail.



- C. The numerals shall be in white on black background or black on white background or contrasting equivalents. The final decision on the adequacy of the number will rest with the Director of Timing and Scoring.
- D. 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 the number 1 is not cause to relinquish the competitor's permanent number. Numbers may be voluntarily released by the holder at the end of the season. 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 in competition the previous season. Other numbers will be assigned in the order that car registrations 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.
- F. Should two or more cars with the same number be entered in a competition, the Stewards will require that one or more cars be temporarily renumbered.

430 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 that are undignified, might confuse the public or might detract from the interest in competitions are prohibited.

431 Appearance

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



APPENDIX E

National, Western & Regional Midgets Division Procedures

1401 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. Specifics will be covered in the Entry Form or at the driver's meeting.

1402 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 to be run, as set forth in the Official Entry when unusual circumstances arise that demand this action.

1403 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 the field is determined by points and/or draw.
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 Midget 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.

1404 Provisional Starting Positions

The National and Western Midget Divisions will include a maximum of two (2) provisional starters in each feature event providing there are eligible entrants who accept this option.

The Regional Midget Division will include a maximum of one (1) provisional starter in each feature event providing there are eligible entrants who accept this option.

The following conditions apply to provisional starters:



The top 15 in Entrant points are eligible for a maximum of two (2) provisional starts per season with the top Entrants 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 points standings.

Prior to June 1st, "Provisionals" will be based upon the season ending points from the previous season. After June 1st, "Provisionals" will be based on the current point standings as posted prior to the event.

Starting positions, point allocations and additional eligibility requirements can be found in 5.4 C., 5.10 and 9.10 C.

1405 Stopping on the Course

1. 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.
2. At certain venues a two-spin/stop rule will be in effect. When this rule is in effect and in case of a spin and/or stop, only one assisted restart per race, per car will be permitted. Additional restarts will be at the discretion of the Chief Steward.

1406 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. Cars stalled on the course may be pushed to start providing the engine is running before arriving at the pit entrance.
3. Push starts under green flag or yellow flag conditions will be at the discretion of the Chief Steward.

1407 Laps under Yellow Flag

1. In events of 60 laps or less, laps where the yellow flag is displayed will not be scored.
2. In events of 35 laps or less on tracks of one mile in length or longer, laps where the yellow flag is displayed will not be counted.
3. Yellow flag laps for indoor races on 1/10 mile tracks or shorter will not be counted.
4. Cars stopped on the course and are restarted will be placed at the rear of the field.
5. 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.
6. If a second restart is required, the cars will line up single file with the exception that any cars not completing the first lap, or stopping, will be placed at the rear of the field.
7. 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.
8. 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.
9. 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.
10. A car unable to start a race that is later red flagged can enter the restart lineup at the rear of the field.
11. 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.

1408 Yellow Flag Procedure – Feature Event Only

1. If you leave the racing surface to perform a necessary repair you will be given up to 3 laps to complete the work.
2. Necessary repairs are defined as something that would prevent you from being able to continue, such as a flat tire, nerf bar loose, reinstall injector stacks, **rear bumper**, etc.
3. Not defined as necessary is changing a worn tire, adding fuel, **or chassis adjustments**.



4. In order to be eligible for time to be given for repairs you must go directly to the designated work area.
5. The laps will start counting once the field is lined up correctly. The laps DO NOT start counting when you get to the work area.
6. 2 laps will given on ½ mile or bigger tracks, and 3 laps will be given on tracks that are smaller. The Chief Steward may amend the number of laps given, due to the differences in tracks, and will inform the competitors at the drivers meeting.

1409 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. You may bring out as many crew members as needed to get work done in a timely manner. You will be allowed to perform any work needed to your car except for bringing a jack on the race track or changing a tire (this must be done in the designated work area). Once the track is clear and ready to go back to yellow, a one minute horn will sound, the starter will display the checkered flag, this indicates your time to work has expired. One minute later another horn will sound, the starter will pull back the checkered flag and any crew member still working on a car will result in that driver starting on the tail. Time to work is not guaranteed, you may not be able to reach your car before the one minute horn sounds.

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.

1410 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.

1411 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.

1412 Testing - As per the sanction agreement with the USAC Race Organizer, practice and/or testing during the **five 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:
- A. ~~For events scheduled on Wednesdays, the five day rule is not in effect and practices are allowed up to and including the preceding Saturday.~~
 - B. USAC scheduled and sanctioned practices.

1413 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.