

## **2024 Wingless Sprint Rules**

**Listed Below are the optional changes to the motor rule packages. If you have questions or need clarifications concerning the rules call Kyle Ezell (580)678-0089**

**Option 1.** Current Wingless Limited Sprint Rules

**Option \*2.** Current Wingless Limited Sprint Rules with the following modification. No vacuum rule; Solid lift flat tappet camshaft allowed; **No roller camshaft allowed**; 4 barrel stock 750 cfm carburetor; **No altering of any kind to the carburetor**; Any dual plane intake manifold is allowed; No altering to the existing EQ heads is allowed.

**Option 3.** OCRS 2 Barrel Engine Rules (See Section 4A Below)

**Option 4.** IMCA RaceSaver 305 Sealed Engine Rules ( See Section 4B Below)

### **Option 1 and \*2.**

Any type of sprint car chassis is allowed that has a minimum of 84 inches and a maximum 90 inches, measured from center of the front hub to the center of the rear hub.

1. Minimum weight, including driver is **1,525** pounds. Cars may be weighed at any time. Fluids used or parts lost during a race may not be added to make weight. No tolerance. Add-on weights must be bolted with a minimum of two 3/8" bolts and double nut and/or weight clamps. They must also be painted white with car number present.

### **BODY COMPONENTS**

1. The definition of an upright car is a conventional front-mount engine in which the vertical position is to be maintained as closely as possible, with a maximum 1/2" offset. The driver shall be seated directly behind the engine, the fuel cell must be behind the driver and the radiator must be positioned in front of the engine. The driver cannot be located beside the drive shaft. Side lips on hood cannot exceed 2 1/2".
2. Nerf bars cannot be attached in more than 3 places. May not exceed .120 wall thickness and no larger than 1" O.D. Maximum width 36" left side and 42" right side, measured from center of driveline.

### **TIRES:**

1. Tires, front tires and left rear tires are open; compounds and size are optional.
2. Tires, Right Rear must be one of the following:
  - a. Hoosier right rear medium ASCS - 105"-16"-15"
  - b. Hoosier right rear RaceSaver - 104"-16"-15"
  - c. American Racer right rear medium - 102"-16"-15"
  - d. Goodyear right rear 400 compound - 103"-16"-15"
  - e. Goodyear right rear, 105"-17"-15"

### **Wheels:**

1. Wheel type is optional. Bead lock wheels are optional.

### **SAFETY RECOMMENDATIONS:**

1. ***It is the driver's responsibility to follow all safety recommendations.*** All cars are subject to inspection at any time and must be free of mechanical defects and be in safe racing condition.
2. Full face racing helmets meeting Snell 2000 standard are required and must be worn at all times the car is on the track and must accompany vehicle during tech inspection.

3. Aluminum Racing seats are mandatory and must be factory manufactured. Only approved seat installation and seat structure will be accepted. No car will be permitted in competition unless seat is properly installed.
4. Fire suits, shoes, gloves, arm restraints and neck collars or Head / Neck restraint systems are mandatory and must be worn at all times during racing.
5. All seatbelts must have a 2" minimum wide safety belt and shoulder harness with 2 belts over shoulders, and are required to have a quick-release type latch. A 2" Shoulder belt system is allowed in combination with the use of a head / neck restraint system. Example: Hans device.
6. Shock-resistant roll cage padding on all bars that driver's head, legs and arms may contact with while strapped in seat are required. A padded, functional headrest in line with the center of the driver's head is mandatory. Right side head restraint is mandatory.
7. Two throttle return springs and a steel toe strap on throttle is mandatory.
8. Front rock screen must be securely mounted to the frame rails; it must extend from the top of the hood to the top of front halo with a maximum of 2"x 4" openings.
9. There must be a 2" minimum clearance between driver's head (with helmet) and top of roll cage (without padding). Loops may be used and must be constructed of the same tubing requirements as frame. These must be added in a safe manner.

#### **RADIOS:**

1. All drivers must have a working receiver type radio when car and driver is on the track. It is the driver's responsibility to make sure the radio is working.

#### **FUEL:**

1. Methanol ONLY. No performance additives.
2. FUEL CELL WITH BLADDER is mandatory. A fuel shutoff valve within easy reach of the driver is required. No vinyl or plastic fuel lines allowed. Fuel cell must be securely mounted. No car can start a race with more than 40 gallons of fuel.

#### **FUEL PUMP:**

Fuel pump type is optional. No pressurized fuel system.

#### **NUMBERS:**

**Nose / Tail Tank Numbers must be a minimum of 16" tall. Make numbers BIG, not fancy and kept clean for scorers. All cars must provide a 16" tall right side number on the right arm guard, right rear panel or hood.**

#### **CARBURETOR:**

One (1) two (2) barrel Holley type carburetor not to exceed 500 cfm. No solenoids. Carburetor will be checked using a GO-NO-GO gauge. Carburetor venturibore, throttle plate bore, throttle shaft diameter, and booster size will be checked using GO-NO-GO gauges. Measurements are as follows: Venturibore max 1.390", throttle plate bore max. 1.700", throttle shaft diameter minimum .180", booster height size minimum .435", booster size interior max of .385", exterior booster max. .6600". The use of fuel injection, supercharger, turbo charger, nitrous oxide or water injection will not be allowed.

#### **DRIVELINES:**

All drivelines must be broken in the coupler or rear slider. Torque arm drivelines may not be used. All drivelines must be enclosed and contain no more than one U-joint or CV-joint and that one must be at the front of the driveline.

#### **IGNITION:**

Any ignition mechanically driven in stock location. No crank triggers.

**MUFFLER:**

Mufflers are mandatory, type is optional.

**SHOCKS:**

Steel or aluminum shocks allowed. Adjustable shocks allowed but CAN NOT be cockpit adjustable.

**INTAKE MANIFOLD:**

1. Any dual plane intake. Cast iron or aluminum, no single plane intake manifolds.
2. No porting or polishing of any kind on aluminum intake manifolds.
3. Cast Iron intakes may be ported.
4. May run up to a 4" spacer.

**ENGINE:**

1. 283, 302, 305, 327 and 350 blocks can be used for Chevrolet, with a maximum of 368 C.I. No big blocks. OEM or Dart after-market Blocks.
2. Only 260, 289, 302, and 351 blocks can be used for Ford, with a maximum of 368 C.I. No big blocks. OEM Blocks or Dart after-market Blocks.
3. Only 273, 318, 340 and 360 blocks can be used for Mopar, with a maximum of 370 C.I. No big blocks. OEM Blocks or Dart after-market Blocks. No hemis.
4. All casting numbers must remain on blocks. No side bolt main blocks allowed.
5. No 400 small block or big block crankshafts allowed. This goes for Ford, Chevy or Mopar.
6. No 4-cylinders allowed. No V-6's allowed. No in-lines. V-8's only.
7. Again: only Ford, Chevy or Mopar engines are allowed.
8. No tolerance on cubic inch.
9. Oil Pan may be a stock or circle track pan that has a 1" inspection hole above the oil level, suitable for tech inspection. Wet sump systems only.
10. Any flat top pistons are legal. No gas ported pistons.
11. OEM blocks or Dart after-market blocks allowed. No aluminum. Cylinder sleeves okay. Polishing lifter galley, okay. No splayed main caps.
12. OEM cranks only. Steel or cast. Balancing okay. After market cranks allowed if they have a stock replacement/stock weight with a maximum of 3.48 stroke.
13. After market rod, main and head bolts or studs allowed. Any **5.7** steel rod. Push rods may be any length.
14. Fluid dampener harmonic balancer is allowed. No roller bearings can be used in the rod, main, or camshaft bearings.
15. Chevy, Ford and Mopar water pumps may be aluminum. OEM type only. Mechanically belt driven only.
16. Any brand of air cleaner allowed.
17. Engine displacement can be checked by pump even on protest.
18. Oil filters must attach at factory specs.

### **CAMSHAFT:**

1. Hydraulic lift cams only. Must have a \*MINIMUM\* of 12" of vacuum at 1200 rpms. Timing or carburetor may not be altered at time of tech, if vacuum used. It is the tracks discretion as to which way they want to check cam, even on the protest. Must have a vacuum fitting in intake. If WOW opts to use vacuum for tech, tech by vacuum will be final.
2. No hydraulic roller cam or lifters. No bronze bushings in the lifter bore or similar pieces. Up to four bronze bushings will be allowed in lifter bore for repair. Hydraulic lifters only. No solid cams or solid lifters allowed.
3. Anti-pump up lifters okay. No gear drives.
4. No reverse rotation cams or motors. OEM rotation only.
5. No vacuum canisters of any type allowed.
6. No vacuum pumps allowed.

### **HEADS:**

1. Engine Quest (EQ) head #350I shall be the only head to be used, except for the grandfathered stock production heads mentioned below. Valve sizes cannot be changed. 1.94" intake and 1.50" exhaust. No porting, polishing, or acid dipping.

#### **CHEVROLET: HEADS - GM**

A. Chevrolet production heads (#s 997, 445, 882, 624, 441, 487, 993, 185) raced in the 2014 WOW season may be used, must have been inspected by WOW and stamped by WOW for approval. These conforming heads can be used for the life of the heads, NO SUBSTITUTIONS.

#### **FORD: HEADS**

- A. Any cast iron head. OEM Ford heads only.
- B. No Boss or after-market heads of any kind.
- C. No valves larger than 2.04 intake or 1.70 exhaust.

#### **MOPAR: HEADS - PLYMOUTH, DODGE, CHRYSLER**

- A. Any cast iron head. OEM Mopar only.
  - B. No after-market heads of any kind.
  - C. Mopar can use the rocker arm bars. OEM only.
  - D. No valves larger than 2.04 intake or 1.70 exhaust.
2. Screw-in studs and guide plates are legal.
  3. Milling of heads is allowed.
  4. Any type rocker arm will be allowed. Stud girdles are allowed.
  5. No titanium components allowed. No carbon fiber parts anywhere.
  6. Poly-locks are allowed. Heads may be cut 360 degrees under valves in bowl area only.
  7. Any angle valve job is legal.

8. No O-ringed block or heads.
9. Any breather, valve cover configuration, composition is allowed.
10. Due to Fords and Mopars having no cc rule, neither will Chevys.
11. If EQ heads are used you must run stock diameter springs, 1.250" O.D. (+/- .060" tolerance)
12. Stock production Mopar, Chevy, and Ford heads can run springs up to 1.440"

#### **Section 4A – Engine Rules (Champ Sprint Option)**

4A.1. 368 Cubic inch maximum displacement. Steel blocks only. Flat top pistons only, (no protrusions above piston face), No internal reciprocating parts made of aluminum or titanium or anything other than steel. Water pumps to remain in the stock location and must be belt driven. Wet sump oil systems only, no external oil pumps or tanks of any kind. All competitors' engines are subject to inspection by USL at any time. No crank trigger ignition systems allowed. Any steel rod or crankshaft may be used. No titanium engine part will be allowed except valves and valve spring retainers. Camshaft is optional. No overhead cams. Gear drive ok. All oil pans must have a one inch inspection plug on the upper half of the oil pan above the oil line and windage tray. Pans without plug will be subject to pan removal at any time.

#### 4A.2. CYLINDER HEADS:

USL BRODIX SPECIFIED CYLINDER HEADS PART # CHEVEROLET

SP-CH

FORD

SP-FO

MOPAR

SP-MO

1. All spec heads will be supplied with CNC bowl blend and intake matching from Brodix. 2. No grinding or blending of CNC work is allowed.
3. No grinding or polishing of any kind is allowed anywhere on the castings. Note: Polishing only is allowed in the combustion chamber.
4. No use of any substance that may change or alter the shape or size of the ports or combustion chambers is allowed.
5. Valve seats and guides are to remain as manufactured and in the cast position, valve must stay on the valve seat and cannot touch aluminum.
6. Valve angles are to remain as manufactured. The original seat center locations as provided by the manufacturer may not be altered.
7. No tapering or reshaping of the valve guides is allowed.
8. No minimum combustion volume.
9. Serial #'s must remain on the head and must not be altered or defaced.
10. No welding modifications are allowed to the original castings. Brodix will provide repairs and recertification.
11. Valve stem may be no smaller than 11/32.
12. Bow tie heads are illegal and casting #25534371C are illegal! 13. Lawton Speedway Limited Sprint engines are allowed.

The ONLY steel cylinder heads allowed for competition in an O.C.R.S. event are original production for Chevrolet only. These heads must be straight plug castings that were produced for cars and light trucks. Casting # 461x are illegal as with any angle plug cylinder head. No aftermarket steel or aluminum cylinder heads are allowed other

than the specified head. Porting or Polishing of the steel stock production head is legal. Ford and Mopar cylinder heads must be the specified brodix head. Shaft mounted roller rockers are ok.

4A.3. CARBURETORS: One 500 cfm Holley 0-4412 5 point check legal carburetor. Venturi Bore Primary

1.373-1.377

Booster O.D. .620 (+or-) .010

Booster I.D. .380 (+or-) .003

Booster Height or Length .434 (+or-) .010

Throttle Bore

1.685-1.687

Throttle shaft & Plate thickness Pri .1868-.2008

These dimensions will be checked with a go-no-go gauge. Carburetors with injectors inside are illegal.

No air leak device of any kind.

4A.4. INTAKE MANIFOLD:

OEM or stock type cast aluminum allowed. May be ported only to match heads. No welding,

grinding, cutting, porting, polishing anywhere on intake EXCEPT for one inch maximum inside intake runners to match heads. No plastic manifolds.

#### **Section 4B – Engine Rules (Sealed Racesaver Option)**

4B.1. All engines must be sealed with RaceSaver® serial numbered seals before they are permitted to compete. RaceSaver® personnel certified to seal engines are available throughout the country. The bolts must be drilled for sealing wire on: 2 adjacent cylinder head bolts on each head, 2 intake bolts, and 2 timing cover bolts. All logo and trademark stamps must be intact at time of inspection. RACESAVER(r) seals will only be installed after showing proof of current driver or owner IMCA license to inspector. If applying for a transfer you must provide your current driver or owner IMCA license number on the form.

RaceSaver® maintains comprehensive documentation on RaceSaver® heads and sealed engines. This includes the history of registration, tech inspections, and repairs. The documentation and hard card program enables consistent application of the rules nationwide. A valid hard card will facilitate identification of RaceSaver® sealed engines and speed up track tech inspection. Pertinent tech information is available to our tech inspectors to assist them in maintaining RaceSaver® rules.

1: Only the following engine blocks will be permitted. GM 305 V-8s with the following approved casting numbers: 361979 460776 460777 460778 14010201 14010202 14010203 14088551

14016381 14016382 14016383 14094766 355909 14093627 14101147 10243878 4715111 10046164 14102058 A specific Dart Machinery block, purpose built and approved for RACESAVER®, competition is the "Little M" "B" block: pn. 31151411.

2: Ballast weight will not be permitted in cars that utilize a lightened block.

3: A maximum of 315.9 cubic inches will be permitted (+/-0.0). Stroke 3.480" (+/-0.020) Max bore 3.801. If 3.5" stroke, max bore is 3.790 Bore: Plain cast iron. Sleeves will be permitted for repair only.

- 4: Only flat top pistons with valve reliefs will be permitted. Pistons may not protrude from cylinder bore.
- 5: Only an iron or steel crankshaft, with a minimum weight of 48 lbs. will be permitted, (-1%). The main bearing diameter will be 2.450 ( -.030). Weight added to crank except balance metal, which must be welded in place, will not be permitted.
- 6: Only 5.700" steel connecting rods, with a rod journal dia. 2.100 (-.030) will be permitted. Oil pan may be removed for inspection at any time.
- 7: Only chain cam drives will be permitted. Variable cam timing will not be permitted.
- 8: Only plain hub or SFI approved damper will be permitted. The water pump must remain in the stock location.
- 9: Only solid .842 diameter ferrous metal flat tappets will be permitted.
- 10: Only a cast iron cam, with a firing order of (18436572) will be permitted.
- 11: Only a straight wound spring with a flat damper, that conforms to the specifications will be permitted. PSI @ seat 90-120#, @.500 lift 330-355#, Inst. Ht. 1.700 -1.820, Dia. 1.262 +/- .005, Wire dia. .193 +/- .002, Free ht. 2.130 max. 1.950 min., 5 full coils +/- 1/8th turn as measured from tail to tail.
- 12: Only vented, wet sump, in pan, oil systems will be permitted.
- 13: Only rockers centered on, & retained by the 3/8" rocker studs will be permitted.
- 14: The maximum valve lift permitted is: (.510" int. .535" exh.) @ zero lash @ valve retainer. Only standard size & configuration, 7 degree retainers and keepers will be permitted.
- 15: Stud girdles, rev kits, or valve train stabilizers, will not be permitted:
- 16: Repositioning, boring or bushing of cam or lifter bores will not be permitted. The maximum cam diameter will be 1.869 + .002
- 17: Only valves that conform to the RaceSaver(R) original size, configuration, length & weight will be permitted. The sizes are as follows: stem size 11/32", Intake 1.94" .008 stem undercut. Exhaust 1.60", Orig. stem undercut to .315
- 18: Ferrous material only: Valves, Seats, Retainers, Keepers, Push rods, Springs, Tappets, Cam, Crank, Rods, Wrist pins, Fasteners, Main Caps. Materials and processes including, but are not limited to; Titanium, Inconel, Ceramics, DLC, Nikasil, will not be permitted.
- 19: Only point type Magnetos, or Kettering style ignition, will be permitted. Only naturally aspirated, constant flow fuel injection will be permitted.
- 20: An additional 100 lbs. penalty will be added to the minimum car weight for use of any electronics, including but not limited to: ignition, ECU's and/or active driver aids.
- 21: RaceSaver® SPEC cylinder head: Alterations of any type will not be permitted. Machining, milling, resurfacing, grinding, polishing, welding, acid or caustic work, shot peening, glass beading, coating, or any other process that will alter the machined surfaces or the natural sand cast finish, will not be permitted. The cylinder head must retain all original dimensions & configurations including; Valves, springs, retainers, stems, & guides. Only re-seating the valves is permitted. Top cuts that extend into the aluminum of the chamber will not be permitted. Under the seat relief cuts, will not be permitted. Alterations to as delivered throat size, 1.810 Int. & 1.345 Ex. (+ .000 - .005) will not be permitted. Bowl changes will not be permitted. Every dimension of these heads has a gauge dimension that must be met for them to be certified. Any changes will result in disqualification. The stamped identification marks may not be altered.

22: Compression Ratio: 10.25 to 1 will be the maximum allowable compression ratio. The compression ratio may be checked with a whistle, or by measuring the volume of the assembled cylinder using liquid. The absolute minimum assembled cylinder volume measured at Top Dead Center (T.D.C.) is 70 cc. Any type of surfacing the heads will not be permitted without a repair authorization. Original serial numbers and certification marks must remain intact. They may not be altered or obscured. Any & all repairs MUST be pre-approved and the cylinder heads must be re-certified. If any spec head is found to be modified; it must be replaced with a certified spec head.

23: Repairs: In the event a cylinder head needs to be repaired, a repair authorization must be obtained by contacting RACESAVER® at 540-923-4541 before attempting repairs. After repair, the cylinder heads, completely assembled with all valves, spring, retainers, studs and guides, must sent to RACESAVER® for re-certification and registration. Recertified heads will be stamped with RACESAVER® & FGRS logos. The spirit and intent of RACESAVER® Engine Rules shall prevail.

**ALL DECISIONS MADE BY TECH OFFICIAL AND/OR DIRECTOR OF COMPETITION OFFICIAL ARE FINAL**