

2023 Tulsa Champ-305 Sprint Rules

Engine Rules (Champ Sprint Option)

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 OCRS 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.

CYLINDER HEADS:

OCRS 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. **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 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.

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 and 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.

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.

Engine Rules (Sealed Racesaver Option)

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 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.

Car Specifications

1: Sprint car appearance. The minimum wheelbase is 80"- inches with a maximum of 95"- inches.

2: The minimum weight with a driver after race: 1550 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 will be allowed. Left Rear tire must be a manufacturer stamped size 94 (or equivalent) or smaller with a minimum of 35 durometer. Absolutely NO tire bleeders of any kind.** A right rear bead lock is required. At the request of our insurance, all mud plugs must be the foam type, or securely bolted 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. Maximum top wing angle is 20 degrees, with a +/- 1 degree tolerance. Measured from the center of the leading edge to the center of the trailing edge (not including the wicker bill on flat top wings). Measurements are made by laying a straight edge down the center of the wing, parallel to the side boards, and then using an angle finder gauge to determine the angle.** 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: Cockpit adjustable wings, shocks, or weight jacks will not be permitted.

7: **Steel, Aluminum or Titanium brake rotors only.**

8: Open drive lines will not be permitted. Safety hoop or strap is required. Center section of the rear end must centered within the rails. A drag link retaining strap is required.

9: A fuel tank & bladder assy. or Fuel Safe enduro cell meeting FIA-FT3 & SFI Spec. 28.1 is required. A main fuel line shut off is required. An on-board fire suppression system is recommended.

10: Only pure methanol is allowed. Additives of any type will not be permitted. Fuel is subject to chemical analysis.

11. Safety bars set forth by the Sprint Car Council are highly recommended with the Oil Capital Racing Series.