

OPEN WHEEL SHOWDOWN – Winged Sprint Car

2023 Rules and Regulations

Please make sure that every rule is read.

If you have any questions please feel free to contact us at openwheelshowdown@gmail.com

RULE BOOK DISCLAIMER:

These rules and/or regulations are designed to provide for the orderly conduct of racing events and to establish minimum acceptable requirements for such events. These rules shall govern the condition of all events, and by participating in these events, all participants are deemed to have complied with these rules. No expressed or implied warranty of safety shall result from the publication of or compliance with these rules and/or regulations. They are intended as a guide for the conduct of the sport and are in no way a guarantee against injury or death to a participant, spectator, or official. The Open Wheel Showdown Sprint Car Series will hereafter be referred to as OWS.

Conduct Policy:

1. General
 - a. All Competitors agree to act professionally as determined by Open Wheel Showdown. The professional manner includes, but is not limited to verbal representation, written representation, any representation that may represent Open Wheel Showdown, the sport of racing and/or motorsports in general and/or any affiliates. All Competitors **MUST** conduct themselves in a manner not detrimental to Open Wheel Showdown the Event or Organizer.
 - b. Profanity in front of race fans, Officials, management, profane signs or writing on cars, etc., will not be tolerated and may subject the offending party to penalties.
 - c. Social Media content deemed detrimental to the Open Wheel Showdown Organizers, Officials, Events, Sponsors and Competitors will not be tolerated. Detrimental content will be subject to dismissal from the event or prevention of attending the event.
 - d. **UNSPORTSMANLIKE CONDUCT AND/OR CONDUCT DETRIMENTAL TO THE SPORT OF AUTO RACING WILL NOT BE TOLERATED.**
 - e. The general appearance of Members and Competitors **MUST** be neat and clean looking.
 - f. No **SPEEDING** in the pits.
 - g. A competitor that stops his or her car on the track to argue or discuss an incident with the starter or other Officials will not be tolerated.
2. Abuse and Altercations
 - a. Verbal or physical abuse of Officials, including improper language or actions will result in sanctions from Open Wheel Showdown.
 - b. Fighting will not be tolerated. Drivers will be held responsible for the conduct of all persons connected with their car, and violations will be dealt with accordingly. Any person from a crew, including the driver, going to another pit area where any altercation erupts, will be considered at fault and will be subject to consequences.
 - c. A driver's pit is their domain.
 - d. Any driver who, in the judgment of Open Wheel Showdown Officials, engages in rough driving, deliberately running into, blocking, or swerving in front of another car - may be subject to disqualification from the event. Any car intentionally blocking the track will subject the owner and driver to immediate and indefinite suspension from the event and future Open Wheel Showdown events.

Section 1: Car Specifications

1. All cars must be the open-wheel, open-cockpit type.
2. All cars must have tubular front bumper and nerf bars.
3. The front part of the body, known as the nose assembly, shall not be wider than the parallel lines of the main chassis and may not extend forward more than 28" from the leading edge of the front axle. This includes the front bumper.
4. The engine, driveline, and rear axle center section must be mounted on the chassis center line with a .5" variance (one inch overall) at a 90-degree angle to the chassis in a vertical position. A maximum of one degree of variation will be allowed as measured from the crankshaft center line. The driver may not be positioned beside or in front of the engine and the driveline must pass between the driver's legs. Cars utilizing a front torsion bar suspension may not have bars mounted below the horizontal center line of the front spindles.
5. Tubular front axles must incorporate the spool wrap-around design in their construction.
6. Independent suspension systems are not allowed.
7. The front wheel width is limited to a maximum of 12" RF and 10" LF. The rear wheel width is limited to a maximum of 18" RR and 15" LR.
8. All cars shall be rear-wheel drive only.
9. The rear axle offset shall be determined by measuring from the farthest portion of the wheel including bead lock bolts to the center line of the rear axle assembly. The maximum distance allowed is 44.5". The total overall width, as measured from outside tire to outside tire is 78." The wheelbase must be a minimum of 84" and a maximum of 92" measured from the center of the rear axle to the center of the front axle.
10. Nerf bars cannot extend beyond the outside width of the tires. (Right side nerf bar cannot extend beyond the outside edge of the right rear tire)
11. Hoods cannot be constructed in such a way that they can be used as another wing or down pressure device. Illegal hoods will be at the discretion of the OWS director.

Frames

1. No aluminum frames will be allowed. Frames must be constructed using chrome-molly tubing. A .095 minimum thickness on the main cage surrounding the driver is required.
2. The maximum width of the main tubes as measured from the bottom of the rear motor plate (bottom frame rail) 30" vertical will be no wider than 31."

Body Style

1. Sprint car type body and tail only with belly pans under the engine and driver's area.
2. No tire enclosures of any kind are allowed.

Section 2: Car Construction

Weight

1. Cars with 410 cubic inch motors must always weigh at least 1,600 pounds with the driver. Cars with 360 cubic inch motors must always weigh at least 1,550 pounds with the driver.
2. Added weight must be bolted to and within the confines of the frame rails. Added weight must be securely fastened.
3. Cars will be weighed after qualifying, heat races, and any subsequent main event. After the feature, the top 4 cars will go to the scales. No Crew members will be allowed in the tech area until after the car has crossed the scales.
4. OWS scales will be the official scales.
5. Any car found to not make weight will be placed last in the previous event.

Engines

1. Steel and aluminum blocks are allowed.
2. Overhead cam engines are prohibited.

3. Engine size is limited to a maximum of 410 CID.
 - a. 410 CID engine with stacks are required to run a 1.875" ID maximum by 1.500" minimum depth restrictors.
 - b. 410 CID engine with Throttle Body/Plenum style Intake Manifold are allowed a maximum of two 4-barrel throttle bodies with 1.700" ID maximum by 1.500" minimum restrictor plates under the throttle bodies.
 - c. 360 CID (366 CID Max) engines with cylinder head valve angle of 21° or more can run open stacks.
 - d. 360 CID (366 Max) engines with cylinder head valves less than 21° must run 2.100" ID by 1.500" depth restrictors.
4. Engines must be mounted in line with the driver. The driveline must pass beneath the driver in the center, through the driver compartment. Offset engines and/or offsetting the position of the engine cannot be more than 1/2" with a 1-degree variance.
5. Standard Vertex style magnetos with internal or external coils and MSD ignition are allowed. * OWS reserves the right to randomly exchange owner MSD central ignition boxes for OWS-owned boxes. The competitor's ignition must be compatible with the MSD #8106 box. OWS officials reserve the right to send boxes to the manufacturer for inspection, after inspection boxes will be returned to owners. NO SPECIAL BUILT MAGNETOS ARE ALLOWED.
6. Electronics that provide traction control are prohibited.
7. All electronic and ignition components may be inspected, sealed, or confiscated by OWS at any time.
8. The use of electronic logic processors to control any function of the race car, and/or system for continuous gathering of data from any function of the race car, except for a tachometer, is strictly prohibited.
9. A throttle kill switch is highly recommended for the car and driver's safety.
10. Penalties for an oversized engine or refusing inspection will result in immediate disqualification.
11. The top 4 finishers will be pumped after the event.

Drivelines

1. All drive shafts must be surrounded (360 degrees) by proper tubing.
2. A metal torque tube hoop is mandatory; it cannot be altered in any way.
3. Maximum 1 u-joint must be located at the front of the driveline closest to the engine.
4. A driveline safety strap-type device (to ensure the torque tube stays in place in case of breakage) is recommended. NO titanium or carbon fiber torque tubes
5. The Torque Tube must bolt directly to the rear end with no moving or adjustable devices between them.
6. NO carbon rotors are allowed.

Fuel

1. Alcohol only
2. Fuel additives of any kind are PROHIBITED.
3. Fuel to be tested at random by the OWS officials.
4. Penalties for the use of illegal fuel or refusing inspection Immediate disqualification and reverting to the beginning of the event.

Aerodynamic Devices

Top Wing:

1. Must always be in the car while on the track.
2. The wing must have the car number displayed legibly on both sideboard surfaces and recommended on the top surface of the wing.
3. Top Area
 - i. Center foil size of 25 square feet with a maximum width and length of 5 feet. The center foil must be square or rectangular in shape with all four corners set at a 90-degree angle.
4. May not extend the confines of a line parallel to the outside of the rear tires.
5. The driver may adjust the top wing in the cockpit. The top wing must be straight with the chassis. No angling of the wings. Other than the slider mechanism, moving parts will not be allowed on or in the foil structure. Only one slider mechanism is permitted on the top wing, which allows forward and backward adjustment. There may be NO side-to-side (lateral movement) from the cockpit.
6. Sideboards must be no longer than 30 inches tall and 75 inches long. Side panels must be fabricated flat. Turnouts on all edges of the wing must not exceed 1 1/4" x 1 1/4" and must be at a 90-degree angle to the flat portion of the side panel.
7. Split-stepped or bi-wings are not permitted.
8. Single Panel Wings Only! No custom-modified wings are permitted!
9. The center foil must be fully sheathed in aluminum. Vent holes, dimples, ridges, or any other fabricated modification will not be permitted anywhere on the wing. No carbon fiber construction is allowed on the center foil.
10. No alterations of a standard manufactured wing, including but not limited to wedges, foils, rudders, or air veins are allowed.
11. Wicker bill 2 inch maximum. Measured from the top surface of the wing.
 - i. All wickers must be CONTINUOUS and the same size across the wings.

Nose Wings

1. Top Area may not be larger than 6 square feet.
2. Width may be no wider than 36 inches.
3. Single Panel Wings Only! No custom-modified wings are permitted!
4. Sideboards must remain square.
 - a. Maximum 1/2" turnouts are allowed.
5. Shall not extend beyond the front bumper. The front bumper may not extend forward more than 28 inches from the leading edge of the front axle.
6. All four corners of the center section must be 90 degrees.
7. Wicker bill 1 inch maximum. Measured from the top surface of the wing.
 - i. All wickers must be CONTINUOUS and the same size across the wings.

Side Shields

1. Cockpit side shields will not extend rearward beyond the rear roll cage. • No other devices are allowed
2. Body panels cannot extend beyond the frame rails.

Shocks

1. No shock absorbers or other ride-controlling or dampening devices that can be adjusted while the race car is in motion are allowed (except for the top wing). The only adjustable items from the cockpit are the top wing (front to back movement), brake bias adjuster, and dial a jet fuel adjuster. All other adjusters must be removed.

Traction Control Devices

1. Traction control devices of any kind are not permitted at any time.

2. Any team found with a traction control device will be automatically disqualified from that event.

Tires

1. All four tires must be Hoosier Racing Tires
 - a. Left Front: 2010 • Right Front: 2030 • Left Rear: M30 • Right Rear: 2045
2. The right rear tire used for qualifications will also be the tire the car starts the feature on. Any tire of the sets purchased and stamped for the event may be used in heat races or B-Main races.
3. Any solvents or any chemicals applied to the tire alter the chemical makeup of the compound or have the effect of altering tire durometer is prohibited
4. No tire breeders of any kind are allowed.
5. You must run the OWS stamped tires starting with the first practice on Friday and running through the balance of the event.

Section 3: Safety and Driver Restrictions

Mandatory items required include:

1. Fuel Bladder
2. Quick-release steering wheel
3. A dash or steering wheel mounted kill switch marked on and off is mandatory.
 - a. A throttle pedal kill switch is recommended to be installed and enabled in every car.
4. Nomex underwear must be worn when strapped in a racecar.
5. One-piece driving suit, with a minimum of two layers.
6. Nomex gloves must be worn when strapped in a racecar.
7. All drivers **MUST** wear a full-face helmet with a **MINIMUM** safety rating of FIA 8859-2015, FIA 8860-2018, Snell SA2020, Snell EA2016, Snell SA2015.
8. Head and neck restraints must be used. The head and neck restraint **MUST** be SFI 38.1 approved and display a legible and valid SFI 38.1 label. Per SFI 38.1 head and neck devices should be recertified every 5 years, this will become mandatory shortly.
9. A full containment seat with reinforcement around head and shoulder restraint sections is **MANDATORY**.
10. Five-point harness seat belts must be installed in the race car. Each car **MUST** be equipped with a minimum of an SFI 16.1, SFI 16.5, or SFI 16.6 approved restraint system. The restraint system will be eligible for use in competition until the expiration date or for 2 years from the date of manufacture. Seat belt restraint systems shall be installed and used in accordance with the manufacturer's instructions. Shoulder belts, lap belts, and crotch belts must be mounted to the frame of the race car.
11. One-way radios that enable the driver to hear the OWS officials must be used in all race cars. The Primary radio frequency is 454.000.
12. Roll bar padding and Side Head nets are highly recommended.
13. All competitors must reduce their speed to idle when entering pit road.
14. Speeding in the pits will result in disqualification from the event.