



2023 POWRi Midwest Mod Specifications

Index

Bodies	1
Balancer	1
Battery	1
Brakes	1
Bumpers	1
Camshaft	1
Crankshaft and Rods	1
Carburetor	2
Communications	2
Differential/Rear End	2
Driveshaft	2
Engine	2
Engine Option A	2
Engine Option B	3
Exhaust	3
Frames	3
Front suspension	3
Fuel Systems	4
Gauges/Electronics	4
Heads	4
Intake manifold	4
Oil Pans	4
Pistons	5
Rear suspension	5
Roll Cage	5
Seat And Seat Belts	5
Shocks	5
Starter	6
Tires	6
Transmission	6
Weight	6
Wheel	6
Wheelbase	6

Specifications highlighted in red are modifications as of November 1, 2022. General Rules of Conduct, Track Technical Inspections, Transponders & RACEceivers, it is the responsibility of each POWRi Midwestern Modified competitor to read, understand and abide by the host Speedway General Track Rules. POWRi Midwestern Modified drivers are to represent the POWRi Racing League in a professional and courteous manner at all times. Any unsportsmanlike conduct by a participant shall be grounds for disqualification and/or punitive action. All sanctioned tracks share information regarding unsportsmanlike behaviors and disqualifications.

Bodies:

Sail panels may have no more than four (4) inch bow from top to bottom. A maximum 29 inches of sail panel along the roof and maximum eight (8) 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. No more than 3 inches past deck. Must match both side no cut outs. No spoilers, no spoiler sides, no nose wings. MD3 nose not allowed, no nose wings, window opening must be a min. of at least 12 inches on all 4 corners. Body may extend 2" on left side & 1 inch past the tire on right side. Max. deck height 39 inches. No Tolerance. No reverse hood rake.

Balancer:

No modifying of harmonic balancer, 8.9 lbs. min. Stock 8"

Battery:

All batteries must be mounted in a safe manner. Top of battery must be covered.

Brakes:

Disc or drum brakes may be used front and rear. No aluminum disc or brake calipers allowed. Brakes must be operational on all four (4) wheels and must lock up all four wheels during inspection. No right or left brake shut off. Brake pads must be the same both sides.

Bumpers:

Bumpers must be used front and rear. Front bumper must be mounted on frame end and be of a semicircle configuration with the bottom loop parallel to the ground. Front bumper must be ten (10) inches high from bottom bar to top of top bar. Material must be one and one quarter inch minimum, two-inch maximum O.D. steel pipe. Rear bumpers may be constructed of pipe, square tubing, but must not have sharp edges. Rear bumpers and nerf bars must not extend beyond width of rear tire. Bumpers must be able to support car when lifted by wrecker.

Camshaft:

Hydraulic camshafts only & must pull at least 15 inches of vacuum at 800 RPM. no tolerance. Hydraulic cam 430 maximum lift at cam, 1.5 only ratio Aluminum rockers allowed, NO 15.2 or 1.6 or Bigger NO tolerance. Poly Locks permitted. No roller cams. Lifters stock type, no Rhoades, anti-pump up, high revolution, etc. Stock type wire clip.

Crankshaft and Rods:

Stock appearing, no light weight, no H-beam rods. Press fit rods only. No floating rods, 5.7 rod on GM max. Aftermarket Eagle, Scat, etc. stock type ok. No lightening of any kind to crankshaft, 3.48 stroke max.

Carburetor:

4412 Holley, no modifications except jets and choke removed (not choke tower). **No Aftermarket Metering Blocks.** No electric fuel pumps, manual only. Spacer plate for carburetor from intake to carburetor only. Carburetor must have vacuum ports for testing vacuum. Carburetor spacer must be 1 inch max, **2-hole standard bore only.** No tapered or super sucker spacers. **Carburetor must pass all GO/NO GO Gauges. Holley Cast Number L6R3250B Not Permitted in any POWRi Competition.**

Communications:

All competitors must have a RACEceiver 1600 in car radio to compete at the track.

Differential/Rear End:

Any passenger car type or truck rear end may be used. Floater rear ends are allowed. Any steel approved OEM passenger car or truck non-cambered rear end allowed. All components must be steel. Inspection hole in housing required. Solid steel axles or gun drilled steel axles and one-piece steel drive flanges only. May have Aluminum axel caps.

Quick change option is allowed and must use 10" ring gear with aluminum or steel spool, steel axle tubes, minimum one-inch-wide spur gears and bolt on rear cover. Safety hubs (floater) allowed. Steel axles only. All additional components must be steel axle caps, U-joint caps, and one-piece drive flange. One inch inspection hole required in housings. No scalloped ring gears cambered rear ends, heavyweight axle tubes (max .250" wall) or housing braces. Pinion plate must be steel. Quick change option must run the same gear they hot lapped with. Your rear cover will be sealed by the racetrack. If your seal is broken it is an automatic disqualification for the event. **ONLY** way you can change your gear per night is if you break a gear & you bring it to the tech official for him to ok gear change.

Driveshaft:

Minimum two-inch diameter, white, steel driveshaft. Steel slip-yokes only. 360-degree drive shaft loop required and must be constructed of at least .25-inch by two-inch steel, or one-inch tubing, mounted six inches back from front U-joint.

Engine:

NO Evacuation System allowed to headers, in either engine option.

Location of Rear of engine (bellhousing flange) must be at least 72 inches forward from the centerline of the rear axle. The center of the crankshaft must be within two and one-half (2 1/2) inches of centerline of the ball joints.

Engine Option A:

Maximum size of engine block: 350 gm .060 max. 351 Windsor Ford .060 max. 360 Chrysler .060 max harmonic balancer on GM min. 8 in. Smaller engine allowed no stroker engines allowed! OEM firing orders cannot be changed. No beehive or high-performance valve springs allowed. 9 to 1 compression max.

Engine Option B:

Crate Engine: Must use unaltered sealed GM 602 crate engine with additional IMCA Cable-Lok system or USRA seals NO EXCEPTIONS. Upon inspection, any different, altered, or missing GM seal bolts or IMCA Cable-Locks, USRA seals will result in a penalty of 1 week suspension and a \$500 fine. Legal aftermarket oil pans ...Champ pan #CP100LTRB and Champ pick-up #100SB, or with Kevko pan IMCA92 and Kevko pick-up #1005-3/4.

-602 GM crate engine MUST run a 6,000-rpm setting.

-Carburetor rule will be the same as motor option A.

-Engine must pull a minimum of 15" of vacuum at 1000 rpm.

Track has option to enforce these restrictions with a cubic inch pump gauge or by visibly checking parts and part numbers. Disqualification and loss of points if found illegal.

Exhaust:

Any collector type header allowed. Exhaust must be directed away from areas of possible fuel spillage. No Zoomies. No 180-degree headers. No step down or Y-type headers.

Kill Switch, Fire Extinguisher & Window Net: A kill switch is required within easy reach of the driver. This switch must be clearly marked OFF and ON.

Weights and/or loose objects are not allowed in the driver's compartment.

All cars must be equipped with quick release type window net on driver's door.

No rear-view mirrors of any kind.

No radio communication or sound equipment of any kind.

Frames:

Factory production complete full American passenger frames only. Frame rails must extend to a point beyond the base of driver's seat. Rear clip may be fabricated out of tubing. Front and rear pick-up loop required; otherwise, bumpers or other pick-up point will be used.

Front suspension:

Front suspension must match frame and be in stock location. Parts must be replaceable from stock oem type parts from same type suspension except upper a-frame and a-frame mount. Tube type upper a-frame may be used. Fabricated a-frame mount may be used but must be in stock location. Lower aftermarket a-frame can be used but must be in stock location. No fabricated spindles. Adjustable strut bars can be used on front end only. No coil over shocks allowed either front or rear. One shock per wheel. You may not run a dampening shock above the reared. Steering box must be stock oem type and be in stock location. No rack and pinion steering. No center steering. Adjustable sway bars allowed. Front springs must be stock metric dimensions & Chevelle must be stock dimensions 5"x 9.5 Max. 500 lb. min front spring rate. Will be checked.

Fuel Systems:

No E85 or alcohol-based fuels, pump gas or racing fuels allowed. No oxygen bearing additives. No pressurized fuel systems. Fuel cells mandatory. Fuel max. capacity of 22 gallons. Must have new style screw on lip with flapper in top. Fuel cells must be encased in an approved metal container of no less than 20-gauge steel or 1/8-inch aluminum. Fuel cells must be mounted between frame rails as far forward as possible and using four, two (2) inches by 1/8-inch metal straps, two in each direction. Bumper must be equipped with a drag loop extending below bottom of the cell. No electric fuel pumps.

Gauges/Electronics:

Mandatory MSD (part #8727CT) rev control box is permitted with unaltered wiring harness (motor option A max RPM setting must be 6,200 / motor option B max RPM setting must be 6,000). 12-volt ignition system only. HEI distributor only. OEM firing order cannot be changed. Ignition rotor, cap, coil, and module must remain OEM appearing. No ignition boxes, remote coil, or accessories. All wiring must be visible for inspection. Only gauges allowed are analog oil pressure and water temperature and analog tachometer or Digital tachometers are permitted. (Memory recall allowed). Ground wire must be visible for inspection, and it is recommended that it be mounted near or on the distributor. No traction control allowed. NO MSD or Davis Tech coils or modules. 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.

Heads:

76 cc min., stock, no performance heads (no double humps, no 292,041 castings, no lt1., no bowtie, no center bolt valve cover. Stock replacement Dart Head 10024360 Only. No porting or polishing, screw in 3/8 studs with shoulder, guide plates are allowed, 194/160 valves max. no 202/160 allowed. 305heads on 305 only!

FORD: World Products Windsor Jr 5303 Bare, 53030 Complete. If using this head must run dished pistons. 50 thousand head gaskets to reach 9:1 Compression. Rockers 1.6 cam lift at lifter is 268 to match a 430 lift at rocker. Stock OEM Balancer

Mopar: Indy-X Head 20301 LA-X

Roller Tip Rocker PRW 3231811 1.5 9:1 Compression Stock OEM Balancer.

Intake manifold:

Only intakes allowed are GM 2101, ford 2121 or 2181, Chrysler 2176 or 3776. Intake must be unaltered (part #2701).

Oil Pans:

Extra capacity oil pans are permitted. No dry sumps allowed. Oil pump must mount in stock position. Must have 1 inch inspection hole above oil level for inspection. Inspection hole needs to be installed in a manner so that official can see crankshaft and rods for proper inspection otherwise pan will be removed for inspection.

Pistons:

Flat top 4-valve relief only. Hypereutectic 4-valve relief pistons ok. No JE, Ross, etc. No high-performance parts allowed.

Rear suspension:

Two options: aftermarket three link design or multi-leaf spring design. All components must be steel. All mounts and brackets must be welded or bolted solid. You may not run a dampening shock above the rear-end. Three link design requirements - must use minimum 15-inch center to center of heims lower trailing arms both sides need to be the same, (1/2- inch tolerance), no swing arms. **Straight tube only no bent tubes.** Solid pull bars are required, no spring bars, rubber bushings or any type of torque device. Pull bar must be mounted solid (no rubber or any type of cushion in the mounting bracket). Must be located at top center of rear end housing and remain centered on housing over drive shaft (1 inch tolerance left to right). May use minimum 23-inch long Panhard bar located behind rear end housing or minimum 19-inch-long J-bar mounted to a steel pinion bracket. Measurements are from center of heim joint to center of heim joint. May mount rear spring over axle housing or use coil cover eliminators (sliders). Lower spring perch or coil cover mount must be welded to rear end housing **solid mount or pivot ball allowed.** No birdcages or floating mounts allowed. Must use steel upper weight jack if springs are mounted over axle housing. **No shock type eliminators. No weight on top of rearend tubes or housing.**

Maximum length rear spring 16”.

Minimum length rear spring 13”.

Roll Cage:

Must consist of continuous hoops not less than one and one-half inches outside diameter and must have a wall thickness of at least .095 inch. Must be frame mounted in at least six (6) places. Body mounted roll cages not acceptable. Must consist of configuration of front and rear hoops connected by tubing on sides or side hoops in a manner deemed acceptable by the inspector. Driver's head must not protrude above cage with helmet on while strapped in driver's seat. Roll cage must have a 3/16-inch inspection hole in non-critical area. Must have at least three (3) horizontal bars at driver's door welded to front and rear of roll cage members.

Seat And Seat Belts:

Racing seat mandatory. All cars must be equipped with an approved quick release type seat belt and shoulder harness securely fastened to frame and roll cage. Seat belt material should be at least three (3) inches wide AND CANNOT BE OLDER THAN 2 YEARS. Seat and steering wheel may be located to suit driver's taste but must be kept on left side of car. No center steers.

Shocks:

One steel, nonadjustable, unaltered shock per wheel only. Take apart from factory Oem shocks allowed. No external gas ports of any kind. No screws. No Schrader valves. No ports, none. All shock mounts, including screw jack type, must be welded. **Must have 1” minimum of shock travel up & down at ride height with driver in car.** No external or internal bumpers or stops. No coil over, air or remote reservoir shocks. No Schrader valves or bladder type valve allowed. Front half of any shock may be shielded. **NO Chain or Shock Eliminator Front either side.**

Starter:

Engine must have a working starter and must be capable of starting car on demand.

Tires:

American Racer G60 only. **Optional Southwest Speed G-60 or Asphalt take offs must durometer 50 after race, 8" only no prep.** may be grooved and sipped. No mixing.

Transmission:

OEM three-, four- 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. In-and-out boxes are not allowed. Ball spline transmissions are not allowed. May all be clutch-operated or an OEM automatic with a coupler. May use a hand or clutch pedal operated ball valve for neutral.

Aftermarket transmissions are permitted.

Approved aftermarket transmissions are Bert (part #BERLMZ), Bert 2nd Generation are not allowed; Brinn (part #70001), Falcon (part #60100), RaceGator (part #140002/140002-C) and Mitchell Machine Bullet Tranny with internal clutch. Clutch must be inside of bell housing for OEM production-type transmissions.

Starter must bolt to engine block or factory location.

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.

Aluminum flywheels are not permitted. Must have full-sized steel bell housing. Flywheel must bolt to crankshaft. Clutch must bolt to flywheel, a minimum six and one-quarter (6.25) inch clutch.

Automatic and aftermarket transmissions must have a guard 270 degrees around flex plate or flywheel and must be constructed of at least one-quarter (0.25) inch steel. Alternatively, automatic transmissions may utilize an SFI-certified aftermarket guard. Flex plates must be SFI certified.

Internal clutches are not allowed except for approved aftermarket transmissions.

Weight:

Minimum weight is 2,500 pounds with driver after race, no tolerance. All lead weight must be mounted securely with 2 weight clamps and 1/2-inch bolts. Lead must be painted white and have your car number on the lead.

Wheel:

Wheel width must not exceed eight (8) inches. No aluminum wheels. Bead locks allowed on right rear only. Any foam or plastic type mud cover mounted on right side wheels. Inner mud plugs on LR only. **No solid or heavy wheels, standard weight sticker wheels only. No metal wheel spacer aluminum only. Spacer can be no bigger than a drive flange 6.5 inches in diameter. No Tolerance.**

Wheelbase:

108 inches minimum, 112 inches maximum both sides.