

# 2020 USRA LIMITED MOD RULES

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THE RULES AND/OR REGULATIONS SET FORTH HEREIN ARE DESIGNED TO PROVIDE FOR THE ORDERLY CONDUCT OF RACING EVENTS AND TO ESTABLISH MINIMUM ACCEPTABLE REQUIREMENTS FOR SUCH EVENTS. THESE RULES SHALL GOVERN THE CONDITION OF SPEEDWAY EVENTS AND, BY PARTICIPATING IN THESE EVENTS, ALL RACEWAY COMPETITORS ARE DEEMED TO HAVE COMPLIED WITH THESE RULES. NO EXPRESS OR IMPLIED WARRANTY OF SAFETY SHALL RESULT FROM PUBLICATION OF, OR COMPLIANCE WITH THESE RULES AND REGULATIONS. THEY ARE INTENDED AS A GUIDE FOR THE CONDUCT OF THE SPORT AND IN NO WAY ARE A GUARANTEE AGAINST INJURY OR DEATH TO PARTICIPANTS, SPECTATORS OR OTHERS.

References are made throughout these regulations requiring and/or recommending that particular products meet certain specifications. These products are manufactured to meet or exceed certain criteria and are labeled as such upon satisfying those criteria. Any change to these products voids that certification. Under no circumstances may any certified product be altered from the "as manufactured" condition or such certification is voided.

Changes and additions to the 2019 USRA Limited Mod rules are underlined. Changes made for grammatical purposes or to improve clarity are not highlighted. All participants and officials are expected and required to additionally be familiar with the definitions and details in the USRA General Rules, Regulations & Procedures.

The United States Racing Association shall hereafter be simply referred to as the USRA throughout the rules description. USRA official(s) shall include all personnel employed as an official by the participating racetrack.

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## ARTICLE 1: BODY

- 1.1 1970 or newer American compact passenger car only (no panel vans or station wagons).
- 1.2 An aluminum half-windshield may be used on driver's side of the front window opening only.
- 1.3 Stock appearing front window support units must be used (painted roll bars are not acceptable substitutes).
- 1.4 A minimum window opening of twelve (12) inches must be maintained on all four window openings (front, back, left and right).
- 1.5 Streamlining at top of windshield is not allowed. Bodies must have standard appearing windshield opening and corner post must follow standard configuration.
- 1.6 Original roof line (parallel to deck and side to side) 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. Aluminum roofs are permitted. Dished roofs are not allowed. Maximum four inch roof sides allowed. Maximum one inch ridge down sides of roof.

- 1.7 Sail panels must be solid and of matching design with matching styles on both sides of racecar. Sail panel may be no farther forward than the driver's seat and no farther back than rear of decking. Sail panel must be mounted within two (2) inches of the outer edge of deck and flush with the outer edge of roof. Sail panels, side to side, may have no more than four (4) inches of variance in material length when measured from roof line to deck.
- 1.8 Sail panels may have no more than four (4) inch bow from roof to quarter panel up and down, no more than two (2) inch bow from a straight line from roof to rear of sail panel and maximum five (5) inches tall at rear of decking and must remain separate from rear spoiler and spoiler supports.
- 1.9 Hood may be no more than two (2) inches above decking and must be sealed off from driver. Reverse hood rake is not allowed. Hood must be level or slope forward toward nose of racecar. Lips on the hood are not allowed. Hood must be flat from side to side—bowed and/or concaved designs are not allowed.
- 1.10 Belly pans are not allowed. A belly pan will be defined as any object or material that alters the airflow under the racecar.
- 1.11 Panel(s) in front of the right door next to the engine compartment is/are not allowed.
- 1.12 Bodies with excessive damage (as determined by an official) will not be allowed to compete.
- 1.13 Spoilers:**
  - 1.13.1 Rear spoiler is permitted, but not mandatory. May be minimum one (1) inch or maximum five (5) inches tall and maximum sixty-seven (67) inches wide.
  - 1.13.2 May have stiffener, but must be one (1) inch or more down from top.
  - 1.13.3 Maximum of three (3) spoiler braces are permitted, but must be mounted in line.
  - 1.13.4 Must be mounted within confines of spoiler braces.
  - 1.13.5 Fins, lips and/or wings are not allowed.
  - 1.14 The rear deck lid and/or trunk area must be covered. Deck height may be a maximum of forty-one (41) inches—NO TOLERANCE. Drop decks are not allowed. Deck may be a maximum length of one hundred twenty-one (121) inches from rear of engine. Deck must remain parallel to the frame and level from side to side. Deck may have a maximum total slope of six (6) inches with a maximum of three (3) inches of slope from racing seat to rear of deck. Doors and quarter panels must be flush with deck. Deck width may be a maximum of sixty-seven (67) inches and must be the same from front to rear.
- 1.15 Excluding hood and nose piece, the bottom of body may extend a maximum of 6 inches further forward than the back of the engine block.
- 1.16 Engine covers are not allowed.
- 1.17 Maximum 5 inch plastic skirting allowed on the bottom of the doors and quarter panels and nose piece is permitted. Body must remain a minimum of three (3) inches from ground.
- 1.18 Maximum overall width of nose is forty-two (42) inches top and bottom. Two and one half (2.5) inch nose fins are permitted along both sides of the nose. Nose fins may not pass the leading edge of radiator or continue past leading edge of hood. All aluminum of the nose (including the fins) must be completely inside the outer edges of the bumper. Nose fins must match side to side. If it is between nose fins, it is the nose; if it separates from the hood, it is the nose.

**1.19 Bumpers:**

- 1.19.1 Center of bumpers (front and rear) must be at least sixteen (16) inches from the ground and no more than twenty three (23) inches from ground.
- 1.19.2 Both front and rear bumpers must be used, and must not have any sharp edges. Any inappropriate bumper will be disallowed by an official. Front bumper must 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 (not off-centered).
- 1.19.3 Rear bumpers and side rail bars must not extend beyond the width of the rear tires. Tires must be the widest part of body.
- 1.19.4 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).

**1.20 Appearance:**

- 1.20.1 All racecars must be numbered with large legible numbers on both sides, on top and on the nose and rear 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.
- 1.20.2 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.

## **ARTICLE 2: ROLL CAGES**

- 2.1 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: minimum one and five-hundred thousandths (1.5) by ninety five one thousandths (.095) of an inch for mild steel and DOM tubing. Aluminum and/or other soft metals are not allowed. Roll bar connections must be properly welded.
- 2.2 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.
- 2.3 Installation and workmanship must be acceptable to officials.
- 2.4 Must be frame-mounted in at least six (6) places.
- 2.5 Must consist of a configuration of front and rear hoops connected by tubing on the sides or side hoops.
- 2.6 With helmet on and driver securely strapped into the racing seat, top of driver's head must not protrude above the roll cage.
- 2.7 Must have a protective screen or bars in front window opening in front of driver's face.
- 2.8 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.
- 2.9 Brace bars forward of roll cage may not be higher than the stock hood height.
- 2.10 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 and uprights should be part of at least one and one-half (1.5) inches in diameter at a minimum of eighty-three one-thousandths (0.083) of an inch thickness and be gusseted in place. The door bars must have four (4) vertical studs per side equally spaced.

## **ARTICLE 3: FRAME**

- 3.1 1978-1987 OEM mid-size GM metric full frame only.
- 3.2 Wheelbase must be a minimum one hundred seven (107) inches and maximum one hundred nine (109) inches on both sides.
- 3.3 Frame must be full and complete. May not be widened, narrowed, shortened and/or lengthened. May not be cut, bent or altered to change suspension brackets, except upper control arm brackets on front end.
- 3.4 All frame bolt holes must remain in OEM location.
- 3.5 Front frame horns may be removed in front of steering box.
- 3.6 Front frame may be cut for radiator clearance only.
- 3.7 Frame may be notched for seat clearance.
- 3.8 Transmission cross member mounts may be removed, but no further forward than frame welds.
- 3.9 Rear of frame behind upper shock mounts may be replaced with round, square or rectangular tubing.
- 3.10 Except front cross member, no part of frame can be lower than five (5) inches from ground.
- 3.11 Any other frame alterations are not allowed.
- 3.12 Tubular front clips are not allowed.
- 3.13 Hydraulic, ratchet or electric weight jacks are not allowed anywhere on the racecar. Aluminum jack bolts are not allowed.
- 3.14 Jeep, Bronco or similar four-wheel drive frames are not allowed. Sports car frames are not allowed. Front-wheel-drives are not allowed.
- 3.15 Rear of engine (bell housing flange) must be mounted at least seventy (70) inches forward from the center line of the rear axle – NO TOLERANCE.

## **ARTICLE 4: COCKPIT, STEERING & SEAT**

- 4.1 Loose objects and/or weights are not allowed.
- 4.2 Air bags are not allowed.
- 4.3 Rear view mirrors are not allowed.
- 4.4 Floor and firewall must be complete in the driver's compartment. Interior sheet metal cannot 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.
- 4.5 Steering:**
  - 4.5.1 Must be OEM and remain within original bolt pattern for type of frame used. Steel tube tie rod adjusting sleeves allowed.
  - 4.5.2 Rack and pinion is not allowed.
  - 4.5.3 May be modified to suit driver, but must remain on left side of cockpit (no center steering).
  - 4.5.4 Quick-release metal coupling on steering wheel is mandatory. Plastic couplings are not allowed.
- 4.6 Seat:**
  - 4.6.1 Factory-manufactured racing seats are mandatory and must be acceptable to officials.
  - 4.6.2 Homemade aluminum, plastic or fiberglass seats are not allowed.
  - 4.6.3 Must be properly installed and seat back cannot be moved back further than rear edge of quarter post.
  - 4.6.4 High-back aluminum seats only. Full containment racing seats are strongly recommended.

## **ARTICLE 5: SUSPENSION**

- 5.1 Front suspension must remain stock-type for the type of frame being used. Steel aftermarket parts may be used as stock components but must mount in the stock location and must be the same size as the OEM parts. OEM upper A-frame mount may be moved or replaced with aftermarket steel non-adjustable mount matching upper A-frame bolt-on design. Bottom A-frames may not be altered, lightened or moved. Screw-in ball joints are not allowed. Upper shock mount may be a maximum four (4) inches above the frame.
- 5.2 Aluminum and/or titanium components are not allowed. Magnet must stick to all components. Exception: aluminum cross shafts are permitted.
- 5.3 Steel tube-type upper A-frames are permitted and may be moved.
- 5.4 Stock passenger car spindles only, must match frame. Fabricated spindles are not allowed
- 5.5 Front sway bars are not allowed. Must be made of steel and may be attached to the bottom A-frame using steel Heim joints. Must be solid full-length OEM. No suspension stops of any kind allowed.
- 5.6 Rear Suspension:**
  - 5.6.1 Control arms and mounts must be made of steel, unaltered OEM, in OEM location and match frame.
  - 5.6.2 Jack bolts are not allowed.
  - 5.6.3 Adjustable spring buckets are permitted. Must remain in OEM location if dropped.
  - 5.6.4 If upper spring cup uses all thread, it must be securely welded to chassis.
  - 5.6.5 Lower spring cups must be centered on housing.
  - 5.6.6 Control arms may be reinforced, but cannot be shortened or lengthened. Must remain OEM length.
  - 5.6.7 Control arm bushings may be aftermarket, but offset or bearing type are not allowed. Bushings may not be drilled.
  - 5.6.8 Suspension parts may not be altered or lightened. Aluminum parts are not allowed, other than bushings.
  - 5.6.9 Safety/tether chains must be mounted solid to rear-end (not to suspension parts) and cannot limit travel.
- 5.7 Shocks & Springs:**
  - 5.7.1 One non-adjustable shock per wheel and mounted in OEM location.
  - 5.7.2 Air shocks are not allowed. Aluminum shocks are not allowed.
  - 5.7.3 Shock covers are allowed but must be mounted directly to shock.
  - 5.7.4 All coil springs must be at least five and one half (5.5) in front and four and one-half (4.5) inches rear outside diameter. Front springs must be a minimum of nine inches of free height. Rear springs must be a maximum 16 inches of free height. Steel springs only. Stacked and/or welded springs are not allowed. Torsion bars are not allowed in rear.
  - 5.7.5 Coil over shocks are not allowed on front or rear. Steel shock mounting bolts only. Aluminum and/or titanium is not allowed.

- 5.7.6 Shocks shall be subject to claim, as outlined in Claim Procedures in Article 16.
- 5.7.7 Coil-over, remote and/or air reservoir shocks are not allowed. Canister and/or adjustable shocks are not allowed.
- 5.7.8 Bladder-type valves and/or Schrader valves are not allowed.
- 5.7.9 Shock spacers are permitted.
- 5.7.10 Bump stops (internal or external) are not allowed.

## ARTICLE 6: ELECTRICAL SYSTEM

### 6.1 Battery:

- 6.1.1 Must be securely mounted inside frame rails and covered.
- 6.1.2 One (1) 12-volt battery only (no 16-volt batteries).
- 6.1.3 Voltage converters are not allowed.
- 6.1.4 All battery posts must be securely covered.

### 6.2 Ignition:

- 6.2.1 Must utilize OEM distributor and ignition. Stock appearing coils, coil covers and modules only. Multiple spark ignitions are not allowed. All ignition parts must remain out of the reach of driver.
- 6.2.2 Kill switch required within easy reach of the driver. The switch must be clearly marked "OFF" and "ON". Crank trigger ignitions are not allowed.
- 6.2.3 GM must utilize OEM GM distributor. Chrysler and Ford may use aftermarket HEI (bushing type only). Roller bearings are not allowed. Must utilize stock-type components.
- 6.2.4 Any module that fits inside the distributor with no modifications is allowed.
- 6.3 Digital gauges are not allowed. Wiring elements must be accessible for technical inspection.

## ARTICLE 7: FUEL SYSTEM

### 7.1 Fuel:

- 7.1.1 Automotive gasoline and racing gasoline is allowed. E85 is not allowed. Additives of any kind are not allowed. Penalty for illegal fuel is loss of points, cash and awards earned for that event.
- 7.1.2 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.
- 7.1.3 Upper cylinder lubricants are not allowed.
- 7.2 Electric fuel pumps are not allowed. Belt driven fuel pumps are not allowed. Pumps must bolt to block in stock location.

### 7.3 Carburetor:

- 7.3.1 Must be naturally aspirated.
- 7.3.2 Fuel injection is not allowed. Aerosol carburetors are not allowed.
- 7.3.3 Standard Engine must utilize a gauge-legal, unaltered Holley 500 CFM two-barrel (part #4412). HP carburetors are not allowed. Grinding and/or polishing of any kind is not allowed. All carburetor components must be for a Holley 500. Milling and/or grinding of throttle shaft is not allowed, and shaft must stay round. The choke and air horn may be removed (this is the only reworking permitted). Casting line at venturi must be present. Boosters must remain centered in venturi and may not be raised or lowered. Annular discharge boosters are not allowed.
- 7.3.4 Crate Engine is permitted to use a Holley 4150 Series four-barrel carburetor. HP carburetors are permitted. This carburetor has no size requirements but must remain to function as the 4150 series carburetor was designed and must utilize Holley type boosters. Vacuum secondary carburetors are not allowed. Annular discharge boosters are not allowed.
- 7.3.5 A one (1) inch adapter plate or spacer is permitted. Distance between bottom of carburetor and top of intake manifold cannot exceed one and one-quarter (1.25) inch. Spacer thickness must remain the same front to back and side to side.
- 7.3.6 Carburetors shall be subject to claim, as outlined in Claiming Procedures (see Article 16).

### 7.4 Fuel Cell:

- 7.4.1 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.
- 7.4.2 Must be enclosed in a steel container and must be protected in rear of axle by roll cage tubing mounted securely.

- 7.4.3 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.
- 7.4.4 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.
- 7.4.5 Limited to a maximum capacity of thirty-two (22) gallons.

## **ARTICLE 8: TIRES & WHEELS**

### **8.1 Wheels:**

- 8.1.1 Must be fifteen (15) inches in diameter and eight (8) inches in width.
- 8.1.2 Stickers are not required.
- 8.1.3 Must be reinforced steel only. Bleeder valves are not allowed.
- 8.1.4 A steel bead lock may be used on the right side wheels only, and may be mounted on the outside of the wheel so long as it does not add over three-quarters (0.75) of an inch to the overall width of the wheel.
- 8.1.5 Homemade mud caps are not allowed.
- 8.1.6 Wheel covers are permitted on right side wheels only. Inner mud plugs are permitted.
- 8.1.7 Wide five wheel adaptors are not allowed.
- 8.1.8 Aluminum spacer between hub and wheel is permitted, but overall width of racecar cannot exceed 78 inches.
- 8.1.9 Added ballast to any wheel is not allowed.

### **8.2 Tires:**

- 8.2.1 Hoosier H500 (stamped or non-stamped) racing tires are permitted in sizes 27 x 8 x 15 or 26.5 x 8 x 15. Any sanctioned race track may also opt to allow the American Racer KK704 racing tire (check local track rule). If running the Hoosier H500 non-stamped tire it must be hard (no soft tires allowed).
- 8.2.2 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.
- 8.2.3 All sidewall markings must remain visible at all times. Buffing or removing of the compound designations is not allowed.
- 8.2.4 Siping is permitted. Grooving is allowed as a track option.
- 8.2.5 Added ballast to the inside of any tire is not allowed.

### **8.3 Tire Testing Procedures:**

- 8.3.1 Random GC (gas chromatography) scans may 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.
- 8.3.2 Traces of chemicals and/or excessive quantities of chemicals found to be outside the baseline on any test shall result in the penalties declared in Rule 2.15.5 plus an additional indefinite financial penalty and indefinite length of suspension. This penalty also applies to driver refusal of a tire test. Refusal of tire test shall be treated the same as an infraction. Official(s) may inspect any tire on the racecar and/or any tire in possession of the driver in his/her pit area and/or hauler (in other words, if you have "doped" tires then do not even bring them to the track).
- 8.3.3 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 relating to tires.

## **ARTICLE 9: BRAKING SYSTEM**

- 9.1 Must be operating on all four wheels and must lock up all four wheels during inspection.
- 9.2 Caliper and rotor must be standard size and weight. Vented rotors are required on front and rear wheels.
- 9.3 Right front brake shut-offs are allowed
- 9.4 Calipers may not be lightened, must be OEM and must be made of steel.
- 9.5 Rotors must be steel and may not be lightened, scalloped, drilled and/or slotted. Rotors may be re-drilled for different bolt patterns or larger studs. No oil bath hubs allowed.
- 9.6 Front-to-rear brake bias is permitted. Additional inline proportioning valve is allowed but must be out of the reach of driver.
- 9.7 Brake floaters are not allowed

- 9.8 Brake lines must be visible.
- 9.9 Must maintain minimum OEM dimension for hubs, rotors and calipers.

## **ARTICLE 10: DRIVE SHAFT**

- 10.1 A loop is required and must be constructed of at least one-eighth (0.125) inch by two (2) inches 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-eighth (0.125) inch by one (1) inch solid steel fastened to cross member are permitted.
- 10.2 Must be a minimum of two (2) inches in diameter.
- 10.3 Must be painted white. Aluminum driveshafts are not allowed.

## **ARTICLE 11: TRANSMISSION**

- 11.1 OEM cast iron three-speed only. Four-speed or five-speed transmissions are not allowed. Automatic production-types are permitted. With engine running and racecar in stationary position, driver must be able to engage racecar in gear and then move forward and then backward at time of inspection.
- 11.2 "In and out" boxes are not allowed.
- 11.3 Must all be clutch-operated or an OEM automatic with a ten (10) inch diameter steel functioning torque converter.
- 11.4 Aftermarket transmissions are not allowed.
- 11.5 Hydraulic slave cylinders or throw out bearings are permitted.
- 11.6 Clutch must be inside of bell housing for OEM production-type transmissions.
- 11.7 Starter must bolt to engine block or factory location.
- 11.8 All forward gears and one (1) reverse gear must be in working order, plus a neutral position, and must be able to be shifted by driver.
- 11.9 Aluminum flywheel is no allowed. Must have full-sized steel bell housing. Flywheel must bolt to crankshaft. Clutch must bolt to flywheel, a minimum ten and one-half (10.5) inch single disc clutch allowed on GM and Chrysler and a minimum nine (9) inch clutch on Ford.
- 11.10 Automatic transmissions must have a guard two hundred seventy (270) degrees around flex plate or flywheel, and must be constructed of at least one-eighth (0.125) inch steel. All flex plates must be SFI certified. OEM aluminum bell housing may be replaced with an explosive proof steel or aluminum bellhousing.
- 11.11 Internal clutches are not allowed.

## **ARTICLE 12: REAR-END**

- 12.1 May use OEM seven and one-half (7.5) inches GM 10-bolt rear-end (bracing optional). Must remain stock width.
- 12.2 Wide-centered fifty-eight (58) inch Ford and/or floater rear-ends are permitted with a maximum 4.10 ring and pinion gear ratio.
- 12.3 From control arm mount out, housing end may be modified with three (3) inches tubing to accept a nine (9) inch Ford axle.
- 12.4 Must remain minimum GM width or maximum three (3) inches wider if Ford housing or Ford axles are used.
- 12.5 Components must be made of steel. Light weight gears are not allowed. Aluminum is not allowed except lowering blocks, axle cap, U-joint caps and drive plate.
- 12.6 OEM mounts on lower control arms must remain in OEM location.
- 12.7 Aftermarket axles, mini-spools and C-clip eliminators are permitted.
- 12.8 Locked rear-ends only. Torque dividing differentials are not allowed.
- 12.9 Full spools are permitted. Lightweight and/or aluminum spools are not allowed.
- 12.10 Pinion angle may not be changed.
- 12.11 Maximum gear ration of 4.10 is permitted, but housing must remain unaltered.
- 12.12 Gun drilled axles are not allowed.
- 12.13 Quick change devices are not allowed.
- 12.14 Cambered rear-ends are not allowed (one-piece drive flange only).
- 12.15 Traction devices are not allowed (includes Gold Track, True Track or similar type components).

## ARTICLE 13: ENGINE

- 13.1 Overflow tubes must be directed toward the ground and inside the frame rails.
- 13.2 Radiator must be mounted in front of engine.
- 13.3 Any American make may be used.
- 13.4 Exhaust & Mufflers:**
  - 13.4.1 Permitted headers include Schoenfeld GM Part #161, #151, #151E or GM #161CM, #151CM, #151ECM (for crate motor) with 1.625-inch tubes and 3-inch collector; Chrysler Part #451, #461; Ford Part #351, #361, #562, #562-4B; and Dynatech GM Part #701-16210, #701-10010.
  - 13.4.2 Collector and turn down length may be a maximum total of nineteen (19) inches. Header modifications are not allowed. Pan evac systems, exhaust sensors, merge collectors, cross-overs, inserts, cones and/or balance tubes are not allowed.
  - 13.4.3 Coated headers are permitted.
  - 13.4.4 Mufflers may be required at track's discretion. Recommended mufflers are Beyea Part #IDM-2311XS2, IDM-23S1-602, IDM-23D1, IDM-23S1, IDM-23S1-604, IDM-23S2, IDM-602-10S1, IDM-602-NSM, IDM-604-10S1 or IDM-604-S1.
  - 13.4.5 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.
- 13.5 OPTION #1 – Crate Engine:**
  - 13.5.1 GM Performance Parts (GPP) factory-sealed CT350 Chevy small block crate engine (Part No. 88958602 or 19258602).
  - 13.5.2 May utilize one (1) Holley four-barrel carburetor. Use of a spacer between carburetor and intake is optional, but spacer may be no more than one (1) inch thick and may not be throttle bore adjustable. Aerosol carburetors are not permitted. Carburetors shall be subject to claim, crate to crate only, as outlined in Claim Procedures in Article 16.
  - 13.5.3 Must utilize soft-touch rev control box with a 6200 RPM chip. This must be out of reach of the driver but easily accessible for inspection at all times. 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.
  - 13.5.4 Must have "Crate" sticker on racecar or crate engine is claimable. Any driver running a "Standard" engine with a "Crate" sticker will be disqualified. Any driver running with a crate motor will not be eligible to claim in that season. Any driver that claims a standard engine and switches to crate engine will be eligible to be claimed.
  - 13.5.5 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 \$2,000 fine and a 14 day suspension from all USRA-sanctioned events.
  - 13.5.6 Crate Engine is not subject to claim.
- 13.6 OPTION #2 – Standard Engine:**
  - 13.6.1 Must be stock appearing. Absolutely no changes allowed. Must use stock firing order for that make and model (GM to GM, Ford to Ford, etc.).
  - 13.6.2 Parts for 400 cubic inches or larger are not allowed. Stroke must match block. Fluid dampeners are permitted.
  - 13.6.3 Only stock appearing crank and rods are permitted. Lightweight cranks are not allowed.
  - 13.6.4 Only flat top or dished pistons are permitted. Gas port pistons and/or rings are not allowed.
  - 13.6.5 A minimum one (1) inch plug above the oil level in the side of the oil pan is recommended. If not utilizing a plug, oil pan will have to be removed at time of inspection.
  - 13.6.6 Accumulators are not allowed. External oil lines are not allowed.
  - 13.6.7 Only stock, unaltered two- or four-barrel cast iron intake manifolds are permitted. Approved aluminum intakes are permitted. Approved intakes are OEM unaltered two- or four-barrel Weiand 7547-1 (stamped or unstamped), Ford (7515, 8023 or 7516) or Chrysler (8022) or (7545); Edelbrock GM (2101) (2701) Ford (7121, 7181 or 7183) Chrysler (2915) or Performer 318/360 intake manifold (Part No. 2176). Porting, polishing or port machining is not allowed. Bowtie, aftermarket, SVO and W2, marine, VORTEC or other special production intake manifolds are not allowed. Ford may use OEM aluminum intakes. Under air or high rise intakes are not allowed. Intake manifolds must be made of cast iron or cast aluminum.



- 13.6.8 Cast iron stock production or unaltered aftermarket steel stock replacement heads are permitted. Porting and/or polishing is not allowed. GM cars must utilize 76cc heads (approved head numbers are 336, 339, 388, 441, 454, 487, 624, 813, 882, 991 and 993). Approved aftermarket head numbers are: GM – EQ Part #CH350I; Ford – World Products Part #53030; Chrysler – EQ Part #CH138B; RHS/Indy Part #20300 or #20301. Chevy heads valve size no larger than 1.94 intake and 1.50 exhaust. Any cast iron OEM Ford and Chrysler heads permitted with valves no larger than 2.04 inch intake and 1.70 inch exhaust. VORTEC, bowtie, SVO and/or W-2 heads are not allowed. Only stock diameter valve springs are permitted. Beehive valve springs are not allowed.
- 13.6.9 Roller cams and lifters are not allowed. Roller rocker arms are not allowed. Roller tip rocker arms are permitted. Altering lifter bores is not allowed. Chrysler may use OEM rocker arm bars.
- 13.6.10 Must be a maximum of one hundred seventy five (175) pounds of compression per cylinder. Compression will be checked with one spark plug removed and five engine strokes.
- 13.6.11 May be a maximum of 364 cubic inches for GM, 363 cubic inches for Ford and 370 cubic inches for Chrysler.
- 13.6.12 GM five and seven-tenths (5.7) inch rods only are permitted. Must be stock appearing "I" beam non-polished rod.
- 13.6.13 Mushroom lifters are not allowed (stock diameter only). Must match make and model.
- 13.6.14 Cap screw rods are permitted
- 13.6.15 Stud girdles are not allowed.

## **ARTICLE 14: WEIGHT**

- 14.1 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.
- 14.2 Overall weight of the racecar must be a minimum of two-thousand three hundred fifty (2,350) pounds.
- 14.3 Ballast:**
  - 14.3.1 May not be mounted in cockpit, or outside of body or hood area.
  - 14.3.2 Must be securely mounted, painted white and clearly marked with the car number.
  - 14.3.3 Must be attached with at least two (2) one-half (0.5) inch bolts.
  - 14.3.4 May not be attached to rear bumper.

## **ARTICLE 15: SAFETY**

- 15.1 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).
- 15.2 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- or thirteen-pound fire extinguishers are recommended.
- 15.3 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.
- 15.4 Helmets are mandatory and must be certified , SA2010 or SA2015.
- 15.5 Helmet must accompany driver and racecar at time of inspection.
- 15.6 Complete one- or two-piece fire suits of a flame retardant nature are mandatory.
- 15.7 Fire-resistant gloves and shoes are mandatory. Fire-resistant socks are recommended.
- 15.8 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 is recommended.
- 15.9 Metal to metal buckles are required on shoulder and seat belts.
- 15.10 Shoulder harness must be mounted securely to the main roll cage.
- 15.11 Where the belt passes through the seat edges, a grommet must be installed, rolled and/or padded to prevent cutting of the belt.
- 15.12 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.
- 15.13 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.
- 15.14 Fire-resistant safety neck collars are mandatory.

15.15 Absolutely no plastic except from edge of firewall to body skin and inner wheel tub to body skin.

## **ARTICLE 16: CLAIMING PROCEDURES**

- 16.1 Any driver possessing a valid USRA license may have the opportunity to execute a claim on the engine, shocks or carburetor of another driver's racecar. Crate Engines are not claimable, and drivers utilizing a Crate Engine are not eligible to claim another driver's engine.
- 16.2 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.
- 16.3 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.
- 16.4 Driver making claim must drive his/her race car immediately after finish of feature, under its own power, directly to the claim area.
- 16.5 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 be \$550 or exchange (see Rule 16.26) for engines (\$25 withheld for wrecker); \$50 each for shocks; or \$150 and exchange or \$300 for carburetors. Only four-barrel for four-barrel and/or two-barrel for two-barrel claims are permitted. Drivers claiming shocks may claim one (1) or more shocks during a single claim. For carburetor claims only, driver being claimed may opt for \$25 and exchange with driver making claim.
- 16.6 Engine claim does not include flywheel, clutch, pressure plate, bell housing, headers, carburetor, starter, motor mounts, sending units and switches for oil pressure and water temperature, carburetor adaptor, fan and pulleys, clutch ball, clutch arm, throw out bearing, dip stick, water pump, fuel pump, distributor, plug wires, external oil restrictors (must furnish plugs) or water outlet and restrictor.
- 16.7 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 select first. If the claimed driver is utilizing a non-claimable engine, the claiming driver may not choose another driver and will not be charged a claim on his/her claim card.
- 16.8 Driver is permitted one (1) claim per event, regardless of the outcome of that claim.
- 16.9 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.
- 16.10 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.
- 16.11 Any driver refusing to accept a claim will forfeit all cash and contingency winnings for that event.
- 16.12 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.
- 16.13 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.
- 16.14 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.
- 16.15 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.
- 16.16 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.
- 16.17 Driver may claim a maximum of three (3) times during the calendar year.
- 16.18 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.

- 16.19 Cost for replacement of a lost claim card is \$25.
- 16.20 Driver must compete in a minimum of three (3) consecutive events prior to the event at which he/she makes a claim.
- 16.21 The USRA reserves the right to disallow any claim at their discretion.
- 16.22 Drivers utilizing a provisional starting position in the main event are not allowed to make a claim in that event.
- 16.23 At their discretion, officials reserve the option to claim the engine, shock or carburetor of any racecar.
- 16.24 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 16.20 applies.
- 16.25 Disqualification shall not affect a legal claim. Claimed parts will be removed and transferred prior to any penalties being assessed.
- 16.26 After a driver's engine has been claimed by another driver, the claimed driver reserves the option to "exchange" engines instead of a "cash claim" for any subsequent claims made on that driver by any other driver. The cash price for the exchange shall be \$350 (\$50 withheld for wrecker) payable by the claiming driver. All other claim procedures apply.

## **AMENDMENTS**

None.

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