



## ***Osage Casino Hotel 305 Champ Sprint Rules***

### **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 TSW 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**

OCRC Brodix specified cylinder heads part #

Chevrolet 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. **Unaltered heads only, no casting blemish heads allowed.** 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 TSW event is 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 must have bowl with functioning float, needle, and seat.
- No Willy's Super Bowl or similar type floatless bowl systems.
- 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® 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 or the inspection hole may be used.
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 ration 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.

## SECTION 5 - CAR SPECIFICATIONS

1. Sprint car appearance-The minimum wheelbase is 80" with a maximum of 95".
2. The minimum weight with a driver after race: 1500 lbs. Any ballast must be securely bolted and located between the front motor plate to 12" behind rear motor plate. Ballast will not be permitted when using a lightened engine block.
3. Ballast will not be permitted in the rear bumpers and rub rails, which must be steel, with a maximum wall thickness of .095.
4. **Tires:** Only Hoosier ASCS 105 Medium Right Rear tire & RaceSaver will be allowed. Open Left Rear tire rule (along with front tires) providing they are tires manufactured for sprint car dirt track racing. Bleeders allowed. A right rear bead lock is required. At the request of our insurance, all mud plugs must be the foam type, or securely 5 dzus or 3 bolt mud cover. Outer mounting tabs must be integral to the wheel or bead lock or be securely welded to the wheel.
5. **Wing(s):** The main wing may have a maximum of 25 sq. feet, 60"- wide, with 30"-inch x 72"- inch side boards. **Flat Top or Dished Center Sections allowed. No wicker bill allowed on a dished wing, maximum 1" wicker bill allowed on a flat top wing.** The front wing must be a maximum of 2'-feet x 3'-feet with the leading edge no more than 6"-inches ahead of front tires.
6. Mu/lers are required at all events. Mu/lers are required to be unaltered store-bought mu/lers. Loss of mu/ler will result in disqualification for that race.
7. Cockpit adjustable wings, shocks, or weight jacks will not be permitted.

8. Steel, Aluminum or Titanium brake rotors only.

9. Open drive lines will not be permitted. Safety hoop or strap is required. Center section of the rear end must be centered within the rails. A drag link retaining strap is required.
10. A fuel tank & bladder assy. or Fuel Safe enduro cell meeting FIA-FT3 & SFI Spec. 28.1 is required. A main fuel line shut o/ is required. An on-board fire suppression system is recommended.
11. Only pure methanol is allowed. Additives of any type will not be permitted. Fuel is subject to chemical analysis.
12. Safety bars set forth by the Sprint Car Council are highly recommended with the Oil Capital Racing Series.

#### **SECTION 6A – TIRE PENALTIES AND INFRACTIONS**

1. First o/ense for the season: Fail heat race durometer inspection and you can start tail end of an assigned B-Main event. Fail B-Main pre-race inspection and you will be finished for the night. Fail A-Main pre-race inspection you won't be permitted to start the A-Main.
2. Second o/ense for the season: \$1,500.00 Fine and 300 points plus any winnings that have accrued for the event, violator(s) will assume all costs included in any testing procedures, no points and no money will be awarded for that event.
3. Any driver changing an engine after taking a competitive green flag will drop to the back of their race they qualified for. If a driver qualified for the A-Main, they will fall to 14th in the starting lineup. In the event there is no B-Main, the driver will start 14th as if there was a B- Main.

#### **SECTION 6B - CHEMICALLY ALTERED OR DEFACED TIRES**

1. First o/ense for the season: \$2500 Fine, no points, no winnings, and the Driver and/or Crew Chief assume all costs of testing procedures. If tires are found to be legal, OCRS shall assume responsibility for the cost of testing.

#### **SECTION 7 - SAFETY**

1. Any driver who exits their car and approaches another driver on a live racetrack **may be** subject to a fine of \$1,000 **and/or** be suspended for two OCRS sanctioned events. The o/ending driver will also forfeit their winnings for the night. This also includes

family and crew members entering a live racetrack. Under caution, stay in your car. If you are in an unsafe situation, you may exit your car but stay with your car. Dark tracks and dark fire suits make you hard to see. Remember, actions done in anger can have dire consequences. A driver/team who willfully ignores/disobeys an OCRS official in a manner which delays the running of the night's program, or places others in danger, will also be subject to a fine of \$1,000 and/or may be suspended for two OCRS sanctioned events.

2. All drivers are required to wear SNELL approved helmet, a fire retarding uniform, protective gloves, and arm restraints during competition. Fire retardant underwear is highly recommended.
3. RACEceiver Radios are mandatory; we reserve the right to penalize drivers that don't run a RACEceiver. No two-way radios will be allowed. Any driver who willfully ignores orders given by OCRS officials in such a way as to bring potential harm to another competitor, official, or fan will be disqualified for the night.
4. All cars must be equipped with adequate seat belts, shoulder harness and crotch strap. OCRS strongly recommends a five-point hookup with 3-inch belts. Full Containment Seat is highly recommended.
5. It is highly recommended, that the Steering Wheel is secured with a pull type, quick release hub or button style, quick disconnect. Use of removable pin style hubs is not recommended at all due to high risk of failure. It is the driver's responsibility to make sure the steering wheel is securely attached before entering the racing surface. Your safety is truly in your own hands.
6. An onboard fire suppression system is highly recommended on all cars with nozzles positioned as to coat the Engine, Driver, and Fuel Cell.
7. Approved front axle tether systems are highly recommended. The tether mounting must meet the SFI 55.1 specification which includes two (2) Vectran® HS V-12, or Dynemma 12 tethers attached to the chassis. Tether systems must include a "king pin to king pin" tether that will attach to the axle clamp/band. Tether cables should be installed using the manufacturer's provided fasteners. Tether systems of any type must be pre-approved and installed in accordance with the manufacturer's instructions.
8. If utilized, a tether is required on both left, and right sides of the Front Axle. Tethers must be mounted from the Front Axle, just outside the Radius Rod hookups on both sides of the Front Axle, utilizing the aluminum mounting brackets provided by the manufacturer. Tethers must extend to the second upright of the frame and be attached below the front engine mounts. Tether must be attached with a slipknot around the upright. Crews cannot alter the intentions of the Axle Tethers.



9. If a car needs to be fired in the Pits, the person in the car must be in full safety gear with seat belts properly attached.
10. No flammable liquids allowed in the cooling systems.

## **SECTION 8 - PROTEST**

1. Protest will be taken only from a driver or car owner and then only if the protest is in writing and accompanied by the appropriate protest fee in cash to OCRS officials. In the event the protested car is found to be legal, the protest fee shall be given to the owner of the car protested minus a fee that shall be paid to the inspector.
2. All protest must be filed within ten (10) minutes after the completion of the last race of the evening. All protest shall be decided upon by OCRS or his representative. Any appeal of official decision must be filed in writing within ten (10) minutes of notification with OCRS and forwarded to the OCRS. Protests can only be filed by OCRS members. Protests will be forwarded to the OCRS Board of Directors whose decision shall be final.
3. No protests will be accepted on judgment decisions.
4. In the event a car is protested and found to be illegal by the inspector, the driver and car protested shall have all points and money forfeited that were won during that particular race program in question and may be suspended.

### **Protest Fees**

- Motor tear down: \$1,500
- P & G fuel test \$800
- Other technical protest: \$500

## **SECTION 9 – SPORTSMANSHIP**

Sprint car racing is a very emotional sport. As such, good sportsmanship is the key element of any competitive racing program. This must include respect for all participants – drivers, owners, girlfriends, wives, mistresses, pit crews, and officials. For our part we will make every effort to be consistent with our rules regardless of whom or what is involved.

We will treat all participants with respect and expect similar treatment in return. A racer's pit area is his castle – therefore please stay out of other racer's pit areas, especially after an incident where you have been involved with that racer. Drivers – remember that you are responsible for the actions of your crew. As such, any member of a team who verbally or physically assaults an OCRS official will be fined and/or suspended from competition.

Sportsmanship does not just pertain to activities at the track. Be aware that we do our best to present TSW and its drivers in the best light possible. We expect our drivers to do the same. Remember what you say has weight, what you type has meaning, what you do has consequences. Think before you lash out and refrain from posting to social media. You never know who is reading, listening, or watching.

**TSW RESERVES THE RIGHT TO CHANGE ANY RULE AT ANY TIME IF NEEDED.**