



POWRi Late Model Specifications

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1. Bodies

- a. The nose piece and roof must match the body style of the car.
- b. All cars must have a minimum of one-half inch (1/2") and a maximum of two (2) inches of roll at top of fenders, doors, and quarter panels. A sharp edge or angle will not be permitted. Body roll must go from sides over interior, not interior over sides.
- c. Floorboards and firewalls must cover the driver's area and be constructed to provide maximum safety.
- d. The driver's seat must remain on the left side of the driveline.
- e. Front window bars are mandatory.
- f. Legible numbers, at least eighteen inches (18") high are required on each side of the car and roof.
- g. No fins or raised lips of any kind are permitted anywhere along the entire length of the car.
- h. Right side body line must be straight from front to rear with a one-inch (1") tolerance up and down, left and right.
- i. No "slope noses" or "wedge cars" permitted. Noses must be stock appearing, subject to Series template.
- j. No "belly pans" or any type of enclosure on bottom of cars will be permitted. Skid plate to protect oil pan is permitted.
- k. No wings or tunnels of any kind are permitted underneath the body or chassis of the car. A maximum of one (1) stone deflector, for rear mounted oil pumps, oil filters, and for the main oil tank will be permitted. The deflector may be made of steel, aluminum, carbon fiber, or heavy gauge wire. Can run from rear of motor mount to in front of the four bar brackets not to cover the bracket. Not to be above the top frame rail. Not to exceed below the bottom frame rail.
- l. All body panels must be solid. No holes, slots, or air gaps are permitted. NACA ducts or NACA style ducts are not permitted. One hole for the interior (deck) mounted oil cooler is permitted.
- m. No panels of any kind under the rear deck running from the front to the rear of the car. Bracing from the fuel cell top from front to rear is legal.
- n. Any air cleaner scoops used must be positioned in front of or around the air cleaner and cannot exceed one (1") inch in height above any part of the air cleaner. The scoop cannot be designed with fins or raised edges to direct airflow. The scoop cannot extend behind the rear of the air cleaner and must have a maximum width of seventeen inches (17") at the rear, with a maximum of ten inches (10") width at the front and cannot have more than one inch (1") opening in height at the front.
- o. No cockpit or driver adjustable shocks, hydraulic or pneumatic weight jacks, trackers, MSD boxes or similar adjustable components of any kind are permitted inside the cockpit of the car. Taping over of any adjuster is not permitted. The offending component must be removed from the cockpit.

2. Brakes, Brake Components, Wheel Hub

- a. Must be equipped with sufficient four (4) wheel braking systems.
- b. On track three-wheel braking is allowed.
- c. Brake rotors must be manufactured of magnetic or stainless steel. No titanium or carbon fiber brake rotors are permitted.
- d. Brake rotors must be used as produced by the brake rotor manufacturer.
- e. Brake calipers must be manufactured of aluminum.

- f. The brake caliper including brake caliper pistons must be used as produced by the brake caliper manufacturer.
- g. Wheel hubs must be manufactured of aluminum or magnesium.
- h. Wheel hubs must be used as produced by the wheel hub manufacturer.
- i. The combined weight of the wheel hub, wheel bearings and seal, spindle nut and washers, brake rotor and attaching hardware, the axle cap, and the wheel spacer must not exceed 27 pounds.

3. Chassis

- a. No titanium chassis or suspension components
- b. No titanium fasteners

4. Cold Air Box

- a. Cold Air Box will be allowed for 2019. NO Ducting, NO Vented, must remain solid.

5. Deck Height

- a. The maximum height from the ground to the top of the rear deck at the top of the rear quarter panels (spoiler hinge bottom) is thirty-eight inches (38"). One inch (1") tolerance.
- b. Deck height will be measured with the nosepiece splitter at a maximum height of fifteen inches (15") with no tolerance from the ground to the top (highest point) of the splitter.

6. Doors

- a. Door to door cannot exceed seventy-seven inches (76") in width at the top of the doors. (1 tolerance)
- b. Door to door cannot exceed eighty-nine inches (89") in width at the bottom in the center of the car.
- c. At no point can the door sides break in towards the center of the car between the top and bottom measurements. One-inch (1") tolerance including plastic.
- d. The minimum ground clearance permitted is three inches (3").
- e. No Plastic or Carbon Fiber Doors allowed.

7. Drive Shafts

- a. All drive shafts must be a minimum of two inches (2") in diameter. All drive shafts must be painted silver or white.
- b. Only one drive shaft is permitted.
- c. The drive shaft must be protected with a secure drive shaft hoop or sling.

8. Engines

- a. OPTION 1 - Brodix 23-degree Head Spec Engine, Dry Sump System are ok.
 - i. ALL blocks must be steel blocks. NO WIDE BORE
 - ii. Approved product numbers for the stamped Brodix Aluminum spec head are SPCH (Chevy), SPFO (Ford) and SPMO (Mopar) for ULMA. USMTS/USRA stamped Brodix Spec head will be allowed.
 - iii. Removing, relocating, grinding, polishing or defacing of any cast letters and/or numbers is strictly forbidden.
 - iv. Valve guides must retain the original angle and spacing as manufactured. Valve guides may not be tapered, thinned, or shortened whatsoever. The minimum valve stem diameter must be five-sixteenths (.310) inch.
 - v. Absolutely no welding or adding material of any kind.
 - vi. 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.
 - vii. Heli coils are permitted for repairs.

- viii. Absolutely no grinding or polishing of any kind anywhere on the casting, except for pushrod clearance.
- ix. Factory CNC chambers may not be altered in any way.
- x. Internally repaired BRODIX aluminum spec head must be recertified by BRODIX. BRODIX aluminum spec head checking fixtures may be used by tech officials to check specifications and dimensions.
- xi. Valve angle can and will be checked on any of the 16 valves, any one valve angle found not within tolerance will result in disqualification! Any car checking outside the tolerance will be disqualified. Any car found with this rule infraction must go through a pre-tech inspection before racing another event. Roller cams allowed.
- b. No wide bore blocks allowed, Oil coolers and remote filters are permitted. Oil accumulator okay but must have only one line. Oil return line from front of head to oil pan will be permitted (2 lines allowed on right side; 1 line allowed on left side). ALL blocks must be steel blocks.
- c. Modifications to the block to alter valve angle are not allowed. A one (1) inch inspection hole in the oil pan is recommended for oil-pump inspection. If pan has no inspection hole, driver may ask to remove or drain the pan for oil-pump inspection. Castings (includes block, heads, and intake) and fittings may not be altered. 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 thirty (30) pounds of weight must be added 12" on center in front of the engine plate; 15 lbs. on each upper frame tube (measured from front of engine plate to center of weight). Weights will not exceed 12" in total length. NO EXCEPTIONS!
- d. OPTION 2 - 23 Degree Open Head Engine
 - i. 23 Degree Open Head Engine: Dry Sump Systems are ok. NO WIDE BORE. NO RAISED RUNNER HEADS ALLOWED.
 - ii. Modifications to the block to alter valve angle are not allowed. A one (1) inch inspection hole in an oil pan is recommended for oil-pump inspection. If the pan has no inspection hole, the driver may be asked to remove or drain the pan for oil-pump inspection. Castings (includes block, heads, and intake) and fittings may not be altered (porting and polishing is allowed). Machine work on the outside of the engine, or on the front or rear of the camshaft, is not allowed. If utilizing lightened blocks, heads, or intake (removal of material from inside and/or outside) an additional thirty (30) pounds of weight must be added 12" on center in front of the engine plate; 15 lbs on each upper frame tube (measured from front of engine plate to center of weight). Weights will not exceed 12" in total length. NO EXCEPTIONS!
- e. OPTION 3 - Cash Money 18 Degree Engine: "MUST BE 100% CASH MONEY RULES
LEGAL CAR" Cash Money 18-degree engines 7600 RPM Chip Limit (1 MSD Box)
 - i. Aluminum Blocks must have 25 lbs. on both sides of the motor between the shock mounts and midplate. NO WIDE BORE.
- f. OPTION 4 - GM CT525 Crate Engine
 - i. GM CT525 Crate Engine Rule: "Must Be Factory Sealed" Engines are to remain sealed. The original factory seals must remain unaltered. GM Certified bolts only, NO REBUILT ENGINES! Modifications of any type and/or broken factory seals will not be permitted. NO upgrades are allowed to any engine that may

produce power via "performance-enhancing methods." (Exception: Engines with USRA/USMTS seals will be allowed). Fifty (50) pounds of weight must be added 12" on center in front of the engine plate; (25 lbs on each upper frame tube measured from front of engine plate to center of weight). Weights will not exceed 12" in total length. NO EXCEPTIONS! Must say "crate" on the left and right front roof post. Mandatory ignition controller MSD p/n 6014CT Maximum RPM/chip 7300 May use any 4-barrel carburetor and fuel may be gas or alcohol. May use any headers. The minimum weight with driver, after race, is 2300 pounds 8" Minimum and Maximum spoiler allowed. Maximum of 8-inch set back. From the center of the bottom ball joint to the front of the engine plate/engine bell housing flange. Rule options are subject to review/change as deemed necessary at any time.

- g. OPTION 5 - GM 602 and 604 Crate Engine Rules
 - i. GM 602 and 604 Crate Engine Rules: "Must Be Factory Sealed." Engines are to remain sealed.
 - ii. The original factory seals must remain unaltered. GM Certified bolts only, NO REBUILT ENGINES! Modifications of any type and/or broken factory seals will not be permitted. NO upgrades are allowed to any engine that may produce power via "performance-enhancing methods." 602 CRATE motor compression ratio: 9.1:1 (no tolerance) subject to whistle and compression pump. 604 CRATE motor compression ratio: 9.6:1 (no tolerance) subject to whistle and compression pump. All engines, parts, and components must be from the factory. This includes, but is not limited to, harmonic balancers, valve springs, push rods, rocker arms, and after-market valve covers. Any changes will result in disqualification and no points awarded. Gas carburetor only, 750 CFM Carb or smaller. Aerosol carburetors are not legal.
 - iii. Must have 1 11/16th base plate maximum. No tolerance (measured with go/no-go gauge).
 - iv. Mechanical fuel pumps only. Billet base plates may be used (.780 maximum). One gasket per surface, .070 maximum. 604 1" carb spacer maximum, no tolerance. 602 2" carb spacer maximum, no tolerance. Spacer must not protrude into the carb or intake at any point.
 - v. 602 and 604 crate engines only will be allowed to run an 8" engine set back. (Measured from the
 - vi. Center of ball joint to #1 spark plug). 602 and 604 Crate Engine cars only will be allowed to run an 8 inch Minimum and Maximum Spoiler.
 - vii. Factory Sealed Crate motor engine inspection and/or exchange: POWRi and/or Track Officials reserve the right to exchange or impound any engine at any time for competitive analysis and for inspection. POWRi will offer an exchange engine to replace the engine in question. Any driver who declines or refuses the exchange or impound will be disqualified and banned from any POWRi race, event, and track for the rest of the current season.
- h. All engine options may run one 2-barrel or one 4-barrel carburetor. ALL cars must run track approved muffler if track calls for one. No ZOOMIES. CRATE cars will follow all POWRi rules as written except where specifically described.

9. Engine Set Back

- a. The engine may be set back a maximum of 25 ½ (25.5) inches from the center of the ball joint to the back of the block. With the exceptions of Crate Engines, Crate Engines will be allowed 27 ½ (27.5) inches of setback.

10. Frames

- a. No aluminum frames or bumpers permitted in construction of cars.
- b. Minimum 103" - Maximum 105" wheelbase.
- c. Rectangle or Square Tubing:
 - i. The frame of all cars must be constructed of two-inch (2") by two-inch (2") minimum rectangular or square tubing with a minimum of eight-inch (8") circumference and a minimum of eighty-three thousandths inch (.083") wall thickness.
- d. Round Tube Frame:
 - i. The frame of all cars must be constructed of a minimum of one and three-quarter inch (1¾") round tubing and must have a wall thickness of eighty-three thousandths inch (.083") wall thickness minimum.
- e. If the rear bumper is stubbed, it may only extend a maximum of eight inches (8") beyond frame. Any stubbed rear bumpers that extend eight inches (8") or more beyond frame must be rounded and directed towards the front of the car.
- f. It is recommended that all cars be equipped with a tow hook or strap.
- g. All battery supports must be braced in two axis - two horizontal and one vertical.
- h. All frame and chassis components must be welded or bolted together. No sleeves, slip coupling, etc.

11. Front Fenders and Hood

- a. Hood can drop one-inch (1") with a one-inch (1") tolerance measured at the back edge of the hood and in front of the carburetor from the left to right side of the car. Fenders must taper from outer edge to hood in a straight line. Fender material must be flat with no bubble. The Fender top must have ten inch (10") minimum width.
- b. Fenders are not permitted to gain height from rear to front of a car. Will check with a string from the top of the quarter panel at the spoiler to the top of the highest point of the fender. Must be flat (1" tolerance)
- c. No part of the fender or hood can be outside of the body line.
- d. The front fender can be a maximum of thirty-six inches (36") in height with a one-inch (1") tolerance. Height is measured vertically from the ground to the top of the fender behind the front tires.
- e. No Plastic or Carbon Fiber Hoods or Fenders allowed.

12. Fuel Systems

- a. An approved fuel cell (32-gallon maximum) must be used at all times.
- b. The only fuel cells that are approved are those that meet and/or exceed the FIA / FT3 or SFI 28.3 specifications.
- c. Fuel cells must be used in accordance with the FIA / FT3 or SFI 28.3 specifications. Alterations of any kind will not be permitted. (Example: alterations to top plate, alterations or removal of foam, etc.)
- d. Fuel valve plate, fuel pickup and fuel return fittings must be on the top of the fuel cell.
- e. Fuel cells that are not contained within a welded steel tubing "rack" must have two (2) equally spaced steel straps that measure two (2) inches wide by 1/8 inch in thickness that

completely surround the fuel cell. The straps must be bolted to the frame. Longitudinal (front to rear) orientation is recommended for strap mounting.

- f. A firewall must be installed between the fuel tank and driver's compartment.
- g. Gasoline or Alcohol only. Nitrous gases or other nitrate additives are not permitted
- h. Willy's Carburetor roll over plate part # WCD4000 is approved for competition.

13. Ignition

- a. Only MSD 6AL Part # 6425, 6ALN Part # 6430 or 6CT Part #6427 ignition boxes only are allowed, GM CT525 crate engine must run the MSD Circle Track LS Ignition Control Part # 6014CT. Only one (1) ignition box allowed.
- b. Only one set of ignition box wiring is allowed. No Crane or other brand ignition boxes are allowed.
- c. Dual Pickup Distributors are allowed. Only one connection is allowed, the second has to be taped up.
- d. MSD ignition box and remote rev limiter control must be located out of driver's reach while in the car.
- e. Ignition box power supply wire must be hooked solely with an independent connection. Ignition box ground wire must be grounded by itself to the battery or chassis where the tech inspector can view it.
- f. Only one (1) RPM rev-limit module chip is permitted. Only one (1) electronic firing module is permitted. Only one (1) ignition coil is permitted.
- g. Magnetos are not allowed. Crank-censored ignitions are not allowed.
- h. GM CT525 crate engine must utilize MSD LS Series #PN6014CT set to the GM recommended preset.
- i. The following rev limits are mandatory on all engines. (All Rev-limit subject to change if POWRi deems necessary.)
 - i. 8,400 or less RPM rev-limit if using a Brodix SPEC Head Engine
 - ii. 7800 or less RPM rev-limit if using a 23 Degree Open Head Engine
 - iii. 7600 or less RPM rev-limit if using a Cash Money 18 Degree Engine. "car must be 100% cash money legal only"
 - iv. 7,300 or less rpm rev limit if utilizing a GM CT525 crate engine.
 - v. 7,200 or less RPM rev-limit if utilizing a 602 or 604 crate engine.
- j. Chips and/or ignition boxes are subject to inspection at any time by POWRi or Track Officials; Chips and or ignition boxes are subject to swap out by a POWRi or Track Official at any time. Any driver caught altering the rev-limiter or ignition system in any way to defeat the rev-limiter rule will be disqualified and shall receive a suspension set by a POWRi Official and or Track Official, loss of all tracks and POWRi points for the night. Any chip and or ignition box that fails tech inspection will be confiscated.

14. Interiors

- a. The interior is permitted to be dropped to the middle (just behind the seat) of the car a maximum of five inches (5") below the top of doors and a minimum of twelve inches (12") below the roll cage.
- b. The interior must be fastened flush at the top of the door and quarter panels and must taper gradually towards the center of the car. Maximum of seventy-degree (70°) angle from the deck.
- c. Interior must run in a straight line from behind the driver's seat to the rear spoiler.
- d. Interior (deck) must run in a straight line (vertical and horizontal) across the back of the car at the spoiler.

- e. All interiors must be made of aluminum.
- f. If the interior is flat through the car, it must maintain a twelve-inch (12") clearance from the roll cage for easy exiting from either side of the car.
- g. Cowl (driver protection) panels in front of the driver may have a maximum of three inches (3") in height. The cowl panel must taper to the deck or end in line with the steering wheel.
- h. If the interior is dropped at the firewall/back of the hood, that portion of the firewall must be filled in vertically with aluminum. Interior may be dropped a maximum of two inches (2") from the top of the hood.

15. Quarter Panels

- a. Quarter panel can be a maximum of forty-nine inches (49") from the center of rear hub to rear edge measured horizontally. Quarter panel can be a maximum of fifty-four inches (54") from the center of hub to rear t-bar at spoiler.
- b. Tire clearance from the body must be a minimum of two inches (2"). No wheel skirts permitted.
- c. At no point can quarter panel sides break in towards the center of the car between the top and bottom. One-inch (1") tolerance including plastic.
- d. Right side quarter panel must be straight in line with the door. Will check with a string from the top of the quarter panel at the spoiler to the top of the highest point of the fender. Must be straight with a one-inch (1") tolerance.
- e. Left rear quarter panels must extend downward from the deck a minimum of thirty-three inches (33") and a maximum of thirty-six inches (36") including the plastic. Measured at the front and rear of the quarter panel. Right rear quarter panels must extend downward from the deck a minimum of twenty-seven inches (27") without the plastic and thirty-one inches (31") with plastic. Measured at the front and rear of the quarter panel. One inch (1") tolerance.
- f. No Plastic or Carbon Fiber Quarter Panels.

16. Remote Control Suspension Devices

- a. NO "in-cockpit driver controlled" suspension devices permitted. NO weight jacks of any kind permitted. (This includes fifth [5th] coils, etc.). ANY driver using "in-cockpit driver controlled" suspension devices or weight jacks WILL BE DISQUALIFIED FROM COMPETITION!

17. Roll Cages

- a. Cars must have a suitable steel roll cage in the driver's compartment.
- b. Side roll bars are mandatory and must extend into the door panels
- c. A minimum of three (3) bars must be used on the left side of the car. Each bar must be a minimum of one and one-half inch (1½") in diameter with a minimum thickness of ninety-five thousandths inch (.095").
- d. The roll cage must be welded to the frame.
- e. The roll cage must be above the driver's helmet. 38" minimum between floor pan and the bottom of the roll cage.
- f. No "fin-shaped" or "foil-shaped" add-ons permitted on any part of the roll cage. The entire roll cage must be constructed of round tubing only.
- g. Roll cage padding certified to SFI Spec 45.1 is required anywhere the driver's helmet may contact the roll cage while in the driving position.

18. Roof and Roof Supports

- a. The roof length size must be a minimum of forty-four inches (44") to a maximum of fifty-four inches (54").
- b. The roof width size must be a minimum of forty-eight inches (48") to a maximum of fifty-two inches (52").
- c. The roof must be stock appearing and mounted directly to roll cage with no spacers.
- d. Roof height must be between forty-five inches (45") and forty-eight inches (48") from the ground.
- e. A maximum one and one-half inch (1.5") roll, turned downward, is permitted along the front edge of the roof. A maximum one-inch (1") ninety-degree (90°) bend is permitted along the rear edge of the roof. (Roll permitted to help strengthen the roof).
- f. A maximum one and one-half inch (1.5") roll, turned downward, is permitted along the front edge of the roof. A maximum one-inch (1") roll turned downward is permitted along the rear edge of the roof. (Roll permitted to help strengthen the roof).
- g. No odd shaped roofs permitted. No Plastic or Carbon Fiber Roofs allowed.
- h. All roof side (sail) panels must extend to the edge of the body. Maximum (no tolerance) right side sail panel size – seventeen inches (17") at the top and forty-three inches (43") at the bottom. Maximum (no tolerance) left side sail panel size – seventeen inches (17") at the top and forty-three inches (43") at the bottom and minimum fifteen inches (15") at the top and forty inches (40") at the bottom. The window area may be covered with clear Lexan or transparent material. Both roof support openings must be covered, or both must be left open, if left open the openings must maintain a border frame of 2-3" at the top and sides and 3" at the bottom. Decals will be permitted but must meet the dimensions in the drawing and must be approved by the Technical Inspector. Maximum two-inch (2") radius (No Breaks) in either direction in rear roof side panels is permitted.
- i. Sail Panel Windows Openings must be a border frame of 2-3" at the top and sides and 3" at the bottom with no tolerance +/-0"
- j. Front posts must be flat and in uniform width from top to bottom – four inch (4") maximum width. Left and right sides must match in size.
- k. Front posts must be flat and in uniform width from top to bottom – four inch (4") maximum width.
- l. Any sun shields, a four-inch (4") maximum, must be able to hinge for easy exiting of the car.

19. Shocks and Springs

- a. 100% Cash Money Legal cars "MUST" run Cash Money AFCO shocks only. Shocks must measure 19.5 inches fully extended. No altering of the shocks in any way is permitted. Any team found altering shocks in any way is subject to one year suspension.
- b. Cash Money Shock claim : Shocks can be claimed by the track officials and will be replaced with a new shock at any time.
- c. No air dump or no air springs allowed, No spring bars allowed, No internal bump stops allowed.
- d. External bump stops will be allowed with the exception of no external air bump stop.
- e. All Shocks must hand compress the full length of shaft with springs and bump stops removed.
- f. Shocks must be constructed of aluminum or steel. Canister shocks are permitted.
- g. The only external connection allowed to the shock is a single hose to a single remote canister with the option of a compression adjuster in the canister.

- h. Compression adjuster and/or canister cannot be mounted within the reach of the driver.
- i. Maximum shock body outside diameter is two (2), half-inch inches (0.50").
- j. Maximum front shocks length is twenty-one inches (21"). Measured center to center of the shock eyes. The maximum rear shocks length is twenty-seven inches (27"). Measured center to center of the shock eyes.
- k. No cross-connected shocks are allowed.
 - i. The only external connection allowed to the damper is a single hose to a single remote canister with the option of a compression adjuster in the canister.
 - ii. Compression adjuster and/or canister cannot be mounted within the reach of the driver.
- l. No "Rod-Through" designs are allowed.
 - i. "Rod-Through" shocks are defined as those shock absorbers in which the piston rod protrudes from both ends of the shock body.
- m. No Inverters are allowed
 - i. No rotating parts inside the damper.
 - ii. No Inverter style dampers, either mechanical or hydraulic, or other type of primarily acceleration sensitive damping devices not permitted.
- n. No Electrical adjusted or active dampers are allowed. No electrical wires, transmitting or receiving components will be allowed to be attached internally or externally to the dampers or mounted inside any component or dampers. No portion of the racecar including and not limited to - shocks and spring components or chassis components may have the ability to communicate transfer/transmit/receive any type of digital or analog data or any language and or adjust or monitor in any way whatsoever including but not limited to a variation of a wireless remote device/phone/computer/tablet/ipad or a mechanical remote device.
- o. Any new chassis design or component designs pertaining to and/or but not limited to shock absorber mounts must be submitted to the POWRi Officials for approval before they will be permitted for use in competition. Manufacturer and/or competitor may be required to disassemble for complete inspection before in-statement of the new part is permitted.
- p. Springs must be made of steel. Torsion bars are not allowed in the rear.
- q. Coil springs must be steel. Leaf springs may be composite or steel.
 - i. Spring preload adjustments for coil springs must be made using mechanical adjusting nuts on the shock body.
- r. Spring preload adjustments for leaf springs must be made using a mechanical adjusting device such as an adjustable shackle or threaded rod type mount.
- s. Other than spring dampening by the shock absorber, hydraulic, pneumatic, or electrically controlled adjusting devices, (static or dynamic) that affect spring preload or race car heights will not be permitted.
- t. Shock Locations
 - i. Only one shock per wheel permitted at the left front, right front, and right-rear corners.
 - ii. Left rear must have one shock behind the axle tube and may have one traction (dummy) shock on the front side or top of the axle tube. Must mount vertically to the birdcage or clamp bracket.
 - iii. One 5th Coil Shock permitted.

- iv. One 90/10 optional shock may be mounted above the lift arm on upper lift arm plates. Must be mounted towards the front of the car lying parallel with the car. Shock must mount within 3" of the centerline of the rear ends center section.
- u. External Bump stops and/or bump springs are permitted with the exception of no external air pump stops. All bump stops and/or springs must be mounted on a shock, 6th coil assembly and/or lift arm assembly. No bump sticks are permitted.
- v. Suspension covers are not allowed. Rear covers on racecars are not allowed outside of your pit area. Spring and/or shock covers are permitted but must be fastened directly to the spring or shock.
- w. A Swing Arm and/or Z Link suspension is permitted as long as the Top and Bottom solid links are mounted on heims and run in the opposite directions of the bird cage. The Shock on a Swing Arm or Z Link rear suspension may mount to the bird cage or the bottom radius rod.

20. Shock, Spring, and Suspension Penalties and Infractions

- a. If violations are found during pre-race technical inspection: The driver will receive a warning and must meet full compliance before being allowed to compete. If a violation is found after pre-race technical inspection: No Winnings, Points, Winners Circle Pay will be paid and a fine may be assessed to the violating driver.

21. Spoiler

- a. Rear spoiler must be manufactured of material of adequate strength such as Lexan, Aluminum, or Carbon Fiber.
- b. Rear spoiler material Minimum and Maximum eight-inch (8") height measured from deck to tip of material. Maximum seventy-two-inch (72") width between outer edges of spoiler sides.
- c. Rear spoiler is not permitted to be suspended above the deck to create a "wing effect."
- d. Rear spoiler must begin where quarter panels end. No extended decks permitted.
- e. Maximum of three (3) rear spoiler supports. Option of two (2) additional one-inch (1") aluminum braces.
- f. Spoiler supports cannot be mounted wider than the top of the quarter panel.
- g. Spoiler must be straight where it mounts to interior (deck) panels.

22. Stock Nose Pieces

- a. POWRi Officials must approve all stock nose pieces.
- b. Nose pieces must be made of molded type material.
- c. Two (2) piece noses must be fastened together in the center. No spacers to gain width or cutting to narrow the overall width of the nose is permitted.
- d. The nose must be mounted flat where the filler panel and nose piece meet. (No Carbon Fiber or Plastic Filler Panels allowed.) The nose piece may not be altered from its original shape. Nose pieces will be checked with a template. The nose will be pushed against mounting support to gauge its profile against template.
- e. Adding to the bottom of the nose piece in the front achieving lower ground clearance is not permitted.
- f. A stock nose piece can extend a maximum of fifty-two inches (52") from the center of the front hub to the farthest point extending forward. (1" Tolerance)
- g. Front fender flares must be made of plastic and cannot alter the original shape of the nose piece. The front fender flairs cannot extend beyond the front tire more than one inch (1") in width with wheels pointed straight.
- h. Front fender flares must have collapsible support.

- i. Front fender flairs can extend a maximum of three inches (3") above the fender tops and hood.
- j. Front fender flairs can extend a maximum of four inches (4") above where the filler panel meets the hood.
- k. The nose piece must have a headlight decal package attached. One warning will be permitted and then the car must run contrasting color tape in the shape of a headlight.
- l. Holes for cooling purposes must be in the center area (in front of the radiator) of the nose and/or valance.

23. Suspension Components

- a. Any new chassis design or component design and or technology pertaining to and/or containing suspension must be submitted to POWRi for approval before they will be permitted for use in competition. The manufacturer and/or competitor may be required to disassemble for complete inspection before instatement of a new part is permitted.
- b. Suspension and/or rear end parts can be made of steel or aluminum. Aluminum mounting brackets are permitted.
- c. Frame and/or suspension mounts must be welded or bolted solid to the frame and not move.
 - i. ie- Floating, sliding, pivoting and/or rotating mounts and/or brackets of any sort are not allowed.
- d. Bolted components must match the correct bolt size with the hole (for instance no 3/8 bolts in a 1/2-inch hole will be deemed illegal) and be torqued to a min of 40-foot pounds per inch
- e. Rear Suspension Mounts
 - i. All mounts must be double sheer.
 - ii. Double shear mounts must be 1/8" minimum steel and/or 1/4" minimum aluminum.
 - iii. Sheer mounts must use minimum 5/8" rod ends with minimum 1/2" grade 8 bolts only.
 - iv. Double shear mount must be no wider than 4 inches with a minimum 1/2" inch grade 8 bolt with steel or aluminum spacers only. The bolt must be bolted through both sheer mounts.
- f. Only one (1) mechanical traction device is permitted. Only one (1) pull bar or one (1) lift arm is permitted. No other options are allowed. Covers of any sort in any relation to the lift arm or pull bar are not allowed.
- g. Lift Arm & Pull Bar
 - i. Floating, pivoting and/or rotating mounts and/or brackets of any sort (connected to and/or associated with the pull bar or lift arm) are not allowed.
 - ii. Lift arm is defined as a steel or aluminum triangulated bar that is connected at the top and bottom of the rear end housing, extending forward where it is connected to a shock, shock spring coil- over combination and a limiting chain. One stabilizer bar is permitted to locate the front of the lift arm from left to right in the car.
 - iii. 6th coil or braking spring assemblies are permitted, must be in front of 5th coil shock.
 - iv. Pull bar is defined as a continuous assembly that is connected to the top of the rear end and extends forward to a solid mounting point located on the chassis. The mounting location at both the front and rear of the pull bar may be adjustable

but must remain constant during competition (cannot be adjustable from the cockpit).

h. Radius Rods

- i. All rear suspension radius rods must be of a fixed length. No hydraulic cylinders, torsion bars, bump rods, spring rods, slider rods or shock-type radius rods are permitted.
- ii. The only materials used to fabricate attaching (radius) rods that will be permitted are magnetic steel or aluminum
- iii. Aluminum attaching (radius) rods may be solid or tubular material. Magnetic steel attaching (radius rods) must be tubular with a maximum wall thickness of 3/16 inch (0.1875)
- iv. Radius Rods must be a minimum of 1" diameter OD. Rods can be round, square, or hex shaped. Rods must be a minimum of .095 steel or .120 aluminum in tubing thickness.
- v. Heim joints must be a minimum of 5/8, and a maximum of 3/4" steel heim. No rubber bushings.
- vi. ONLY - Two (2) radius rods per side.
 1. Radius rods must be spaced on the frame a minimum of 6"
 2. Radius rods must be spaced on the birdcage a minimum of 6" and a max of 12"
 3. Measurements will be made from the center of each radius rod bolt.
- vii. All radius rods must be straight with the exception of the left lower that can have a bend for axle housing mount clearance.

i. Axle Housing Mounts (Birdcages)

- i. Axle Housing Mounts (Birdcages) may consist of multiple barrels but must bolt or weld together to work as single barrel birdcage.
- ii. Limited one (1) Axle Housing Mount (birdcage) per side.
- iii. Shock(s) and radius rods must mount to the Axle Housing Mount (birdcage).
- iv. Floating, pivoting and/or rotating mounts and/or brackets of any sort are not allowed. All brackets or mounts attached to the Axle Housing Mount (birdcage) must be bolted or welded solid.
- v. The only materials used to fabricate axle housing mounts (birdcages) that will be permitted is aluminum or magnetic mild steel. Axle housing mounts fabricated of exotic, heavy materials will not be permitted.
- vi. When fabricating axle housing mounts, detail must be paid to functionality. The completed axle housing mounts, when comparing the right and the left side, must be as similar in design as possible.

j. Jack Bolts are permitted.

24. Tire Rule

- a. New Tire Rule: Fronts and Left Rear 90's: LM30's or NLMT-3
- b. New Tire Rule: Right Rear 92's: LM40's or NLMT-4
- c. New tire rule will go into effect June 3rd, Drivers will have from beginning of season to June 3rd to burn up last year's tires rule: Fronts and Left Rear 90's: LM 20, WRS-2 D55, Right Rear 92's: LM30, WRS-2 D55
- d. All tires "MUST" durometer the factory set baseline-settings of a given tire. NO TOLERANCE ALLOWED. Any tire reading below factory set baseline will result in disqualification for that race and will be subject to tire testing.

- e. Grooving and sipping of tires is allowed.
- f. No tire softeners, no conditioners, no altering of tires with any natural or unnatural chemicals, no hazardous or non-hazardous components or chemicals which alter the factory set baseline settings of a given tire.
- g. POWRi Official(s) and or Track Tech Official(s) may question any tire at any track, on any night for evaluation. (Evaluation meaning samples will be taken from the tire and sent to a test facility for testing to verify that the tire “Conforms to Benchmark Policy”).
- h. Any tire on the car or in the trailer is subject to inspection.
- i. This procedure (samples taken from tires) will be done at the track with drivers, POWRi Official, and/or Track Official present. Samples will be sealed and sent to the lab for testing by a POWRi Official or Track Official. All lab fees will be paid by the driver if results reveal that the tire does not meet benchmark standards.
- j. Drivers pay for that event will be held until test results are confirmed. Any tire not meeting benchmark standards will result in the following penalties: loss of all points and pay from that race, loss of all POWRi championship points and track points, and a POWRi fine of \$2,000 plus track fines.
- k. Largest permitted tire is twenty-nine inches (29") by eleven inches (11") by fifteen inches (15") unless otherwise specified and made known to all competitors.
- l. Maximum circumference permitted is ninety-three inches (93") unless otherwise specified and made known to all competitors
- m. The maximum width of the tires measured from the outside edge(s) of the sidewalls across the face of the tire will be 16 $\frac{3}{4}$ "-inches. There will be a tire hoop used for inspection and the tire must pass through the tire hoop freely, without any manipulation or outside contact
- n. All sidewall markings must always be visible. No buffing or removing of the compound designations.

25. Traction Control Devices

- a. All Traction Control Devices are strictly prohibited during any form or portion of a POWRi event, race or practice/test session.
- b. All traction control devices, whether electronically controlled in the ignition system, wheel sensors or any means of measuring ground speed to control wheel spin are strictly prohibited. All devices not mentioned in the above that are found to control wheel spin, timing or fuel delivery control will be considered strictly prohibited.
- c. At NO time will there be any type of ping control devices, dial a chip control, timing controls or any modifications to the ignition control boxes, distributors, or any other part of the Ignition System. This includes any add on component or components inside or outside the cockpit of any competitor's race car. There shall be NO driver-controlled wheel spin, timing or fuel delivery control devices in the cockpit area of any race car.
- d. A competitor found with any of the above mentioned will lose the complete device permanently and will lose all points earned to that point in the season. NOTE: A competitor may be asked for his electronic ignition at any time by the Technical Director to be sent for testing and inspection. Failure to hand over the electronic ignition will result in the holding of any purse monies won.
- e. GPS and/or any other type of electronic tracking and/or locating device will not be permitted for any reason.

26. Transmission, Clutch, and Axle Housing (Rear End)

- a. Any transmission with working reverse and working forward gears is permitted.
- b. Manual transmission must be equipped with an operational clutch.
- c. Automatic transmissions are permitted.
- d. The transmission must be mounted to the rear of the engine and lead to one drive shaft.
- e. No “live-axle” rear-ends are permitted.
- f. No independent rear suspensions are permitted.
- g. All axle housings using a cable to lock-in the rear-end must have the cable mounted outside the cockpit area and not in reach of the driver.
- h. The axle housing must be of the “closed tube” design utilizing “full floating” magnetic steel axle shafts.
- i. The center section of the axle housing must be manufactured of either aluminum or magnesium.
- j. Axle tubes must be one (1) piece. Axle tubes must be manufactured of aluminum or magnetic mild steel. Axle tubes manufactured of exotic heavy materials (ex: tungsten) will not be permitted. The outside diameter of the axle tubes must not exceed three (3) inches. Axle tube internal inserts or external sleeves will not be permitted. The addition of any ballast weight to the axle housing will not be permitted.

27. Weight Limit

- a. All cars will be issued decals to identify motor and weight. Decals must be displayed on each side of the car on the front lower corner of the window side panel. Motor must match the decal on the car. If the decal and motor do not match, a disqualification will be rendered. No tolerance.
- b. Brodix 23* Spec Engine & 23* Open Engine: Car and Driver must weigh 2,350 lbs
- c. GM CT525 Sealed Crate Engine: Car and driver must weigh 2,300 lbs.
- d. 604 Factory Sealed Engine: car and driver must weigh 2,250 lbs.
- e. 602 Factory Sealed Engine: car and driver must weigh 2,200 lbs.
- f. After each race, whether Heat, Last Chance or Feature, an additional weight allowance will be given at the rate of 1 lb. per lap for fuel burn off, 10 laps = 10 lb.; 50 laps = 50 lb.; 100 laps = 100 lb. etc.
- g. No unsprung weight allowed.
- h. Any attached weights must be securely attached to the frame, painted white and have the car number clearly displayed on them. Weights of up to fifty (50) pounds must be secured by two (2) half inch (1/2") Grade 5 or higher bolts on two (2) weight clamps per piece. Weights secured by one bolt and/or held on by a means other than accepted by the Technical Inspector will not be permitted. Due to the high-risk factor involved, any car that loses lead weight during an event may be fined or face disqualification.
 - i. All added weight(s) must be securely attached to the frame below the body decking.
 - j. Frame is defined as the steel welded structure only
 - k. Any part that moves or is not a fixed component to the steel frame structure may not be used for any weight attachment.
 - l. No weights may be attached to the rear bumper.
 - m. No driver-operated weight adjustment devices are permitted.

28. Wheels

- a. Only aluminum wheels will be permitted. No steel wheels allowed.
- b. Wheels must be mounted with lug nuts: no knock-off mounting devices are allowed.
- c. Maximum wheel width is fourteen inches (14").

- d. Maximum width outside of front tires is ninety inches (90").
- e. Maximum width outside of rear tires is eighty-eight inches (88").
- f. Only approved wheel discs will be permitted. Approved wheel discs are wheel discs that are fastened to the wheel using a minimum of three (3), 1/4 or 5/16-inch diameter magnetic steel hex head bolts. The use of wheel discs with any other type of fastener will not be permitted.
- g. Only aluminum wheel spacers will be permitted.
- h. The combined weight of the wheel, wheel hardware, wheel disc and fasteners, and tire must not exceed 40 pounds*. *The maximum combined weight in this rule is based upon current tire rules and may need to be adjusted in the event of an alternate tire.
- i. Bleeder valves of any kind are not permitted.