

2012 Port Royal Speedway Sprint Car Rules

CHANGES/UPDATES FOR 2012 ARE IN RED

ANY CAR, TEAM AND/OR DRIVER THAT DOES NOT MEET THESE SPECIFICATIONS AND/OR EQUIPMENT REQUIREMENTS WILL BE SUBJECT TO PENALTIES AS DETERMINED BY THE PORT ROYAL SPEEDWAY

Engines

- A.)** Only small block V-8 engines with the cam in the block and a maximum of 410.00 cubic inches of displacement (tolerance +/- 0.000) will be permitted. The formula $6.2932 \times \text{bore}^2 \times \text{stroke}$ will apply. Big block engines will not be permitted.
- B.)** The engine must be mounted in-line with the driver and the drive-line must pass beneath the driver on center through the driver compartment. Offset engines and/or offsetting the position of the engine will not be permitted.
- C.)** The engine block and cylinders must be machined from cast aluminum. Billet machined blocks and/or cylinder heads will not be permitted.
- D.)** Engines with the magneto and/or distributor in a forward mounted and/or front mounted position must be approved prior to competition. Engines with the magneto and/or distributor mounted in the stock OEM production position for the block and/or engine must be approved prior to competition.
- E.)** Only normally aspirated engines will be permitted. Turbo chargers, superchargers and/or forced induction of any type and/or description will not be permitted.
- F.)** The maximum engine cylinder bore size shall be 4.165.
- G.)** All engine cylinder sleeves (inserts) must be machined from an iron and/or steel alloy.
- H.)** Titanium crankshafts, connecting rods and/or rod caps will not be permitted.
- I.)** Only two (2) valves and one (1) spark plug will be permitted per cylinder.
- J.)** Cylinder heads must retain a traditional valve pattern. Rotation of the valves will not be permitted. Cantered or splayed valve cylinder heads must be approved prior to introduction into competition.
- K.)** Only steel connecting rods with a maximum length of 6.000 inches will be permitted.
- L.)** All oil pans must have an inspection plug. The inspection plug must be a #12AN fitting or 1.00" pipe plug. In the event that an engine does not have an inspection plug the oil pan must be removed for inspection prior to competition.
- M.)** Only throttle plate (butterfly) and shaft throttle body styles with round circular bores will be permitted. The maximum throttle bore as measured at the throttle plate (butterfly) may not exceed 3.000 inches in diameter. Slide plate, rotary cylinder, and/or other styles will not be permitted for competition.

N.) A maximum of 16 fuel nozzles, utilizing two (2) per cylinder will be permitted. One (1) nozzle must be placed in the cylinder head and one nozzle must be placed in the injector.

O.) A minimum of two (2) throttle return springs must be used to mechanically return the throttle to a fully closed position.

P.) Only magneto-type ignitions will be permitted. A single crank-trigger type system will be permitted as a back up ignition system. One (1) switch that alternates the current between the magneto and the crank trigger may be mounted to the dashboard within the driver's reach. Multiple coil-pack ignitions will not be permitted.

Q.) Steel and stainless steel headers will be permitted. Titanium headers will not be permitted.

R.) Mufflers are mandatory on exhaust systems. Schoenfeld muffler No. 112535 is required.

S.) In the event that there are new engine components and/or a new engine configuration they must be submitted to the Port Royal Speedway prior to being introduced into competition.

Fuel

A.) Fuel additives, including but not limited to nitro, nitro methane and/or nitrous oxide injection will not be permitted. Pure methanol and/or other approved fuels will be permitted. Fuel samples may be taken from time-to-time for inspection and analysis.

B.) FT3 fuel cells are recommended. A fuel cell with bladder and foam will be the only type fuel cells permitted. The fuel cell must be of one piece construction of cross-link polyethylene plastic. Alterations and modifications will not be permitted.

C) All teams are encouraged to run a 33 gallon fuel tank and bladder. At all events, 33 gallons of fuel will be considered as part of the formula utilized when determining the total number of laps prior to refueling in any specified and/or announced event

Traction Control Devices

A.) Traction control devices of any type are not permitted at any time, during any event.

B.) Any team found with a traction control device in pre and/or post race inspection shall be disqualified from that event. Additional penalties, including indefinite suspension and/or fines, and/or any penalty deemed appropriate by the Port Royal Speedway Officials may be issued.

C.) From time-to-time random inspections will occur and various components may be impounded for further analysis and inspection including, but not limited to ignition systems, ignition boxes, wiring looms and/or tachometers.

Chassis/Frame

A.) All chassis/frames built after during and/or after the 2005 season should have a manufacturer's serial number and identification plate visible and welded on the left front side of the roll cage upright. See drawing 16.8 a,r.

B.) Roadster type chassis will not be permitted.

C.) The chassis must have a minimum of four (4) mounting points for securely mounting any manufacturer's seat per the seat and chassis manufacturer's specifications.

D.) Drag links must be made of 4130 steel a minimum of one (1) inch in diameter and a minimum material thickness of .058 inches. Only magnetic steel tie rods and heim joints (rod ends) will be permitted. Swedging of the tubing will not be permitted. The drag links must be tethered to the frame with a minimum of one (1) inch nylon webbing.

E.) Hollow and/or drilled bolts, fasteners, and/or heim joints (rod ends) will not be permitted.

F.) Only front axles made of magnetic steel will be permitted. The minimum sizes permitted will be; 2" x .156", 2 1/4" x .120 and/or 2 3/8" or greater x .095".

G.) Titanium front axles, nerf bars and/or rear bumpers will not be permitted. Nerf bars and rear bumpers must be made from magnetic steel and/or stainless steel. The bumpers must be a minimum of one (1) inch in diameter and have a minimum material thickness of .065 inches. The nerf bars must not extend past the outside edge of the tires.

H.) The front bumper must not extend more than eight (8) inches from the frame and/or the measurement from the center of the front axle to the front of the front bumper must not exceed 23 1/2 inches.

I.) The top of the roll cage shall have a maximum outside width of 29.5 inches. Bracing that would prevent the driver's ability to exit through the opening and/or inhibit safety/rescue workers ability to extract the driver will not be permitted.

J.) The cockpit horizontal middle frame bar will have a maximum outside width of 27 inches.

K.) The bottom frame rail will have a maximum outside width of 26 .5 inches.

L.) All tubing utilized in the construction and/or fabrication of the main frame must be round in shape. Any other shapes, such as elliptical (oval) tubing will not be permitted.

M.) Only steel, carbon fiber or aluminum floor plans will be permitted.

N.) The minimum wheelbase will be 83 inches. The maximum wheelbase that will be permitted will be 90 inches.

O.) Front anti-roll torsion bar assemblies (sway-bars) will not be permitted.

P.) All cars must have a driveline strap and/or a driveline hoop restraint constructed of a minimum of .065 inch magnetic steel either welded and/or bolted to the chassis. The rear cross member used for mounting the steel driveline hoop must be constructed of .083 inch steel.

Q.) Wings, bumpers and/or nerf bars must be positively fastened with bolts & nuts, hitch pins and/or roll pins only. For any car to be pushed off at any time the rear bumper must be in place behind the tail tank.

R.) The only adjustable device that may be within the driver's reach will be one (1) top wing adjuster, for the top-wing slider mechanism. The slider must be one dimensional and allow forward and rearward movement only.

S.) The following frame measurements are minimum dimensions. Only those areas indicated are mandatory and subject to technical inspections.

“BUTT” BAR a car’s rear end can be tethered to the rear chassis. ASTM4130 normalized steel is suggested. TOP RAILS 1 ½” x .095”
BOTTOM RAILS 1 3/8” x .095” or 1 ½” x .083”
ROLL CAGE UPRIGHTS 1 3/8” x .083”
ROLL CAGE CROSSMEMBER 1 ½” x .095”
UPPER RAILS 1 3/8” x .083”
REAR END SAFETY “BUTT” BAR 1” x .083” or 1 ¼ X .065 BRACE 1 ¼” x .065”

Chassis/Frame/Weight

- A.)** All racecars must weigh a minimum of 1400 pounds with a driver fully prepared to compete in the car throughout an entire event.
- B.)** Additional bolt-on weight will be permitted, but must be mounted and fastened to the frame and/or chassis in a secure manner. All additional bolt-on weight must be mounted and fastened in the area between the bottom frame rails and axles but mounted no higher than the upper rails. At the discretion of Port Royal Speedway officials, additional bolt-on weight may be mounted and/or fastened forward of the front axle, but not past the front torsion bar.
- C.)** The addition of bolt-on weight during any yellow and/or red flag condition will not be permitted.
- D.)** The Port Royal Speedway scales will be available and open to scale cars prior to hot laps at every event.
- E.)** All cars will be weighed at the discretion of the Port Royal Speedway officials.
- F.)** If a car is found to be light after its respective heat and/or qualifying race, that car will go to a consolation event (B-Main) and must start last in that race. If there is no consolation/B Main, said car must start last in the feature/A Main.
- G.)** Any car that is found to be light after the A-Main, that car will be scored last, awarded last place points and receive last place money.
- H.)** When instructed to do so by the Port Royal Speedway Officials, cars must proceed immediately to the scale area. Crew members and/or other race team personnel will not be permitted in the area and/or to approach the car prior to reaching the designated area until it is weighed and released by Official.
- I.)** Except for extenuating circumstances drivers must remain seated in their typical racing position in the vehicle during the scaling process unless released by Officials. If a driver leaves the car without prior consent it could result in a disqualification from the event in which the car

competing in.

J.) Drivers instructed to weigh after the “A Main” are required to report to the scale area to be weighed. Failure to report and/or drive directly to the scale area will result in disqualification from the event. Any extenuating circumstances will be considered.

Body

A.) Only standard type Sprint Car bodies, tails and hoods will be permitted.

B.) Side foils, rudders and/or panels that extend beyond the rear of the cage support bars will not be permitted.

C.) Body pieces that extend beyond or underneath the front torsion tube will not be permitted, with the exception of the hood.

D.) Sunshields that restrict the driver’s vision at the discretion of the Officials will not be permitted.

E.) Wedges and/or foils underneath the racecar will not be permitted.

F.) Pieces that are added to the basic frame to resemble imitate and/or be specifically designed to deflect, trap and/or form a pattern for air to travel in a directed manner, except for those used to cool and/or protect the motor and the brake system will not be permitted.

G.) Mirrors of any kind, whether attached to the racecar and/or the driver will not be permitted.

H.) All cars must have a minimum of an 18 inch tall number on the outside of both top wing panels and a minimum 18 inch tall number on the top wing center foil. Any letter utilized as part of the car number must be a minimum of 12 inches tall. If there are cars at any event that carry duplicate car numbers then one of the two cars will be required to add a letter to the number for scoring purposes.

I.) All cars will be required to run a full sprint-type appearing hood with a maximum outside hood width of 30 inches. The hood must extend to the front of the torsion tubes and/or similar location on coil-over cars. The hood may be a multiple piece design, but visually, it must appear to be one continuous piece in side-to-side and front-to-back manner.

J.) The driver’s right side opening must be a minimum of 10 inches vertical at any point and a minimum of 21 inches horizontal at any point..

K.) Safety bar and/or arm guard paneling may protrude outward a maximum of 7 inches as measured from the outside edge of the upper “middle” frame rails. The area created by utilizing such a design for arm guards must be for the sole purpose of creating driver elbow room and shall not be designed to trap or deflect air in order to gain a competitive advantage. Said elbow room space must remain above the upper “middle” frame rail and cannot extend rearward of the leading edge of the rear axle.

L.) Radius rod protectors will be permitted. The maximum protector vertical opening will be 10 inches in height by 24 inches long and it must not extend more than 3 ½ inches from the outside edge of the bottom frame rails.

M.) A maximum 1 ½ inch wide by 20 inch long exhaust fume deflector, located on the bottom side-body panel at the rear edge will be permitted. The turnout

must not exceed 90 degrees.

N.) All other side paneling must be fabricated flat and must not extend past the outside edge of the frame rails more than the thickness of the paneling material.

O.) Side body panel designs and/or concave surfaces that, in the sole discretion of the Sprint Car Series Officials, are intended to trap, alter and/or direct airflow for the purpose of gaining an aerodynamic performance advantage will not be permitted.

P.) Any new body designs including, but not limited to side body panels, hood design, nose pieces and/or any other part of the exterior body must be approved by the Port Royal Speedway Sprint Car Officials prior to being introduced into competition.

Wings & Top Wing Center Foil

A.) Center Foil maximum size of 25 square feet with a maximum width and length of 60 inches. Center Foil must be square or rectangular in shape with all 4 corners set at 90° angles with no variance allowed. Center foil top is to be flat from front to back and side to side. The center foil top must start being flat within 6" from the center foil's front leading edge.

B.) Center Foil shall be fully sheathed in aluminum. Vent holes, dimples, ridges and/or any other type of fabricated modification will not be permitted anywhere on the wing.

C.) A maximum 1" removable wicker bill may be mounted on the rear edge of the center foil. Wicker bill must be 90 degrees to the top of the center foil. Built-in wicker bills or gurney lips will not be permitted. The maximum dimension of wicker bill may change periodically at the discretion of Port Royal Speedway officials. Any such changes will be issued in writing prior to the even in which the change will be made.

D.) The top wing may adjustable in the cockpit by the driver. Other than the slider mechanism moving parts will not be permitted on or in the foil structure.

Only one slider mechanism will be permitted on the top wing, which only permits forward and backward adjustment.

E.) The maximum center foil thickness is 9 inches. Underneath side of center foil must appear to be a continuous smooth arc with no recesses, concaves, or protrusions. Center Foil must be one-piece construction. Split or bi-wings will not be permitted. Only wings fabricated of metal alloys will be permitted. Fiberglass, carbon fiber and/or other similar material(s) will not be permitted in the basic framework of the wings. The top wing must not extend beyond outside of rear tires.

F.) Foils or rudders will not be permitted anywhere on the top wing.

Front Wing Center Foil

A.) The center foil will have a maximum size of 6 square feet with a maximum width of 36 inches and a maximum length of 24 inches. The Center Foil must be

square or rectangular in shape with all four comers set at 90 degree angles.

B.) Center Foil shall be fully sheathed in aluminum. Vent holes, dimples, ridges and/or any other type of fabricated modification will not be permitted, anywhere on the wing.

C.) A maximum 1” removable wicker bill may be mounted on the rear edge of the center foil. The Wicker bill must be 90 degrees to the top of the center foil. Built-in wicker bills or gurney lips will not be permitted.. The maximum dimension of wicker bill may change periodically at the discretion of Port Royal Officials. Any such changes will be issued in writing prior to the event in which the change will be made.

D.) The maximum distance from the Center Foil front edge to the front edge of the front axle may not exceed 20 inches.

E.) The Center Foil front edge must remain at least 1 inch behind the front edge of the front bumper. The Center Foil top surface from side to side must remain flat.

F.) The Center Foil must be one piece. Split or bi-wings will not be permitted.

G.) Only wings fabricated of metal alloys will be permitted. Fiberglass, carbon fiber or other similar material(s) will not be permitted in the basic framework of the wings.

H.) The Front Wing must not extend beyond the outside of front tires. The Front Wing may not be cockpit or driver adjustable while the car is stationary and/or in motion.

I.) Moving parts will not be permitted on or in the foil structure. Rudders or fins will not be permitted.

J.) The 5” section located at the rear of the front foil must not have a belly/curl arc that is out of proportion with the rest of the front foil. As measured on a 5-inch straight edge, the belly at 2 Y2 inches from the rear of the foil may not be deeper than 3/8-inch with no tolerance. It is suggested that the wing blue print specify 11/32 inch depth, so that if any deflection or movement of the wing occurs, the depth will not exceed the 3/8 inch specification (This 3/8 inch measurement ensures that the belly/curl arc is gradual).

K.) The belly/curl arc must span the entire length of the front foil and appear to be a gradual arc with the deepest point, not further back than 12 inches from the leading edge. The belly/curl arc must start at the front foil’s leading edge and shall not exceed a depth of 2 inches. Front foil thickness cannot exceed 3.6 inches.

Side Board Panels

A.) All braces or supports shall be oriented thin edge to face the air stream. Only rectangular, round or oval metal braces not exceeding 1-inch in width will be permitted. Adjustable bracing will not be permitted.

B.) Aero elliptical brace material will not be permitted.

C.) Brace or support shall not resemble a wicker bill or a split wing Side boards

must be mounted square to the center foil and parallel to each other. Any kick-out will not be permitted

FRONT

A.) The Front side boards will have a maximum 12 inches tall and 26 inches long with an overhang not exceeding 1-inch from the center foil front edge to the side board front edge.

B.) Side boards may have a maximum ½"-inch front, back, top and bottom turnout(s) (flange).

TOP

A.) The Top wing side board's maximum size will be 72 inches long and 30 inches tall. The top 2/3's of each top wing side panel shall consist of only 2 corners. Each corner shall be set at a 90° angle with no variance. This portion of the side panel's leading edge may not be behind the center foils leading edge.

B.) Panels must be of one-piece construction.

C.) 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 orientated at a 90° angle to the flat portion of the side panel.

In the event that there are new wing/foil components and/or a new wing/foil configuration they must be submitted per the Port Royal Speedway rule book prior to being introduced into competition for approval.

Wheels

A.) The maximum width for the right rear wheel will be 18 inches. The maximum width for the left rear wheel will be 15 inches.

B.) The maximum wheel diameter will be 15 inches.

C.) Plastic and/or carbon fiber wheels will not be permitted.

Tires

A.) Right and left side Goodyear "rear drive" tires will be required on at all Port Royal Speedway events. The tire will be available in the following compounds:

GY 100

GY 200

GY 300

GY 400 (Emergency Tire)

B.) The altering of any tire compound, by any means will not be permitted. Chemical alteration of the tread carcass and/or tread compound, such as tire 'soaking' and or the introduction of tread 'softener' and/or the physical defacement (removal, altering and/or covering) of tire sidewall markings in any manner will not be permitted. If any competitor is found to have altered their tires any penalty deemed appropriate by Officials may be issued.

1.) Any tire may be inspected and/or analyzed for alteration at any time. This will consist of a process as determined by the independent laboratory that performs the analysis. A "Chain of Custody" process will be outlined with the competitor upon inspection of the tires.

C.) Rear tire dimensions must comply with the Port Royal Speedway blue prints. Both rear tires must freely fit our gauges during pre and/or post race inspection.

Fitting New Tires

A.) A new right rear tire may be used for the start of any Main Event.

B.) If a car loses a right rear tire on its first qualifying lap, a new right rear tire can be fitted, but the car will be restricted to one (1) lap at the end of qualifying.

C.) During any Main, a flat and/or damaged tire may be changed, during a caution period in the designated work area .

1. The car will restart in the position and procedure of a car exiting the work area, behind all cars on the same lap, provided the replacement is made within work area time allowed.
2. A replacement will only be allowed for damaged tires, flat tires and/or damaged wheels. This rule applies to all four (4) tires on the car.
3. Prior to any work of replacement, positive approval for any replacement must be obtained from the official assigned to the work area.
4. A damaged tire is described as a tire; flat on the wheel, deflated, with extremely low air pressure or other circumstance. Loss of air must be due to an apparent puncture, hole, slice, cut, tread separation, extreme tire wear or similar situation.
5. The damaged tire can be replaced with a new or used tire.
6. A damaged wheel may also be changed, with a replacement tire, during a caution period in the designated work area under the same stipulations as stated in TIRES 1 through 4. A damaged wheel is described as bent or broken, bead lock bent or broken, broken or damaged center section. Malfunctioning bleeder valves or bleeder devices are not considered as a damaged wheel.

Other

- A.) Racing components in aluminum and magnesium should be checked for stress and replaced on a regular basis, based on the manufacturer's recommendations of the life usage of the part. These parts are, but not limited to; wheel centers, live rear axles, hubs and top wings.
- B.) Computer operated and/or controlled parts, such as fuel injection, fuel systems, chassis adjusting systems, etc., will not be permitted at any time during any event.
- C.) The use of electronic logic processors (this includes any traction control devices) to control any function of the racecar and/or any system for continuous gathering of data from any function of the race car for which the intended use is computer downloading will not be permitted at any time during any event.
- D.) Two-way radios, crew-member to driver and/or any other means of electronic communication will not be permitted.
- E.) Competitors will be required to use "one-way radio communication. Each team will be responsible for their own radio & headset. Radios & Headsets will be available for purchase from the track parts vendor. The communication from the Port Royal Speedway Race Director will aid in the direction of the race, including, but not limited to, safety and resetting the race lineup prior to any restart.
- F.) All seat belt mounting brackets must be fabricated from magnetic steel. Aluminum and/or any other materials will not be permitted.

ANY DEVIATION FROM ANY OF THE ABOVE RULES MUST BE SUBMITTED TO PORT ROYAL OFFICIALS FOR APPROVAL