



# **POWRi B-Mod Specifications**

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## **1. Appearance**

- a. 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. The top numbers should be at least four (4) inches thick and twenty-four (24) inches high.
- b. 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.

## **2. Ballast**

- a. May not be mounted in cockpit, outside of body or hood area, or on any rotating or suspension parts. Weight must be mounted to the frame, roll cage or rearend housing only. Weight brackets for rearend housing must be made of steel.
- b. Must be securely mounted, painted white and clearly marked with the car number
- c. Must be attached with at least two (2) one-half (0.5) inch bolts with a maximum of one hundred (100) pounds per mounting. Any ballast weighing twenty-five (25) pounds or less may be mounted with one (1) one-half (0.5) inch bolt
- d. May not be attached to rear bumper.

## **3. Body**

- a. Plastic and/or composite body panels are not allowed except for the rear quarter panels and doors. The rear quarter and doors may be constructed from a fire-retardant plastic or composite material.
- b. An aluminum half-windshield may be used on driver's side of the front window opening only.
- c. 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 twenty (20) inches at bottom, going straight up to top.
- d. A minimum window opening of twelve (12) inches must be maintained on all four window openings (front, back, left, and right).
- e. Streamlining at the top of windshield is not allowed. Bodies must have standard appearing windshield opening and corner posts must follow standard configuration.
- f. Original roof line of vehicle (parallel to deck, front to back and side to side) must be maintained with a maximum of five (5) inches of slope from rear to front. No more than one (1) inch stiffener permitted at the rear of the roof and must turn down perpendicular to the ground. A maximum one (1) inch roof lips on the outside edge of roof are permitted. A maximum of four (4) inch vertical sides on the roof are permitted. Fiberglass roofs are permitted. Aluminum roofs are permitted but must remain flat and may not be concaved.
- g. Sail panels must be solid and of matching design with matching styles on both sides of the racecar. The sail panel may be no farther forward than the driver's seat and no farther back than rear of decking and no higher than the roof. Sail panel must be mounted within one (1) inch 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.

- h. Sail panels may have no more than four (4) inch consistent bow from top to bottom. A maximum eighteen (18) inches of sail panel along the roof and maximum five (5) inches tall at rear of decking and must be a straight line from back edge of roof to back edge of deck when the sail panel is held flat. The leading edge must be within two inches of 90 degrees from roof to quarter panel.
- i. Hood may be no more than two (2) inches above decking and must be sealed off from the driver. Reverse hood rake is not allowed. The hood must be level or slope forward toward the 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.
- j. Belly pans are not allowed. A belly pan will be defined as any object or material that alters the airflow under the racecar.
- k. Panel(s) in front of the right door next to the engine compartment is/are not allowed. Panels under the deck area mounted horizontal or vertical are not allowed.
- l. Bodies with excessive damage (as determined by an official) will not be allowed to compete.
- m. Spoilers are not allowed.
- n. The rear deck lid and/or trunk area must be covered. Deck height may be a maximum of thirty-nine (39) inches—NO TOLERANCE. Must have an access panel no smaller than six (6) inches wide and twelve (12) inches long in front of fuel cell in the deck to view pull bar location. Drop decks are not allowed. Deck may be a maximum length of one hundred twenty (120) inches from rear of engine. The deck must remain parallel to the frame and chassis and the same width from front to back and front of deck must be level to ground from side to side. The deck must remain within four inches of parallel to the motor measured at rear of deck. (See measurement “W” in body diagram). The deck may not be concaved. 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 as measured from the ground. Doors and quarter panels must be flush with deck. Doors and quarter panels must be a minimum twenty-two (22) inches and a maximum thirty-six (36) inches in material length. Doors and quarter panels must remain outside of outside frame rails. Deck width may be a maximum of sixty-six (66) inches and must be the same from front to rear.
- o. Maximum overall width of nose is forty-two (42) inches top and bottom. Nose must remain flat, parallel to the deck and may not be concaved. Two (2) 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. Maximum nose length is forty-two (42) inches as measured from center of lower ball joint—NO TOLERANCE.
- p. Tires must remain the widest part of the racecar. No part of the body may extend beyond the outside edge of the tires. Exception: The lower part of the left rear quarter panel’s wheel opening’s front edge may extend a maximum one inch outside the tire, but wheel opening must remain no smaller than outside diameter of tire.
- q. Excluding hood and nose piece, body may extend no further forward than the back of the engine block. Exception: Bottom of door may extend a maximum of eight (8) inches ahead of rear of block.

- r. A maximum of five (5) inch plastic skirt on bottom of doors and quarter panels and nose piece is permitted. The body must remain a minimum of three (3) inches from the ground and nose must remain a minimum of five (5) inches from the ground. Engine covers are not allowed. Fins, wings, lips, or other air spoilers (other than noted) are not allowed. A maximum one-half (0.5) inch break for rigidity on body panels is permitted. Any approved lip(s) must be the same from side to side.

#### **4. Bumpers**

- a. Center of bumpers (front and rear) must be at least sixteen (16) inches from the ground and no more than twenty (20) inches from ground.
- b. 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 diameter tubing with a minimum wall thickness of sixty-five one-thousands (.065) inch and must be able to support the racecar if lifted by a tow vehicle. The top bar must be directly above bottom bar (not off centered).
- c. Rear bumpers and side rail bars must not extend beyond the width of the rear tires. Tires must be the widest part of the body.
- d. Rear bumpers may be constructed of tubing or flat stock and must protect the fuel cell.
- e. Any aluminum of the nose may not extend outside of front bumper. Plastic valances and/or plastic nose pieces are permitted but no plastic may extend in front of the bumper. Plastic may flare past the sides of the bumper, but all nose piece components must be a minimum of five (5) inches above the ground. 1.19.6 Front bumper may be a maximum width of forty-four (44) inches from outside to outside.
- f. Bumper may be no farther forward than forty-two (42) inches as measured from the center of the lower ball joints.

#### **5. Braking System**

- a. Must be operating on all four wheels and must lock up all four wheels during inspection.
- b. Must have caliper and rotor on all four wheels. The caliper and rotor must be standard size and weight. Vented rotors are required on front and rear wheels.
- c. Electronic brake actuators are not allowed. Brake shut offs are not allowed.
- d. Calipers may not be lightened, must be OEM, made of steel and must match front to front and rear to rear. Brake pads may not be altered or lightened and must match side to side.
- e. Rotors must be steel and may not be lightened, scalloped, slotted, or drilled. Rotors may be re-drilled for different bolt patterns or larger studs. Oil bath hubs are not allowed.
- f. Front-to-rear brake bias is permitted (no left to right).
- g. Brake floaters are not allowed.
- h. Brake lines must be visible.
- i. Must maintain minimum OEM dimension for hubs, rotors, pads, and calipers.

#### **6. Cockpit**

- a. Loose objects and/or weights are not allowed.
- b. Air bags are not allowed. Rear view mirrors are not allowed.
- c. Other than the gas pedal, brake pedal and front-to-rear brake bias, any knobs, handles, or levers used for adjustment of carburetor, ignition timing and/or suspension is not allowed.
- d. The floor and firewall must be complete in the driver's compartment. Minimum 0.125-inch aluminum, or 0.060-inch steel, complete floor pan required. 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.

## 7. Concept Engine

- a. Must be stock appearing. Any American make is permitted. Absolutely no changes allowed. Must use stock firing order for that make and model (GM to GM, Ford to Ford, etc.). Titanium is not allowed.
- b. May be a maximum of 360 cubic inches. (370 c.i. for Chrysler).
- c. Must be a maximum 9.5:1 compression. Only standard weight (minimum 450 grams) flat top or dished pistons are permitted. Must use standard weight wrist pins (minimum 130 grams). Must use minimum 1.5mm, 1.5mm, 3mm piston rings. Maximum six one hundredths (.06) inch oversized allowed.
- d. Aftermarket and splayed main cap blocks are not allowed. Grinding, polishing, painting, or coating of internal engine parts are not allowed. Altering lifter bores are not allowed. Lifter bore valley vent tubes are not allowed. Block casting numbers must remain visible. Approved aftermarket blocks are permitted. Approved aftermarket blocks include DART #31161111 or Brodix #BRS400035842 or GM #12480047 or World Products #084010.
- e. Only stock appearing crankshafts are permitted. Lightweight cranks are not allowed. No undercut, bull nosed, gun drilled, or knife edge crankshafts allowed. Balancing permitted by drilling only. Resizing journals to a maximum of .030 inch under is permitted. Stroke must match block.
- f. Lightweight, aluminum and/or fluid dampeners are not allowed. Any stock OEM steel balancer is permitted.
- g. Must be stock appearing I-beam non-polished connecting rod. Aluminum or light weight is not allowed. GM five and seven-tenths (5.7) inches or six (6) inches rods are permitted. Only standard size rod journals and wrist pins (Chevrolet rods 2.100/.927) are permitted. Cap screw rods are permitted. Minimum weight of 530 grams is required.
- h. Steel oil pans only with a minimum one (1) inch plug above the oil level in the side of the oil pan. If not utilizing a one (1) inch plug, oil pan may have to be removed for inspection. Wet sump oil systems only.
- i. Only stock, unaltered two-barrel low-rise cast-iron intake manifolds or Approved aluminum intakes are permitted. Approved aluminum intakes are GM - Edelbrock (#2101 or #2701) or Weiand (#7547 or #7547-1); Ford - Edelbrock (#2121 or #2181 or #2665) or Weiand (#7515 or #8023 or #7516); Chrysler - Edelbrock (#2176) or Weiand (#7545 or #8022). Porting, polishing, powder coating and/or port machining is not allowed. Bowtie, aftermarket, SVO and W2, marine, VORTEC or other special production intake manifolds are not allowed. External cooler lines from back of intake to front of intake is permitted.
- j. Cast iron stock production or 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). Aftermarket head numbers are GM -EQ Part #CH350I; Dart Part #10024267 or #10024360; or World Products Part #043600 or #042670; Ford -World Products Part #53030; Chrysler -EQ Part #CH318B. Heads may be flat milled to reach the 9.5:1 compression rule. Valve size no larger than 2.02 intake and 1.60 exhaust. VORTEC heads are not allowed. Intake valves must weigh a minimum of one hundred three (103) grams. Exhaust valves must weigh a minimum of eighty-seven (87) grams. Only stock diameter valve springs are

permitted. Valve springs may not exceed a seat pressure of one hundred twenty (120) pounds. Beehive valve springs are not allowed. Only stock steel valve spring retainers permitted.

- k. Screw-in studs, guide plates and poly-locks are permitted.
- l. Roller cams and lifters are not allowed. Only flat tappet hydraulic camshafts with four-hundred fifty thousandths (0.450) inch maximum lift at the valve or three-hundred thousandths (0.300) inch lift at the camshaft are permitted. Roller Rocker arms are not allowed. Stock-type stamped steel rocker arms or cast steel rocker arms with roller tips are permitted. Must maintain an OEM rocker arm ratio (1.5 for GM). Chryslers may utilize OEM steel shaft rockers but may not exceed one hundred twenty (120) pounds of valve spring seat pressure and must maintain OEM valve spring dimensions. Under valve cover pressurized valve train oiling systems are not allowed.
- m. Mushroom lifters are not allowed. Steel stock diameter lifters only and lifter must collapse one-tenth (0.1) inch minimum
- n. Stud girdles are not allowed.
- o. Any Holley 4150 Series four-barrel carburetor is permitted
- p. Only non-stepped headers are permitted. Must follow all header rules
- q. Must utilize a rev limiter with a maximum setting of 6,500 RPM
- r. Overall racecar weight must be a minimum two-thousand five hundred (2,500) pounds
- s. Concept engines are not subject to claim but must have "Concept" decal prominently displayed and affixed near the A pillar or otherwise engine is claimable. Any driver utilizing a Concept Engine will not be eligible to claim in that season. Any driver that claims a Standard Engine and switches to Concept Engine is eligible to be claimed.
- t. All fuel rules apply.

#### **8. Crate Engine**

- a. GM Performance Parts (GPP) factory-sealed CT350 Chevy small block crate engine (Part No. 88958602 or 19258602): includes four-bolt-main block, 9.5:1 hypereutectic pistons, cast iron crankshaft, GM iron Vortec cylinder heads, high-rise dual-plane intake manifold, 8-quart single kick-out circle track oil pan, valve cover kit with breather tube and breather, unique dual-pattern cam and special "Kool nut" rocker arm nut design.
- b. May utilize one (1) Holley 4150 Series four-barrel carburetor (see Article 7.3.4). 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.
- c. Must utilize soft-touch rev control box with a 6,200 RPM limit. This must be always out of reach of the driver but easily accessible for inspection.
- d. Crate Engine is not subject to claim but must have a prominently displayed "Crate" decal affixed near the A pillar or Crate Engine is claimable. Any driver running a "Standard" engine with a "Crate" decal will be disqualified.
- e. 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 the driver being disqualified from that event.
- f. GM seal bolt exception is USRA, USMTS or approved rebuild seals.

#### **9. Drive Shaft**

- a. A loop is required and must be constructed of at least one-quarter (0.25) 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-quarter (0.25) inch by one (1) inch solid steel fastened to cross member are permitted.

- b. Must be a minimum two (2) inches in diameter.
- c. Must be painted white.
- d. Aluminum drive shafts are not allowed.
- e. Carbon fiber drive shafts are permitted but must be painted white.

## **10. Electrical System**

- a. Battery
  - i. Must be securely mounted inside frame rails and covered.
  - ii. One (1) 12-volt battery only (no 16-volt batteries).
  - iii. Voltage converters are not allowed.
  - iv. All battery posts must be securely covered.
- b. Ignition
  - i. Must utilize OEM distributor and ignition. Stock-appearing coils, coil covers and modules only. Square coil covers are not allowed. Multiple spark ignitions are not allowed. Crank trigger ignitions are not allowed. GM external coils are not allowed. All ignition parts must remain out of the reach of the driver.
  - ii. Kill switch required within easy reach of the driver. The switch must be clearly marked "OFF" and "ON."
  - iii. GM must utilize OEM GM HEI distributor. Chrysler and Ford may use aftermarket HEI (bushing type only). Roller bearings are not allowed. Must utilize stock-type components.
  - iv. Open circuit board modules are not allowed.
- c. Digital gauges are not allowed. Digital tachometers are permitted. Cameras pointing to any moving parts, suspension parts and/or gauges are not allowed. Except for memory recall tachometers, electronic monitoring computer devices capable of storing and/or transmitting information are not allowed.
- d. Wiring elements must be accessible for technical inspection. Any racecar advancing spots and missing will be subject to disqualification.
- e. All standard engines must utilize a soft-touch rev control box MSD part #8727CT with a 7,000 RPM maximum limit. All crate engines (see Rule 13.6) must utilize a soft-touch rev control box MSD part #8727CT with a 6200 RPM maximum limit. All concept engines (see rule 13.8) must utilize a soft touch rev control box MSD part #8727CT with a 6500 RPM maximum limit. This must always be out of reach of the driver but easily accessible for inspection. A Lexan window above ignition box for easy viewing of the rev limiter is highly recommended. MSD part #8727CT rev control box is required with unaltered wiring harness and will be required on all race cars. Ground wire must be visible for inspection, and it is recommended that it be mounted near or on the distributor.
- f. Transponders must be mounted vertically on or behind the engine mid-plate, less than two (2) feet from the ground and unobstructed by any metal.

## **11. Engine**

- a. Overflow tubes must be directed toward the ground and inside the frame rails.
- b. The radiator must be mounted in front of the engine. Aluminum pulleys and radiators are permitted.
- c. All belt driven components must be mounted on the front of the engine. Electric water pumps and/or fans are not allowed. Engine oil coolers are not allowed. Air pumps are not allowed.
- d. Offset must be within two (2) inches of centerline of front cross member.
- e. Must be a minimum of eleven (11) inches from ground to front center of crankshaft.

## **12. Exhaust & Mufflers**

- a. Tri-Y headers are not allowed. Round tube headers only. All primary tubes must enter one collector at the same point. Concept Engines must utilize non-stepped headers only. Standard Engines and Crate Engines may utilize stepped headers. Header wrap is not allowed.
- b. 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. Exhaust through body panels or fenders is not allowed.
- c. Mufflers are recommended. Mufflers may be required at the track's discretion.
- d. Mufflers are recommended. Mufflers may be required at the track's discretion. 13.4.4 Exhaust sensors, merge collectors, dividing collectors, venturi collectors and/or extension cones are not allowed. Collector extension and/or muffler and turn down may not exceed twenty-four (24) inches and must maintain a consistent inside diameter.
- e. Zoomies, Crossovers and/or 180s are not allowed.
- f. Oil pan evac systems are permitted but must enter exhaust header from the side of the collector only. External pump systems are not allowed.

## **13. Frame**

- a. Factory production complete full-perimeter 1960 or newer parallel American passenger car frames only. Frames may be cut in the rear only at a point equal to or behind rear of engine.
- b. May only be altered for the installation of springs and shocks. The top of frame may not be altered for upper "A" frame clearance.
- c. All components must be made of steel and be properly welded.
- d. 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. All factory holes must be present for inspection. All measurements must meet the frame diagram tolerances listed or be within one-half (0.5) inch (either way) of OEM measurements on any measurement not listed on frame diagram—NO TOLERANCE.
- e. Minimum height from ground is four (4) inches. Exception: Front cross member may be notched for radiator clearance only. Outside frame rails may not be raised. (See measurement "L" on frame diagram).
- f. The rear frame may be altered to accept leaf or coil springs.
- g. Hydraulic, ratchet or electric weight jacks are not allowed anywhere on the racecar. Aluminum jack bolts are not allowed.
- h. The wheelbase must be a minimum of one-hundred eight (108) inches on both sides and a maximum of one hundred twelve (112) inches on both sides (no tolerance).
- i. Tubular front clips are not allowed.
- j. Overall width of the racecar may not exceed seventy-eight (78) inches. Width shall be measured from the widest points on each side of the racecar (the tires).
- k. 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.

## **14. Fuel System**

- a. Fuel
  - i. Automotive gasoline and racing gasoline are permitted. Oxygenated fuel is not allowed; however, an ethanol blend is allowed up to 85%. Additives of any kind are not allowed.



- ii. 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. Fuel is tested and must pass using a Digitron dielectric meter. It is the responsibility of the driver and/or owner to have fuel tested.
  - iii. Upper cylinder lubricants are not allowed.
  - iv. Electric fuel pumps are not allowed. Belt-driven fuel pumps are not allowed. Pumps must bolt to block in stock location.
- b. Carburetor
- i. Must be naturally aspirated.
  - ii. Fuel injection is not allowed. Aerosol carburetors are not allowed.
  - iii. The Standard Engine must utilize a gauge-legal, unaltered Holley (or Holley-type) 500 CFM two-barrel (part #4412). HP and/or XP carburetors are not allowed. Aftermarket metering blocks are permitted. 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.
  - iv. Crate engines and concept engines are 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.
  - v. 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.
- c. Fuel Cell
- i. 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.
  - ii. Must be enclosed in a steel container and must be protected in rear of axle by roll cage tubing mounted securely.
  - iii. No part may be lower than protective tubing. Protective tubing must be no wider than six (6) inches on both sides. Fuel cells may be no lower than ten (10) inches from the ground.
  - iv. 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.
  - v. Limited to a maximum capacity of thirty-two (32) gallons.

## 15. Rearend

- a. Any passenger car- or truck-type is permitted. Aluminum is not allowed except lowering blocks, axle cap, U-joint caps, and drive plate.
- b. Nine (9) inch Ford rearend is permitted (floater recommended).
- c. Quick change rearend is permitted with steel axles and steel axle tubes only. Must use a ten (10) inch ring gear and minimum one (1) inch wide solid spur gears.
- d. Cambered rearends are not allowed (one-piece drive flange only).
- e. Traction devices are not allowed (includes Gold Track, True Track, or similar type components)

- f. 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
- g. Frame- or cage-mounted, forward and/or backward rearend travel stops are not allowed.

#### **16. Roll Cages**

- a. The main roll cage must consist of continuous hoops of round steel tubing and must be acceptable to officials. Acceptable tubing is as follows: minimum one and one-half (1.5) inches diameter by ninety-five one-thousandths (0.095) inch wall thickness for main four-point roll cage. Any tubing measuring one and three-quarter (1.75) inches diameter will be permitted a minimum wall thickness of eighty-three one-thousandths (.083) inch. Any tubing under one and three-quarter (1.75) inches diameter will be required to be a minimum ninety-five one-thousandths (0.095) inch wall thickness tubing. Sliding and/or slip joint roll bar unions associated to the main roll cage are not allowed. A minimum of three (3) driver side door bars must be parallel to ground and located perpendicular to the driver 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. Driver side door bars and uprights must be at least one and one-half (1.5) inches in diameter at a minimum of eighty-three one-thousandths (0.083) of an inch wall thickness. Steel door plate, 18 gauge or forty-nine one-thousandths (0.049) inch minimum thickness must be securely welded to outside of driver side door bars and cover area from top door bar to bottom door bar and from rear hoop down-post to five inches in front of seat. Passenger side must have at least one cross door bar, horizontal or angled, minimum one and one-quarter (1.25) inch O.D. with eighty-three one thousandths (0.083) inch wall thickness, and one top horizontal door bar, minimum one and one-half (1.5) inch O.D. with eighty-three one thousandths (0.083) inch wall thickness.
- b. 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.
- c. Installation and workmanship must be acceptable to officials.
- d. Must be frame-mounted in at least six (6) places.
- e. Must consist of a configuration of front and rear hoops connected by tubing on the sides or side hoops meeting the minimum tubing dimensions.
- f. With helmet on and driver securely strapped into the racing seat, the top of driver's head must not protrude above the roll cage. A cross bar in halo is required.
- g. Must have a protective screen or bars in front window opening in front of driver's face.
- h. 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.
- i. Brace bars forward of the roll cage may not be higher than the stock hood height.
- j. Adjustable bars on the frame and/or roll cage are not allowed. Removable bars are permitted.

#### **17. Seat**

- a. Factory-manufactured racing seats are mandatory and must be acceptable to officials.
- b. Homemade aluminum, plastic or fiberglass seats are not allowed.
- c. Must be installed with minimum three-eighth (3/8)-inch fasteners and washers and seat back may not be moved back further than rear edge of quarter post.
- d. High-back aluminum seats only. Full containment racing seats are strongly recommended.

## **18. Shocks and Springs**

- a. One (1) shock per wheel is permitted and rear shocks must be mounted within twenty-five (25) degrees of vertical. Only conventional type (closed on one end) single shaft shocks are permitted. Rear end dampener shocks are not allowed. Rear shocks may be mounted on a weight-jack-type adjustable bolt.
- b. The shock shaft must be able to compress all the way into shock body. Shock shaft must move in both directions from its installed position at ride height. Shock cannot preload the spring.
- c. Shock covers are permitted but may cover only the front half of shock and must be mounted directly to shock. Bump stops (internal or external) are not allowed. Shock rubber stoppers are not allowed.
- d. Steel shock mounting bolts only. Aluminum and/or titanium is not allowed.
- e. Bladder-type and/or Schrader valves are not allowed. Coil-over, remote and/or air reservoir shocks are not allowed. Canister and/or adjustable shocks are not allowed. Bulb-type shocks are not allowed. Air shocks are not allowed. Aluminum shocks are not allowed. Inverter shocks, J-damper shocks, active mass damper shocks and/or through-rod-designed shocks are not allowed. Dummy shocks are not allowed. Aluminum shaft guides are permitted.
- f. One spring slider on each rear wheel is permitted. Coil springs must be at least four and one-half (4.5) inches outside diameter. Steel springs only. Torsion bars are not allowed in rear. Spring rubbers are not allowed. Progressive, tapered, stacked and/or welded springs are not allowed.
- g. Leaf Spring Rule: Must use steel, multi-leaf springs. Must be same number of full springs on each side (half springs are not allowed). Additional suspension components are not allowed. Adjustable lowering blocks are permitted.
- h. Mono-Leaf Spring Rule: Must utilize coil springs centered on top of rearend housing.
- i. Must adhere to either Leaf Spring Rule or Mono-Leaf Rule. Mixing and matching is not allowed.

## **19. Standard Engine**

- a. Must be stock appearing. Any American make is permitted. Absolutely no changes allowed. Must use stock firing order for that make and model (GM to GM, Ford to Ford, etc.). Titanium is not allowed.
- b. May be a maximum of 360 cubic inches. (370 c.i. for Chrysler).
- c. Must be a maximum 9.5:1 compression. Only flat tops or dished pistons are permitted.
- d. Must appear strictly stock for that model and make and in the original mounts. Parts for 400 cubic-inch or larger engines are not allowed. Stroke must match block. Approved aftermarket blocks are permitted. Approved aftermarket blocks include DART #31161111 or Brodix #BRS400035842 or GM #12480047 or World Products #084010.
- e. Only stock appearing crankshafts are permitted. Lightweight cranks are not allowed. No undercut, bull nosed, gun drilled, or knife edge crankshafts allowed.
- f. Lightweight, aluminum and/or fluid dampeners are not allowed.
- g. GM five and seven-tenths (5.7) inch or six (6) inch rods are permitted. Must be stock appearing I-beam non-polished rod. Only standard size rod journals and wrist pins (Chevrolet rods 2.100/.927) are permitted. Aluminum and/or light weight is not allowed. Cap screw rods are permitted.

- h. A minimum one (1) inch plug above the oil level in the side of the oil pan is recommended. If not utilizing a one (1) inch plug, oil pan may have to be removed at time of inspection.
- i. Only stock, unaltered two-barrel low-rise cast-iron intake manifolds or Approved aluminum intakes are permitted. Approved aluminum intakes are GM - Edelbrock (#2101 or #2701) or Weiand (#7547 or #7547-1); Ford - Edelbrock (#2121 or #2181 or #2665) or Weiand (#7515 or #8023 or #7516); Chrysler – Edelbrock (#2176) or Weiand (#7545 or #8022). Porting, polishing, or port machining is not allowed. Bowtie, aftermarket, SVO and W2, marine, VORTEC or other special production intake manifolds are not allowed. External cooler lines from back of intake to front of intake is permitted.
- j. Cast iron stock production or aftermarket steel stock replacement heads are permitted. Porting, polishing and/or powder coating 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). Aftermarket head numbers are GM – EQ Part #CC167ES2 or #CH350I; Dart Part #10024267 or #10024360; World Products Part #043600 or #042670; Ford – World Products Part #53030; Chrysler – EQ Part #CH318B; RHS/Indy Part #20300 or #20301. Heads may be flat milled to reach the 9.5:1 compression rule. Valve size no larger than 2.02 intake and 1.60 exhaust. VORTEC heads are not allowed. Beehive valve springs are not allowed.
- k. Screw-in studs, guide plates and poly-locks are permitted.
- l. Roller cams and lifters are not allowed. Roller rocker arms are not allowed (stock-type stamped steel rocker arms or cast steel rocker arms only). Roller tip rocker arms are permitted. Chryslers may utilize OEM steel shaft rockers but may not exceed one hundred twenty (120) pounds of valve spring seat pressure and must maintain OEM valve spring dimensions. Under valve cover pressurized valve train oiling systems are not allowed.
- m. Mushroom lifters are not allowed (stock diameter only). Must match make and model.
- n. Stud girdles are not allowed.
- o. Must utilize a rev limiter with a maximum setting of 7,000 RPM.

## **20. Steering**

- a. Must be OEM and remain within original bolt pattern for type of frame used. The idle arm, pitman arm and center link must match the frame. The outer tie rod end and adjustment sleeve may be replaced with a heim end and steel tube.
- b. Rack and pinion are not allowed.
- c. 600 steering gear boxes are not allowed.
- d. May be modified to suit the driver but must remain on the left side of cockpit (no center steering).
- e. Quick-release metal coupling on steering wheel is mandatory. Plastic couplings are not allowed.

## **21. Suspension**

- a. Front suspension must remain stock-type for the type of frame being used. Lower A frame must be unaltered stock stamped steel and in OEM location and remain OEM dimensions with OEM type bushings only. Mono ball or heim style bushings are not allowed. One-piece steel, rubber, polyurethane, or nylon bushings only No offset or bearing type bushings allowed. Inner steel sleeve in bushing must be present. Screw-in ball joints are permitted. GM 1978-1988 metric “G” body frames are allowed to use Nova lower “A” frames. Front and/or rear suspension travel limiting devices are not

allowed except for tether chains (see Rule 5.10). Front and/or rear suspension must travel freely in both directions from ride height measured at the shock.

- b. Aluminum and/or titanium components are not allowed. Magnet must stick to all components Exception: aluminum cross shafts are permitted. Stainless steel is permitted. Gun-drilled, tubular and/or hollow bolts or studs are not allowed anywhere on the racecar.
- c. Steel tube-type upper A-frames are permitted and may be moved but pivot points must remain on the top of the frame rail.
- d. Stock unaltered passenger car spindles only must match side to side make and dimensions. Fabricated spindles and/or steering arms are not allowed.
- e. Front sway bars may be used. Must be made of steel and may be attached to the bottom A-frame using steel Heim joints. Must be solid full-length OEM.
- f. A solid rear Panhard bar or solid J-bar may be used. J-bar must be mounted to right side of pinion and go over the top of the driveshaft to left side of the chassis. Must be made of steel and may be attached by using a minimum three-quarter (0.75) inch i.d. steel Heim joint. Minimum length must be nineteen (19) inches measured from center of Heim to center of Heim.
- g. Two-link suspension only. Four-link type suspensions are not allowed. All suspension bars and/or arms must remain solid and straight, a minimum fifteen (15) inches from center of Heim and must mount on the bottom side of rear end housing. Swing arms are not allowed. Solid pull bars only and centerline of pull bar must be mounted above driveshaft and within one (1) inch of driveshaft centerline. Lift arm is not allowed.
- h. Suspension or rearend parts, including jack bolts and mounting brackets, must be made of steel. Spring and suspension covers are not allowed. Tarps and/or covers on racecar are not allowed in tech area.
- i. Floating suspensions are not allowed. All bird cages and/or brackets must be welded to the rearend housing.
- j. A tether chain is permitted on front and rear suspension. The chain must be mounted from lower A-frame to frame or cage on front end and on top of axle tube to frame or cage on rear end. Chains must be mounted vertical and solid and must remain loose at ride height. Only the left side rear chain may utilize a rubber biscuit. Springs of any kind are not allowed on chains. Frame or cage rearend travel stops are not allowed (Exception: under slung chassis and tether chains).

## **22. Tires**

- a. The only tire permitted is the American Racer G60-15 KK704 (Short, Tall or X Tall). Tires must durometer 50 or harder at the conclusion of any race.
- b. 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.
- c. Grooving and/or siping is permitted.
- d. Sidewall markings must remain visible. Buffing and/or removing compound designations is not allowed.
- e. Added ballast to the inside of any tire is not allowed.

## **23. Transmission**

- a. OEM three-speed, four-speed and five-speed and 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.

- b. “In and out” boxes are not allowed. Ball spline transmissions are not allowed
- c. May all be clutch-operated or an OEM automatic with a coupler. May use a hand or clutch pedal operated ball valve for neutral.
- d. Aftermarket transmissions are permitted. Approved aftermarket transmissions are Bert (Part #LMZ/GEN II), Brinn (Part #70001), Brinn Predator (Part #70600), Falcon (Part #60100) and RaceGator (Part #140002/140002-C), Jerico (Part# JER0021) and Mitchell Machine Bullet Tranny with internal clutch. Ball Spline transmissions are not allowed.
- e. Clutch must be inside of bell housing for OEM production-type transmissions.
- f. The starter must bolt to engine block or factory location.
- g. 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.
- h. Aluminum flywheel is permitted. Must have full-sized explosion proof, aluminum, or steel bell housing. Aluminum must be SFI approved (Note: GM bell housing is not SFI approved). Flywheel must bolt to crankshaft. Clutch must bolt to flywheel, a minimum six and one-quarter (6.25) inch clutch.
- i. Must have approved scatter shield or blanket. Scatter shield may be constructed of one-eighth (0.125) inch by three (3) inch steel, two-hundred seventy (270) degrees around flex plate or flywheel. Alternatively, automatic and/or aftermarket transmissions may utilize an SFI-certified aftermarket guard. Flex plates must be SFI certified.
- j. Internal clutches are not allowed except for approved aftermarket transmissions.

#### **24. Weight**

- a. 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.
- b. The overall weight of the racecar must be a minimum of two-thousand five hundred (2,500) pounds.

#### **25. Wheels**

- a. Must be fifteen (15) inches in diameter and eight (8) inches in width.
- b. Bleeder valves are not allowed.
- c. Must be reinforced steel only.
- d. 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 to the overall width of the wheel.
- e. Homemade mud caps are not allowed.
- f. Wheel covers are permitted on right side wheels only. Inner mud plugs are permitted.
- g. Wide five-wheel adaptors are not allowed. Steel lug nuts are only permitted.
- h. Spacer between hub and wheel is permitted but must be made of aluminum only and overall width of racecar cannot exceed seventy-eight (78) inches measured from the top of left tire to the bottom of the right tire (at widest part)
- i. Added ballast to any wheel is not allowed.
- j. Solid and/or non-spoked wheels are not allowed.