### **OPEN WHEEL MODIFIEDS**

### **ARTICLE 4: BODY**

- 4.1 1970 or newer American compact passenger car only. Panel vans or station wagons are not allowed.
- 4.2 An aluminum half-windshield may be used on driver's side of the front window opening only.
- 4.3 Stock appearing front window support units must be used (painted roll bars are not acceptable substitutes). Front window may have a support of no more than six (6) inches at bottom, going straight up to top for non-clear materials. Support may be up to ten (10) inches at bottom, going straight up to top, only if it is a clear Lexan material.
- 4.4 A minimum window opening of twelve (12) inches must be maintained on all four (front, back, left and right) window openings.
- 4.5 Streamlining at top of windshield is not allowed. Bodies must have standard appearing windshield opening and corner post must follow standard configuration.
- 4.6 Original roof line of vehicle must be maintained with a maximum of five (5) inches of slope from rear to front. No more than one-half (0.5) inch stiffener allowed at the rear of the roof and must turn down perpendicular to the ground. OEM Gremlin roofs are not allowed.
- 4.7 Sail panels must be of matching design with matching styles on both sides of racecar. Sail panels may have a maximum bow of four (4) inches top to bottom, maximum bow of three (3) inches front to back and may be no more than eight (8) inches above the back edge of deck.
- 4.8 Reverse hood rake is not allowed. Hood must be level or slope forward toward nose of racecar. Back of hood may be no more than two (2) inches above decking.
- 4.9 Belly pans are not allowed. A belly pan will be defined as any object or material that alters the airflow under the racecar.
- 4.10 Panel(s) (engine covers) in front of the door next to the engine compartment are permitted, but must maintain a six (6) inch gap from the door. One side must remain open for inspection of engine on the scales.
- 4.11 Bodies with excessive damage (as determined by an official) will not be allowed to compete.

# 4.12 Spoilers:

- 4.12.1 If utilizing a Flat Tappet/Steel Head Engine (see Rule 16.16), BRODIX Aluminum Spec Head Engine (see Rule 16.17) or CT525 Crate Engine (see Rule 16.18), the maximum rear spoiler height shall be seven (7) inches. If utilizing any other steel or aluminum heads other than the BRODIX Aluminum Spec Heads, the maximum rear spoiler height shall be five (5) inches.
- 4.12.2 Rear spoiler may not exceed the width of the rear deck lid, must be flush to the deck and must extend from right edge of deck to left edge of deck.
- 4.12.3 Rear spoiler must remain separate from sail panels.
- 4.12.4 A maximum of two (2) center supports and a maximum of two (2) side supports may be attached to the front of the rear spoiler (see body diagram for dimensions).
- 4.12.5 Fins, wings, lips or other air spoilers (except as noted above) are not allowed.
- 4.12.6 Fins, wings, lips or other air spoilers must match corresponding part on opposite

side of racecar.

- 4.13 The rear deck lid and/or trunk area must be covered.
- 4.14 Aluminum roofs are permitted.
- 4.15 Doors and quarter panels may be mounted a maximum of one (1) inch above the deck, and must match side to side.
- 4.16 Excluding hood and nosepiece, the top of the body should extend no further forward than the back of the engine block. The bottom of the body may extend up to eight (8) inches forward of the back of the engine block.
- 4.17 Nose may not extend past front bumper and must be a minimum of five (5) inches above the ground. A two (2) inch lip on the nose is permitted, but may go no further than leading edge of hood.

## 4.18 Bumpers:

- 4.18.1 Center of bumpers (front and rear) must be a minimum sixteen (16) inches and a maximum twenty (20) inches from ground.
- 4.18.2 Both front and rear bumpers must be used, and may not have any sharp edges. Any inappropriate bumper may be disallowed at the discretion of an official. Front bumper should be mounted from frame-end to frame-end with the bottom loop parallel to ground. Bumpers must be made of a minimum of one and one-quarter (1.25) inch tubing and must be able to support the racecar if lifted by a tow vehicle. Top bar must be directly above bottom bar.
- 4.18.3 Rear bumpers may be constructed of tubing or flat stock, and must protect the fuel cell. Rear bumpers may be no more than two (2) inches wider than the body on each side and may not be open-ended (must wrap around and be connected to side rail bars).

## 4.19 Appearance:

- 4.19.1 All racecars must be numbered with large legible numbers on both sides, on top and on the nose and real panels. Numbers on the sides of the racecar should be in contrasting color from the body and be at least four (4) inches thick and at least eighteen (18) inches high. Top numbers should be at least four (4) inches thick and twenty-four (24) inches high.
- 4.19.2 Officials reserve the right, in the public image of the sport and/or the USRA, to assign, approve or disapprove any advertising, sponsorship or similar agreement in connection with any event. All cars must be neat appearing and are subject to approval of officials to compete. By competing in an event, all drivers agree to comply with the decisions of officials in this regard.
- 4.20 Overall width of the racecar may not exceed 78 inches. Width shall be measured from the widest points on each side of the racecar.

# **ARTICLE 5: ROLL CAGES**

5.1 Round steel tubing, seamless roll-over bars are required for the basic roll cage, and must be acceptable to officials. Acceptable tubing is as follows: one and three-quarters (1.75) inches by nine-tenths (0.9) of an inch or one and one-half (1.5) inches by ninety-five one-hundredths (0.95) of an inch for mild steel and DOM tubing (one and three-quarters (1.75) inches by eighty-three one-hundredths (0.83) of an inch for chrome-moly

- tubing). Aluminum and/or other soft metals are not allowed. Roll bar connections must be properly welded.
- 5.2 Roll bars within the driver's reach must be padded with an accepted material as determined by an official. Fire retardant material is highly recommended.
- 5.3 Installation and workmanship must be acceptable to officials.
- 5.4 Must be frame-mounted in at least six (6) places.
- 5.5 Must consist of a configuration of front and rear hoops connected by tubing on the sides or side hoops.
- 5.6 With helmet on and driver securely strapped into the racing seat, top of driver's head must not protrude above the roll cage.
- 5.7 Must have a protective screen or bars in front window opening in front of driver's face.
- 5.8 Protection of driver's feet utilizing a bar across the back of the engine with vertical bars and rub rails or similar protection is mandatory.
- 5.9 Brace bars forward of roll cage may not be higher than the stock hood height.
- 5.10 A minimum of three (3) driver side door bars must be parallel to ground and located perpendicular to the driver so as to provide maximum protection for the driver, but without causing undue difficulty in getting in or out of the racecar. Side bars must be welded to the front and the rear of the roll cage members. Door bars with a thickness of less than nine-tenths (0.9) of an inch should have four (4) bars at least one and one-half (1.5) inches in diameter at a minimum of eighty-three one-hundredths (0.83) of an inch thickness and be gusseted in place. The door bars must have six (6) vertical studs per side of one and three-quarters (1.75) inches by eighty-three one-hundredths (0.83) of an inch minimum seamless round tubing equally spaced.

### **ARTICLE 6: FRAME**

- 6.1 Factory production complete full 1960 or newer parallel American passenger car frames only. Frames may be cut in rear only at a point not further than thirty-six (36) inches from center of rear end housing.
- 6.2 May only be altered for the installation of springs and shocks.
- 6.3 All components must be made of steel and be properly welded.
- 6.4 Must be full and complete on both sides, may not be widened or narrowed and must be able to support roll cage on both sides.
- 6.5 Minimum height from ground is four (4) inches. Exception: front cross member may be notched for radiator clearance only. Right front frame rail must be a maximum of seven and one-quarter (7.25) inches above the ground.
- 6.6 Jeep, Bronco or similar four-wheel drive frames are not allowed. Sports car frames are not allowed. Front-wheel-drives are not allowed.
- 6.7 Rear of frame may be altered to accept leaf or coil springs.
- 6.8 Hydraulic, ratchet or electric weight jacks are not allowed anywhere on the racecar. Aluminum jack bolts are not allowed.
- 6.9 Wheelbase must be a minimum of one-hundred eight (108) inches on both sides (no tolerance).
- 6.10 Tubular front clips are not allowed.
- 6.11 Maximum overall width of car (at front or rear) shall not exceed seventy-eight (78) inches from outside of tread to outside of tread (no tolerance).

### **ARTICLE 7: COCKPIT**

- 7.1 Loose objects and/or weights are not allowed.
- 7.2 Air bags are not allowed.
- 7.3 Rear view mirrors are not allowed.
- 7.4 Floor and firewall must be complete in the driver's compartment. No interior sheet metal can be higher than or enclose a standard window opening. Sheet metal in the driver's compartment must be horizontal from the top of the driver shaft tunnel to the right side door bars or angle from the top of the drive shaft tunnel upwards to the top of the right side door bars. Driver must be able to exit the racecar from both sides.

## 7.5 Steering:

- 7.5.1 Must be OEM and must remain within original bolt pattern for type of frame used 7.5.2 Rack and pinion is not allowed.
- 7.5.4 May be modified to suit driver, but must remain on left side of cockpit (no center steering).
- 7.5.5 Quick-release metal coupling on steering wheel is mandatory. Plastic couplings are not allowed.

### 7.6 Seat:

- 7.6.1 Factory-manufactured racing seats are mandatory, and must be acceptable to officials.
- 7.6.2 Homemade aluminum, plastic or fiberglass seats are not allowed.
- 7.6.3 Must be properly installed and seat back cannot be moved back further than rear edge of quarter post.
- 7.6.4 High-back aluminum seats only. Full containment racing seats are strongly recommended.

### **ARTICLE 8: SUSPENSION**

- 8.1 Must remain stock-type for the type of frame being used. Steel aftermarket parts may be used as stock components as long as they mount in the stock location and are the same size as the OEM parts. This includes lower tubular A-frames. If using lower tubular A-frames, must match factory specs. All parts must meet OE specs and match side to side.
- 8.2 Aluminum and/or titanium components are strictly forbidden. Magnet must stick to all components.
- 8.3 Steel tube-type upper A-frames are permitted and may be moved. Steel or aluminum cross shafts are permitted.
- 8.4 Coil-over springs are not allowed on the front.
- 8.5 Stock passenger car spindles only. Fabricated spindles are not allowed. Bottom A-frames may not be altered, lightened or moved and must match side to side.
- 8.6 Front sway bars may be used. Front sway bars must be made of steel and may be attached to the bottom A-frame using steel heim joints. Must be solid full-length OEM.
- 8.7 Rear panhard bars may be used. Must be made of steel and may be attached by using a minimum three-quarter (0.75) inch i.d. steel heim joint.
- 8.8 Steel coil-over eliminators or steel/aluminum coil-over kits are permitted on the rear only, but must conform to shock and spring rules.
- 8.9 Suspension and/or rear-end parts must be made of steel. Aluminum mounting brackets are permitted.

## 8.10 Shocks & Springs:

- 8.10.1 One shock only per wheel is permitted.
- 8.10.2 Aluminum heims on shocks are not allowed (steel caps only).
- 8.10.3 Air shocks are not allowed.
- 8.10.4 All coil springs must be at least four and one-half (4.5) inches outside diameter.
- Springs must be made of steel. Torsion bars are not allowed in rear.
- 8.10.5 Canister shocks are not allowed.
- 8.10.6 External rubber bump stops are permitted (steel or plastic cup only).
- 8.10.7 Shocks shall be subject to claim, as outlined in Claim Procedures (Article 19).
- 8.10.8 Progressive springs are not allowed (except on pull bar or lift bar).
- 8.10.9 Cockpit-adjustable shocks are not allowed.

### **ARTICLE 9: ELECTRICAL SYSTEM**

## 9.1 Battery:

- 9.1.1 Must be securely mounted inside frame rails and covered.
- 9.1.2 One (1) 12-volt or 16-volt battery is permitted.
- 9.1.3 Voltage converters are not allowed.
- 9.1.4 All battery posts must be securely covered.

# 9.2 Ignition:

- 9.2.1 Magnetos and/or crank-triggered ignitions are permitted only for racecars utilizing a Crate Engine (see Rule 16.9).
- 9.2.2 One (1) coil only is permitted.
- 9.2.3 Kill switch required within easy reach of the driver. The switch must be clearly marked "OFF" and "ON".
- 9.2.4 MSD ignition boxes shall be subject to claim, as outlined in Claim Procedures (Article 19).
- 9.2.5 Must utilize an 8,000 RPM rev-limiting chip (7,300 if utilizing Crate Engine). Chip may not be within reach of the driver while in cockpit and must be accessible to officials at any time. Track will distribute chips to each driver each race night. Any driver caught altering the chip or ignition system in any way so as to defeat the chip rule shall receive a 30-day suspension, loss of all track and national points for the night and a \$1,000 fine for the first offense. Second offense shall be a one-year suspension, loss of all track and national points for the season and a \$2,000 fine.

### **ARTICLE 10: FUEL SYSTEM**

### 10.1 Fuel:

- 10.1.1 Must be automotive gasoline or alcohol only. Additives of any kind are not allowed. E85 ethanol or racing fuel is permitted. Penalty for illegal fuel is loss of points, cash and awards earned for that event.
- 10.1.2 May not be blended with ethers or other oxygenates, and may not be blended with aniline or its derivatives, nitro compounds or other nitro containing compounds. Oxygenated fuel is not allowed.
- 10.2 Electric fuel pumps are not allowed.

### 10.3 Carburetor:

10.3.1 One (1) two-barrel, four-barrel or Predator carburetor properly installed will be permitted.

- 10.3.2 Must be naturally aspirated.
- 10.3.3 Fuel injection is not allowed.
- 10.3.4 An adapter with gasket is permitted. Adapter and gasket combined may be no more than two and one-quarter (2.25) inches.

### 10.4 Fuel Cell:

- 10.4.1 Must be commercially manufactured and must be mounted utilizing at least two (2) steel straps. Straps must be two (2) inches wide at all measuring points.
- 10.4.2 Must be enclosed in a steel container and must be protected in rear of axle by roll cage tubing mounted securely.
- 10.4.3 No part may be lower than protective tubing. Protective tubing must be no wider than six (6) inches on both sides. Fuel cell may be no lower than ten (10) inches from the ground.
- 10.4.4 Must have check valves.
- 10.4.5 Limited to a maximum capacity of thirty-two (32) gallons.
- 10.4.6 Must have check valves. A ball-type, flapper or spring or filler rollover valve is mandatory for fuel cells without a positive seal filler neck/cap system.

## **ARTICLE 11: TIRES & WHEELS**

### 11.1 Wheels:

- 11.1.1 Must be fifteen (15) inches in diameter and eight (8) inches in width.
- 11.1.2 Stickers are not required.
- 11.1.3 Must be reinforced steel only.
- 11.1.4 A steel or aluminum bead lock may be used on the right front and right rear wheels only, and may be mounted on the outside of the wheel so long as it does not add over three-quarters (3/4) of an inch to the overall width of the wheel.
- 11.1.5 Homemade mud caps are not allowed.
- 11.1.6 Wheel covers are permitted on right side wheels only. Inner mud plugs are permitted.
- 11.1.7 Wide five wheel adaptors are not allowed.
- 11.1.8 Steel or aluminum spacer between hub and wheel is permitted, but overall width of racecar cannot exceed 78 inches (see Rule 4.19).
- 11.1.9 Aluminum or steel lug nuts are permitted.

### 11.2 Tires:

- 11.2.1 American Racer G60 or KK704 stamped or non-stamped tires are permitted. All non-stamped tires must be asphalt (no dirt).
- 11.2.2 Softening is not allowed. Solvents of any kind are not allowed. Altering tires with any components or chemicals which alter the manufacturer's baseline-settings of the tire is not allowed.
- 11.2.3 Grooving and/or siping is permitted.
- 11.2.4 All sidewall markings must remain visible at all times. Buffing or removing of the compound designations is not allowed.

## **11.3 Tire Testing Procedures:**

11.3.1 Random GC (gas chromatography) scans will be performed to identify illegal substances. A GC scan should always be a peak in 19-20 minutes. If there is no peak, the driver will be disqualified. Driver may protest the GC scan results and request a mass spec test at the cost to the driver (usually around \$300). The mass spec test will

reveal exactly what substance was used. The main peak of the tire should never be in half.

- 11.3.2 Traces of chemicals and/or excessive quantities of chemicals found to be outside the baseline on any test is automatic disqualification. First offense shall result in loss of all points accumulated for the season, forfeiture of all prize money earned for the event, a \$5,000 fine and a one-year suspension from USRA-sanctioned events. Driver will not be permitted to compete in any future USRA-sanctioned event until fine is paid in full. Second offense shall result in the same penalties for first offense, but with a lifetime suspension from all future USRA-sanctioned events.
- 11.3.3 It is strongly recommended that all drivers use only soap and water. Baking tires will not eliminate traces of illegal substances. The USRA will aggressively test for illegal substances and will levy severe punishment for infractions.

### **ARTICLE 12: BRAKING SYSTEM**

- 12.1 Must be operating on all four wheels and must lock up all four wheels during inspection.
- 12.2 Must have caliper and rotor on all four wheels. Vented rotors are required on front wheels.
- 12.3 Electronic brake actuators are not allowed.
- 12.4 Calipers may not be lightened and must be OEM
- 12.5 Steel or aluminum single-piston OEM-type calipers are permitted.
- 12.6 Rotors must be steel and may not be lightened or drilled. Rotors may be re-drilled for different bolt patterns or larger studs.
- 12.7 Front-to-rear brake bias is permitted (no left to right).
- 12.8 Brake shut-offs are not allowed.
- 12.9 Brake lines must be visible.
- 12.10 Must maintain minimum OEM dimensions for hubs, rotors and calipers.

### **ARTICLE 13: DRIVE SHAFT**

- 13.1 A loop is required and must be constructed of at least one-quarter (0.25) inch by two (2) inch solid steel. Loop must be mounted no more than six (6) inches from the front of the drive shaft tube. Alternatively, two (2) loops of one-quarter (0.25) inch by one (1) inch solid steel fastened to cross member are permitted.
- 13.2 Must be painted white and made of steel.

### **ARTICLE 14: TRANSMISSION**

- 14.1 OEM three-, four- and five-speed and automatic production-types allowed.
- 14.2 "In and out" boxes are not allowed.
- 14.3 Must all be clutch-operated.
- 14.4 Bert and Brinn transmissions are permitted. With motor running and racecar in stationary position, driver must be able to engage racecar in gear and move forward, then backward, at time of inspection.
- 14.5 Clutch must be inside of bell housing for OEM production-types.
- 14.6 One (1) forward gear and one (1) reverse gear must be in working order, plus a neutral position, and must be able to be shifted by driver.
- 14.7 Clutch-type transmissions must be equipped with an explosion-proof steel bell

housing. Aluminum must be SFI-approved (GM bell housing is not SFI approved). 14.8 Automatic, Bert or Brinn transmissions must have a guard two-hundred seventy (270) degrees around flex plate or flywheel, and must be constructed of at least one-quarter (0.25) inch steel. Alternatively, automatic transmissions may utilize an SFI-approved aftermarket guard.

14.9 All racecars must have the capability of starting without being pushed or pulled.

### **ARTICLE 15: REAR-END**

- 15.1 Any passenger car or truck type is permitted. Aluminum is not allowed except lowering blocks, axle cap and drive plate.
- 15.2 Quick change rear-ends are permitted: Steel tubes only; ten (10) inch ring gear only; pinion and carrier bearings must be tapered; titanium is not allowed; wide-five wheel patterns are not allowed; aluminum spools are permitted. Magnesium will be permitted until such date that the cost increases, at which time only magnesium rearends purchased prior to that date will be permitted and must have original serial number.
- 15.3 Cambered rear-ends are not allowed. One-piece drive flange only.
- 15.4 Traction devices are not allowed (includes Gold Track, True Track or similar type components).

### **ARTICLE 16: ENGINE**

- 16.1 Must be able to be used in conventional passenger car without alteration. Motor mounts may not be removed or altered. Castings (includes block, heads and intake) and fittings may not be changed. Machine work on outside of engine, or on front or rear of camshaft, is not allowed. If utilizing lightened blocks (removal of material from inside and/or outside), an additional twenty-five (25) pounds of weight must be added in front of the mid-plate.
- 16.2 Total "dry sump" systems are not allowed. "Wet" system must be in stock operating order, except oil coolers and remote filters are permitted.
- 16.3 Modification of cooling system is permitted. Radiators and oil coolers may not protrude above interior.
- 16.4 Any American make may be used. Rear of engine (bell housing flange) must be mounted at least seventy-two (72) inches forward from the center line of the rear axle NO TOLERANCE.
- 16.5 Offset must be within two (2) inches of centerline of front cross member.
- 16.6 Must be a minimum of eleven (11) inches from ground to front center of crankshaft.
- 16.7 Steel blocks only –aluminum and/or titanium are not allowed.
- 16.8 Overflow tubes must be directed toward the ground and inside the frame rails.
- 16.9 Radiator must be mounted in front of engine.
- 16.10 Wiring elements must be accessible for technical inspection. Any racecar advancing spots and missing will be subject to disqualification.
- 16.11 Tri-Y headers are permitted, but cannot contain stainless steel.
- 16.12 Exhaust system and/or mufflers must be mounted in such a way as to direct spent gases away from the cockpit and away from areas of possible fuel spillage.
- 16.13 Mufflers may be required at track's discretion.
- 16.14 Roller cams are permitted, unless otherwise noted.

16.15 Engine type shall determine the overall weight of the racecar (see Rule 17.3), spoiler height (see Rule 4.12.1) and RPM limits of the rev-limiting chip (see Rule 9.2.5).

## 16.16 Flat Tappet/Steel Head Engine:

- 16.16.1 If valve angle is 23 degrees, the overall weight of the racecar must be a minimum of two-thousand four-hundred (2,400) pounds. If valve angle is less than 23 degrees, the overall weight of the racecar must be a minimum of two-thousand five-hundred (2,500) pounds (see Rule 17.3.1). The maximum rear spoiler height shall be seven (7) inches (see Rule 4.12.1).
- 16.16.2 Stock diameter lifters only. Mushroom lifters are not allowed.
- 16.16.3 Stud girdles and shaft rockers are permitted.
- 16.16.4 Engine components must be of matching manufacturers (i.e. Chevy for Chevy).

# 16.17 Flat Tappet/BRODIX Aluminum Spec Head Engine:

- 16.17.1 The overall weight of the racecar must be a minimum of two-thousand three-hundred fifty (2,350) pounds (see Rule 17.3.2). The maximum rear spoiler height shall be seven (7) inches (see Rule 4.12.1).
- 16.17.2 Approved product numbers for the BRODIX Aluminum Spec Head are SPCH (Chevrolet), SPFO (Ford) and SPMO (Mopar) for USRA.
- 16.17.3 Removing, relocating, grinding, polishing or defacing of any cast letters and/or numbers is strictly forbidden.
- 16.17.4 May be angle milled, but valve angle must remain within one (1) degree of original manufactured specification.
- 16.17.5 Valve guides must retain original angle and spacing as manufactured. Valve guides may not be tapered, thinned or shortened whatsoever. Minimum valve stem diameter must be five-sixteenths (.310) inch.
- 16.17.6 Absolutely no welding or adding material of any kind.
- 16.17.7 Removal of material is not allowed, except for pushrod clearance. Factory CNC chamber may not be altered in any way.
- 16.17.8 Absolutely no enlarging, relocating or other altering of any bolt hole, dowel hole or threaded hole, except to spot face bolt holes after angle milling.
- 16.17.9 Heli coils may be used for repairs.
- 16.17.10 Absolutely no grinding or polishing of any kind anywhere on the casting, except for pushrod clearance.
- 16.17.11 Internally-repaired BRODIX Aluminum Spec Head must be recertified by BRODIX.
- 16.17.12 BRODIX Aluminum Spec Head checking fixtures will be used to check specifications and dimensions.
- 16.17.13 Stock diameter lifters only. Mushroom lifters are not allowed.
- 16.17.14 Stud girdles and shaft rockers are permitted.
- 16.17.15 Engine components must be of matching manufacturers (i.e. Chevy for Chevy).

## **16.18 BRODIX Aluminum Spec Head Engine:**

- 16.18.1 The overall weight of the racecar must be a minimum of two-thousand four-hundred (2,400) pounds (see Rule 17.3.1). The maximum rear spoiler height shall be seven (7) inches (see Rule 4.12.1).
- 16.18.2 Approved product numbers for the BRODIX Aluminum Spec Head are SPCH (Chevrolet), SPFO (Ford) and SPMO (Mopar) for USRA.

- 16.18.3 Removing, relocating, grinding, polishing or defacing of any cast letters or numbers is strictly forbidden.
- 16.18.4 May be angle milled, but valve angle must remain within one (1) degree of original manufactured specification.
- 16.18.5 Valve guides must retain original angle and spacing as manufactured. Valve guides may not be tapered, thinned or shortened whatsoever. Minimum valve stem diameter must be five-sixteenths (.310) inch.
- 16.18.6 Absolutely no welding or adding material of any kind.
- 16.18.7 Removal of material is not allowed, except for pushrod clearance. Factory CNC chamber may not be altered in any way.
- 16.18.8 Absolutely no enlarging, relocating or other altering of any bolt hole, dowel hole or threaded hole, except to spot face bolt holes after angle milling.
- 16.17.9 Heli coils may be used for repairs.
- 16.18.10 Absolutely no grinding or polishing of any kind anywhere on the casting, except for pushrod clearance.
- 16.18.11 Internally-repaired BRODIX Aluminum Spec Head must be recertified by BRODIX.
- 16.18.12 BRODIX Aluminum Spec Head checking fixtures will be used to check specifications and dimensions..

# 16.19 Crate Engine:

- 16.19.1 The overall weight of the racecar must be a minimum of two-thousand three-hundred (2,300) pounds (see Rule 17.3.5). The maximum rear spoiler height shall be seven (7) inches (see Rule 4.12.1).
- 16.19.2 GM Performance Parts (GPP) factory-sealed CT525 Chevy small block crate engine (Part No. 19171821): includes aluminum block and heads, hypereutectic aluminum pistons, nodular iron crank and hydraulic roller tappet camshaft. For more information call Karl Performance Parts at 866-551-9188 or visit www.karlperformanceparts.com for more information.
- 16.19.3 Must have "Crate" sticker on racecar. Any driver running a sticker designating a different engine with a "Crate" sticker will be disqualified with loss of points and earnings for that event.
- 16.19.4 Must be unaltered and sealed from factory at appropriate points (intake, head, timing chain cover and oil pan) with approved GPP break-off bolts. Any altered, damaged or missing GPP break-off bolts will result in driver being disqualified from that event, loss of all track and national points accumulated up to, and including, the date of the offense, a \$5,000 fine and a one-year suspension from all USRA-sanctioned events. 16.19.5 Official and/or promoter reserves the right to exchange a crate engine for a similar crate engine of the same model (provided by the promoter or the USRA) at any time with any driver utilizing a crate engine.
- 16.19.6 The diagnostic program and your portable tuning device (laptop computer) is considered to be a functioning part of the racecar and must be readily available during any and all inspections.

### **ARTICLE 17: WEIGHT**

17.1 The overall weight of the racecar shall be measured at the conclusion of an event with the driver in the cockpit, wearing complete racing apparel.

17.2 All racecars must display weight at which it will compete on left side windshield post. Must be two (2) inches tall and in contrasting color to the racecar.

## 17.3 Overall Weight:

- 17.3.1 If utilizing a Flat Tappet/Steel Head Engine with a 23-degree valve angle (see Rule 16.16) or BRODIX Aluminum Spec Head Engine (see Rule 16.18), the overall weight of the racecar must be a minimum of two-thousand four-hundred (2,400) pounds. 17.3.2 If utilizing Flat Tappet/BRODIX Aluminum Spec Head Engine (see rule 16.17), the overall weight of the racecar must be a minimum of two-thousand three-hundred fifty (2,350) pounds.
- 17.3.3 If utilizing steel or aluminum heads with a 23-degree valve angle, the overall weight of the racecar must be a minimum of two-thousand four-hundred fifty (2,450) pounds.
- 17.3.4 If utilizing steel or aluminum raised runner heads, or less than a 23-degree valve angle, the overall weight of the racecar must be a minimum of two-thousand five-hundred (2,500) pounds.
- 17.3.5 If utilizing a Crate Engine (see Rule 16.19), the overall weight of the racecar must be a minimum of two-thousand three-hundred (2,300) pounds.
- 17.4 If utilizing aluminum heads other than the BRODIX Aluminum Spec Heads, racecar must have a minimum fifty (50) pounds of weight in front of mid-plate.
- 17.5 If utilizing lightened blocks (removal of material from inside and/or outside), an additional twenty-five (25) pounds of weight must be added in front of the mid-plate (see Rule 16.1).

#### 17.10 Ballast:

- 17.10.1 May not be mounted in cockpit, or outside of body or hood area.
- 17.10.2 Must be securely mounted, painted white and clearly marked with the car number.
- 17.10.3 Must be attached with at least two (2) one-half (0.5) inch bolts.
- 17.10.4 May not be attached to rear bumper.

## **ARTICLE 18: SAFETY**

- 18.1 It is recommended that each racecar have built-in fire extinguishing equipment, but cannot be of the dry powder type (must be Halon 1211 or equivalent).
- 18.2 Drivers should have in their pit area as part of their equipment, at all times, a fully charged dry chemical, Halon (or its equivalent) fire extinguisher. Ten (10) or thirteen (13) pound fire extinguishers are highly recommended.
- 18.3 Driver must wear required helmet, fire suit and five-point safety harness whenever the racecar is on the racetrack. This includes during track packing, warm ups, hot laps and races.
- 18.4 Helmets are mandatory and must be certified Snell SA2000, SA2005 or SA2011 Standard or SFI Spec 31.1A, 31.1/2005 or 31.1/2011.
- 18.5 Helmet must accompany driver and racecar at time of inspection.
- 18.7 Complete one- or two-piece fire suits of a flame retardant nature are mandatory. A fire suit certified to SFI Spec 3.2A/5 is strongly recommended.
- 18.8 SFI-approved fire-resistant gloves and shoes are mandatory. Gloves and shoes certified to SFI Spec 3.3/5 is strongly recommended. Fire resistant socks are strongly recommended.

- 18.9 The use of a five- six- or seven-point driver restraint system (safety belts, sub-belt and shoulder harness) is required. Factory-type shoulder belts or straps are not allowed. The use of a seven-point driver restraint system certified to SFI Spec 16.1 or 16.5 is strongly recommended.
- 18.10 Metal to metal buckles are required on shoulder and seat belts.
- 18.11 Shoulder harness must be mounted securely to the roll cage.
- 18.12 Where the belt passes through the seat edges, a grommet must be installed, rolled and/or padded to prevent cutting of the belt.
- 18.13 Driver restraint system must be less than three (3) years of age past the date of manufacture. It is recommended that the driver restraint system be no more than two (2) years past the date of manufacture.
- 18.14 Full-size window net mounted in the left side driver's window opening is required. Window net mounts must be welded to the roll cage. All bars around the driver must have approved roll bar padding. Approved racing arm restraints are recommended. Must be certified to SFI Spec 27.1.
- 18.15 Fire-resistant safety neck collars are mandatory.

# **ARTICLE 19: CLAIMING PROCEDURES**

- 19.1 Any driver possessing a valid USRA license may have the opportunity to execute a claim on shock(s) or MSD ignition box of another driver's racecar.
- 19.2 The first four (4) finishers in the main event must drive their racecars directly to the designated claim area at the conclusion of the main event, and are subject to being claimed by any other driver that finishes fifth or lower and finishes on the same lap as the winner.
- 19.3 Claims must be made within five (5) minutes of the completion of the main event. Claimed items must be removed at the racetrack and within one (1) hour after claimed driver accepts the claim.
- 19.4 Driver making claim must drive his/her race car immediately after finish of feature, under its own power, directly to the claim area.
- 19.5 Claiming driver must present claim card and cash to official overseeing the claim area at the time that the driver declares his/her intention to claim. The cash price of the claim shall \$100 each for shocks; or \$250 for MSD ignition boxes. Drivers claiming shocks may claim one (1) or more shocks during a single claim.
- 19.6 Claiming driver shall select from the first four (4) finishers in the main event, and must declare that choice to the official overseeing the claim area. If the claiming driver decides at that time that he/she does not wish to execute the claim, he/she will nonetheless be charged one claim on his/her claim card. If multiple drivers declare an intention to claim, the driver finishing farthest back in the main event will draw first.
- 19.7 Driver is permitted one (1) claim per event, regardless of the outcome of that claim.
- 19.8 Only drivers and officials are permitted in the designated claim area. Any other participants associated with that racecar that enter the claim area will be subject to disqualification, fine and/or suspension.
- 19.9 Only a driver may claim, and only the claimed driver may agree to accept or refuse the claim. The first statement of acceptance or rejection of the claim by the claimed driver is binding.
- 19.10 Any driver refusing to accept a claim will forfeit all cash and contingency winnings

for that event.

- 19.11 Any driver refusing to accept a claim forfeits his/her right to make a claim in any USRA event for a period of one (1) year from the date of refusal.
- 19.12 Any driver refusing to accept a claim will forfeit all USRA points (national and track) accumulated up to, and including, the event at which the claim was made.
- 19.13 First refusal to accept a claim will result in that driver being suspended from all USRA events for thirty (30) days and until a \$1,000 fine is paid and received at USRA headquarters. Second refusal to accept a claim will result in that driver being suspended from all USRA events for one (1) year and until a \$5,000 fine is paid and received at USRA headquarters.
- 19.14 Any driver found to be making a claim for another person will lose all USRA points (national and track) accumulated to date for the entire season, all cash and contingency winnings for that event, and will be suspended from all USRA events for thirty (30) days and until a \$1,000 fine is paid and received at USRA headquarters. 19.15 Sabotage of claimed parts will result in driver being suspended from all USRA events for fourteen (14) days and until a \$1,000 fine is paid and received at USRA headquarters. Driver will also forfeit all USRA points (national and track) accumulated up to, and including, the event at which the sabotage occurred. Furthermore, driver will forfeit the privilege to make a claim for a period of one (1) year from the date on which the sabotage occurred.
- 19.16 Driver may claim a maximum of three (3) times during the calendar year.
- 19.17 After making an accepted claim, driver must finish in the top four (4) of a main event and reinstate his/her claim card. Cost is \$25 for reinstatement of claim card. Driver will not be eligible to make another claim unless claim card is reinstated.
- 19.18 Cost for replacement of a lost claim card is \$25.
- 19.19 Driver must compete in a minimum of three (3) consecutive events prior to the event at which he/she makes a claim.
- 19.20 The USRA reserves the right to disallow any claim at their discretion.
- 19.21 Drivers utilizing a provisional starting position in the main event are not allowed to make a claim in that event.
- 19.22 At their discretion, officials reserve the option to claim the shock(s) or MSD ignition box of any racecar. Officials may exchange MSD ignition boxes at any time.
- 19.23 Drivers will be eligible to make a claim during the first event of the season. After one event, driver must have raced in previous events before Rule 19.19 applies.
- 19.24 Disqualification shall not affect a legal claim. Claimed parts will be removed and transferred prior to any penalties being assessed.