

# Midwest 305 Sprint Cars Inc.

## TECHNICAL RULES

*Revised 2/7/2010*

Rules stand as listed below through the 2011 Season.

### Chevy Engine Rules

**1.Engine:** Maximum of 316 cubic inches

**2. Block:** Stock Chevrolet 305 block (no Bow-Tie, Dart, After-Market, Canadian blocks). Approved casting numbers: 361979, 460776, 460778, 14010201, 14110201, 1410203, 1408851, 14016381, 14016382, 14016383, 471511, 355909, 14010202

**3. Pistons:** Flat top pistons, cannot protrude from cylinder bore. 11:1 is absolute maximum. Compression ratio will be checked with whistler static engine compression meter. 2 Or 4 valve relief.

**4. Crank:** Stock Chevrolet cast-iron or steel crank; 3.480 or 3.50 stroke. (No knife-edging or drilling, only to balance). Stock weight 48 pounds. Aftermarket 48 pound cranks accepted.

**5. Rods:** O.E.M. Stock appearing I Beam or H beam, 5.7 or 6.0 rods only. Oil pan inspection hole required to view rods. No Aluminum or Titanium

**6. Drive:** Chain, belt, gear drive is allowed. Stock-location water pump.

**7. Hub:** Damper or steel hub. If damper, must be SFI -approved.

**8. Cam/Tappets:** Flat-tappet cam, stock-diameter tappets (no roller, mushroom, radius tappets).

**9. Oil Pump:** Wet sump, internal pump only. (no crankcase vacuum systems)

**10. Rockers:** Roller rockers allowed (no shaft systems). 3/8" or 7/16" stock no screw-in stud-mount rockers only.

**11. Valve Train:** Stud girdles optional, any valve spring may be used, no rev kits.

**12. Valve Sizes:** 2.02 intake and 1.600 exhaust. 11/32" stock stem length (no altered stems).

**13. Steel:** The following must be steel only: valves, retainers, keepers, push rods, springs, tappets, crank, rods, wrist pins, fasteners, main caps. No titanium, composites nor ceramics in engine.

**14. Ignition Systems:** Magnetos, electronic, or Kettering-type only (no crank triggers). No MSD ignitions allowed.

**15. Fuel:** Injection/Carburetor. Constant-flow fuel injection maximum stacked bore 2 3/16". If sleeved down, sleeve must be at least 3" long and measure 2 3/16" throughout, no down nozzles, one nozzle per cylinder.

**16. Heads:** Any 23 degree steel head 49cc with maximum 200cc intake runner. No machining, milling, resurfacing, grinding, polishing, welding, acid/caustic work, shot peening, glass beading, coating, or any other process that alters the machined surfaces of the natural sand casting finish. The only work is allowed is port matching up to a 5/8 of an inch. You may deburr the bowl to rid away the sharp points of the casting only. No enlargement of the bowl or runners will be allowed. No under the seat cuts allowed. No work that enlarges the throat size. 1.810 INTERNAL and 1.345 EXTERNAL plus or minus .010. Head bolts only, no studs allowed.

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17. **Compression Ratio:** 11 to 1 is absolute maximum (11:1). Compression ratio may be measured by pouring the assembled cylinder. Heads may not be milled (only exception is when milling is required to repair the surface).

18. **Weight:** Minimum 1550 lbs. weight (with driver; no fuel added) after race. Zero tolerance as measured by the equalization platforms. Weight must be between the front motor-plate and 12" behind the rear motor-plate. Weight must be secured by a minimum of three 3/8" diameter bolts.

19. **Chassis:** Any sprint chassis is allowed, with minimum 80-inch and maximum 95-inch wheel-base. The roll cage must be of a four-post design. Frame and body must be sprint appearing (no dirt champ cars). No elliptical tubing used on or as part of the main frame structure. No chassis/suspension/traction cockpit-adjustable devices are allowed. *Drag link tether highly recommended.*

20. **Bumpers/Nerf Bars:** Rear bumpers and nerf bars are required and must be steel. (Cannot contain ballast or lead) Diameter must be a minimum of one inch. Minimum .065 thickness, and must be bolted in place. (No pins, cotter keys, or pop rivets)

21. **Tires:** Bead-lock required on right rear. Bleeders may be used. Maximum 18-inch tires with right rear tire having minimum durometer reading of 36.

22. **Wings:** (winged race only) Maximum top wing size of 25 square feet, with maximum of 30-inch by 72-inch side panels. Side panels must be one piece. No split wings or bi-wings. Top wings must not extend beyond outside of rear tires. A 1" wicker bill can be used on any wing. Maximum front wing size to be six square feet total with a maximum width of 36 inches and 12-inch side panels. No foils or rudders will be allowed. No side foils, rudders, or panels are to extend beyond roll cage on any side, no body pieces to extend beyond or underneath front torsion tube except hood. Sunshields cannot restrict vision. No wedges or foils underneath race car. No pieces may be added to the frame so as to resemble, imitate, or be specifically designed to deflect, trap, or form a wind break of any nature, except those used to cool/protect the motor & braking system. No device to move wing while racing allowed.

23. **Numbers:** Numbers must be visible and neat in appearance. Numbers must be on both the left and right side of the tail, as well as the side panels of the top wing. Numbers must be at least 16 inches high and letters at least 12 inches high on the top wing. In the event of duplicate numbers teams may be asked to temporarily add a unique letter to their number in all locations on the car.

24. **Brakes:** In-board and left front brakes must be utilized at a minimum.

25. **Driveline System:** All driveline systems must be properly installed, reinforced, and/or covered. A driveline hoop or restraint is required. (no open drivelines) Center section must be centered in frame.

26. **Fuel Tank:** Fuel tank bladder is required. Fuel tanks must be securely fastened. Any means of mounting the tank must meet the approval of the officials. Tank size used for qualifying must remain for all events. Fuel shut-off valve is required at tank. No electric fuel pumps.

27. **Fuel:** Methanol or ethanol fuel only. No power-enhancing additives allowed.

28. **Wheels:** No dual wheels are allowed. No carbon fiber wheels.

29. **Mufflers:** Maximum of 105 db.

30. **Front Axle:** Steel only. Minimum size is 2 inches by .156", 2-1/4 inches by .120", and 2-3/8 inches by .095".

31. **Floor Pan:** Steel or aluminum only.

32. **Carbon Fiber:** No carbon fiber parts allowed in the suspension or driveline.

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33. **Driver seat and fuel/fume deflector:** Driver's seat and butt-bar are required. *The fuel/fume deflector is strongly recommended. Fuel/fume deflector should be wider than driver's seat and extend from floor pan underneath seat to turn-up behind seat.*

34. **Radio:** No on-board radios. Officials' radio communications overheard by others will never be used as the basis of a protest, nor will they be used in support of a protest.

35. **Seatbelts:** Seatbelts should have the five- or six-point configuration of attachment to the frame or roll cage. *Arm restraints are also suggested, as is Hutchins, D-Cell, or Hans Device.*

36. **Car's Equipment:** Use a securely fastened steering wheel with a quick disconnect. No aluminum roll cages, front axles, frames, rear bumpers or nerf bars. All roll cages must be higher than the driver's helmet. Opening on left-hand side of cockpit must be a minimum of 14 inches. Only two valves and one spark plug per cylinder allowed. No titanium crankshafts or rods allowed. There must be an inspection plug in the oil pan, either a #12AN fitting or a one-inch pipe plug, or the pan may be removed for inspection. The sprint car cannot be raced without a hood. If a rear bumper is lost during a race, the car may continue until the car is stopped. If a red flag situation occurs, the rear bumper must be replaced in the allotted time before it can be restarted. A triangular safety net is strongly suggested on the right side of the roll cage, and also suggested on the left side. Metal fasteners are strongly suggested. Knee pads or other devices to keep the knees from banging around on objects and causing injuries are encouraged. Shoulder/helmet restraints are also encouraged. A padded head rest and roll cage padding around the cranial area is encouraged. A type of Styrofoam or fiberglass insulation of one-inch thick with an upholstery-type covering is suggested. If armafax or foam rubber is used, it should be considerably thicker. No mirrors allowed.

37. **Technical Inspection:** Cars will be subject to technical inspection at the discretion of the technical inspection committee assembled by the Midwest 305 Sprint Cars organization. All decisions are final.

38. **Protest Rule:** \$250.00 protest cash must be put up in order to protest. If illegal, protestor gets protest fee back. If legal, driver gets protest money. If car is illegal, driver will be fined \$500.00 plus loss of all points. Driver will not be able to race a Midwest 305 Sprintcars Inc. event until fine is paid in full.

39. **Redraw:** If the car count is under 16, a "2", "4", "6", "8", pill will be used for redraw. If the car count is over 16, a "10" pill will be added.

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### Ford Engine Rules

1. **Engine:** 302 Ford Cubic Inches (Maximum bore 4.030 on STD 4,000 Bore 302)
2. **Block:** Any Stock block or replacement block from auto, truck. NO AFTER market blocks.
3. **Pistons:** Flat Top Pistons can not protrude from cylinder bore. 10.25:1 max comp ratio.
4. **Crankshaft:** Stock Ford cast iron or steel crank shafts: 3.000" stroke. NO knife-edging or drilling other than for balancing.
5. **Rods:** Stock Ford or replacement rods, oil pan inspection hole required to view rods.

6. Same as Chevy
7. **Hub:** Same except may go from external balance internal balance.
8. Same as Chevy
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15. Same as Chevy

16. **Heads:** 302 or 351 W Inline Valve Heads may be used. No canted Valve Heads! No machining, milling only to produce good gasket sealing surface tune up only. Grinding, polishing, welding, acid/caustic work, shot-penning, glass-beading, coating, nor any other process that alters the machined surfaces or the natural sand-cast finish. Must retain all original dimensions and configurations, including valves, springs, retainers, stems & guides. The only work allowed is reseating the valves. No under seat relief cuts allowed. No work that enlarges the as-delivered throat size. No bowl changes. No port matching. Head bolts only (no head studs). No Boss Heads.

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