

2011 WILROC WINGED SPRINT CAR RULES

Rules Disclaimer and Release:

The following rules are designed to establish certain minimum accepted requirements for, and the orderly management of, WILROC sanctioned events. They are intended to be followed by all racing teams (including owners, drivers and pit crew members) participating in WILROC racing events, but WILROC reserves the right to interpret, change or modify the rules at any time.

WILROC officials (including board members, committee members and race day officials) are empowered to make the necessary changes, modifications and interpretations of the rules at their sole discretion and their decision is final and cannot be challenged, except as outlined in the rules below.

All participants in WILROC sanctioned events understand that racing is a dangerous sport. By participating, each person agrees to follow the WILROC rules, accepts the risk inherent in sprint car racing, accepts that the rules in no way guarantee the safety of any participant and agrees to release WILROC from any liability for injuries or damages.

Racing teams are solely responsible for the design, construction, fabrication and maintenance of their sprint cars and related equipment, as well as safety equipment (including seat belts, head and neck restraints, arm restraints, safety netting, helmets, racing suits and shoes) used in the sprint car or worn by the driver and pit crew members. WILROC rules must be followed, but it is the responsibility of all participants to ensure that their sprint car, driver and crew are safe.

WILROC is not responsible for any damage or injury to equipment or participants at any WILROC sanctioned event.

THERE IS NO EXPRESS OR IMPLIED WARRANTY OF SAFETY FROM THE WILROC RULES, COMPLIANCE THEREWITH, OR PARTICIPATION IN WILROC SANCTIONED EVENTS. BY PARTICIPATING, EACH PERSON ACCEPTS ALL RISKS ATTACHED TO SUCH PARTICIPATION AND RELEASES THE WILROC SPRINTCAR ASSOCIATION, ITS OFFICERS, DIRECTORS, OFFICIALS, EMPLOYEES AND AGENTS FROM ANY AND ALL LIABILITY, AND INDEMNIFIES THEM JOINTLY AND SEVERALLY FROM ANY LEGAL ACTION ARISING FROM ANY EQUIPMENT DAMAGE OR INJURY SUFFERED BY THE PARTICIPANT AT ANY WILROC SANCTIONED EVENT.

VOTING: Only one vote for representative of a car (owner or driver). Multiple car teams have only one vote. Car must have competed under the WILROC banner to have voting eligibility

NOTE: The following rules are subject to change in the fairness of competition.

WILROC Rules shall apply at all WILROC events. Track officials and/or WILROC officials will be responsible for enforcement at all WILROC sanctioned events. At the discretion of WILROC officials in charge, any competitor may be disqualified for rule violations, hazardous equipment or unsafe actions. All race cars at a WILROC sanctioned event are subject to inspection at any time. Approval of a race car, at a WILROC sanctioned event, by WILROC official(s) shall mean only that the car is approved for participation in a competitive event and shall not be construed in

any way to mean that the inspected race car is guaranteed mechanically sound.

The WILROC official(s) shall not be liable, nor shall WILROC, for any mechanical failure, and not for any losses or injuries resulting from same. Tech and safety inspections may occur at any time and are solely at the discretion of the Tech and Safety Committee members.

Absolutely NO alcoholic beverages will be consumed by drivers or their pit crew members prior to or while competing in any WILROC sanctioned event. Use, sale or distribution of illegal drugs at ANY TIME shall be cause for immediate, indefinite suspension.

All drivers must be at least 16 years of age (proof of age required). Drivers under 18 years of age must have a signed and notarized Parental Consent Form by parent or legal guardian and said document must be in the hands of the WILROC officials prior to participation in any event. (NOTE: The Sanctioning body may require a participant to undergo a physical examination before being able to compete in a WILROC sanctioned event).

A ROOKIE is a driver who has not driven a WILROC race car previously. Rookie drivers will be examined by WILROC officials and must receive their approval prior to being able to compete.

SAFETY

NO car or driver shall be allowed to participate in any on track activity without passing Wilroc safety inspection. Violation of this will result in immediate suspension and fine. Cars or drivers found to be in violation of any of these safety regulations will be parked.

1. Roll cages are mandatory on all cars and must be constructed of seamless steel tubing with a Minimum O.D. of 1¼” and a minimum wall thickness of .095. This structure must be attached and secured to a strong component of the chassis structure and adequately braced fore and aft to secure it in an upright position. All roll cages must pass technical inspection. Roll bar cage must be a minimum of 2” higher than the driver’s helmet. Any bars in close proximity of the driver’s helmet must be padded with high impact material conforming to SFI Foundation Specification 45.1. securely fastened to the bar. Driveline hoop and bar at bottom rear of seat required.
2. Fuel cells must be securely mounted behind driver and well protected. Bottom of fuel cell must be above frame rail. Fuel cells must be USAC approved type. Sprint car fuel cell must be centered in rear of chassis. Main fuel line must have ¼ turn shutoff valve between tank and pump. Gas caps must be approved racing type. No plastic fuel lines; must be reinforced pressure hose. Tank must be vented in a manner that it will not leak if upset. Fuel shutoff must be clearly marked as to “ON” and “OFF” positions. . It is mandatory that the valve be visibly accessible from outside the car.. No plastic or glass fuel filters. No spring type clamps on fuel lines. All electric fuel pumps must use oil pressure activated switch.
3. No refueling on the track. All refueling must be accomplished in the pit area unless otherwise designated. Driver must be out of the car when refueling. Fueling with the driver in the car will result in \$100 fine and back-of-pack start. A second offence in the same season will result in the loss of points and monies for the night.

4. All drivers must wear fire resistant head sock, underwear, socks, gloves and uniform able to fit snugly around the neck, wrist and ankles. It is required that the uniform meet SFI 3.2/5 foundation specifications. Footwear must be fire resistant racing apparel. All safety equipment is to be clean and in good repair.

5. All participating drivers must wear safety helmets designed specifically for auto racing that meet or exceed the SA2005 Snell Foundation ratings. Helmets will be subject to inspection at each event by the Technical and/or medical representative. Face shields required. Helmets must be replaced following any severe contact. A head and neck restraint system is mandatory.

6. Seat Belts - The use of an approved seat belt is mandatory. Both the fastening design and condition of the belt are subject to the inspection of the Technical Committee. Life of the belts in use shall not exceed three (3) years and must be date stamped by the manufacturer. All belts must have a label showing that they meet SFI specification 16.1 or 16.5.

a. Seat belts must be worn as tight as possible.

b. Seat belts must be worn in such a manner that it passes around the pelvic area at a point below the anterior superior iliac spines. Under no condition may it be worn over the area of the intestines and abdomen.

c. Seat belts must come through the seat at the bottom of each side thereby wrapping and holding the pelvic area over the greatest possible area. At any point where the belt passes through the sides of the seat, the seat edges must be rolled and or have grommets to prevent chafing or cutting of the belt material.

d. Five or six point (crotch) belts connected to main belt quick release mechanism and securely attached to the chassis are mandatory.

Shoulder Harness - The use of double over the shoulder straps is mandatory.. Both the fastening design and condition of the straps are subject to the inspection of the Technical Committee. Life of the shoulder straps in use shall not exceed three (3) years and must be date stamped by the manufacturer. All straps must have a label showing they meet SFI specification 16.1. a. Shoulder straps must be attached directly to a strong structural member of the chassis close behind the driver's head and neck. At points of attachment they should be four (4) to six (6) inches apart. They should be attached in a line approximately 90 degrees to the seat back and be approximately level with the top of the driver's

shoulders. They should not be more than two inches below the through hole in the seat back.

b. Where the straps pass through the seat or body structure of the car, the edges must be rolled or have grommets to prevent chafing or cutting of the strap material.

c. Shoulder straps must be secured behind the driver's shoulders so that they are prevented from sliding sideways more than one (1) inch in either direction.

d. Two belts joining in a "Y" behind the neck to form one strap may not be used.

e. The shoulder harness should be worn as tight as possible.

7. Knee guards on the car or driver worn knee pads required to protect from impact within cockpit.

8. A full firewall is required between the engine and driver's compartment. It must be fully sealed to protect the driver from water, flame or metal fragments.

9. Hoods are required and must cover radiator, cap and engine compartment. Must be on car when it is on the racetrack during practice and in competition. Cars may be pushed off without hood for fire up only, no hot laps without hood.
10. Belly pans or floorboards must extend from frame rail to frame rail and from firewall to under seat (or as approved by safety official). All oil or grease leaks are to be cleaned up – including floor at all times. Dirty or greasy driver's compartments or improper seals will lead to car being "parked".
11. All cars must have foot operated hydraulic brakes in good working order.
12. All cars must be equipped with front and rear bumpers. Must extend a minimum of 6" ahead of the front tires and 6" behind the rear tires. Bumpers must not be more than 4" wider than the frame. Torque arms must have safety cable on front pick up point.
13. All cars must be equipped with side nerf bars which must extend to the normal width of the tire. No part shall extend beyond the width of the car. Nerf bars must also extend to the fullest length possible between the front and rear tires.
14. Ignition shutoff must be of a toggle type and mounted within easy reach of the driver. All switches to be clearly and permanently labelled "ON" and "OFF".
15. Batteries must be securely mounted. Conventional batteries must be retained in case of a crash or rollover. On sealed batteries, the vent hose must be routed to the outside of the car. Batteries must be covered to prevent spillage and have a clearly identified master disconnect switch.
16. All cars must have a radiator catch can. An overflow tube may run into the header system a minimum of 3 feet from the final exhaust outlet.
17. Mandatory that all teams have a fully operable ABC type fire extinguisher (min. 5# capacity) plus 4 litres of water in their pits – visible at all times. A 5 gallon open bucket of water is recommended.
18. No glass (except instruments) allowed. No rear view mirrors allowed.
19. Wrap around metal high back bucket seat with built in headrest of rigid back construction. Containment seat is mandatory and must be securely mounted and be padded with rigid high impact foam. Head rest minimum 5"X7". Seat to be securely fastened with a minimum of three grade 8 or better 3/8 " bolts and fender washers or four grade 8 or better 5/16" bolts and fender washers. Headrest to be securely mounted to rollcage with a minimum of two 5/16 bolts and be approved by tech. Seat back to extend to top of driver's shoulders. (Safety Committee Approved).
20. No car to have pitman arm or drag link inside of roll cage

21. No coolers can be attached to roll cage.
22. No riding on race cars or trailers permitted.
23. Recommended: Fuel cans labeled and coloured RED / water cans labeled and coloured BLUE.
24. WILROC reserves the right to withhold any car from competition if it does not conform to safety regulations and official inspections.

CHASSIS

1. Must be an open cockpit open wheel sprint car or roadster design.
2. Wheelbase will be 85" minimum and 102" maximum.
3. The maximum chassis offset allowed, for both front and rear wheels, is four (4) inches (8 inches overall) measured from the centerline of the chassis to the inner wheel bead seat. The outside bead seat cannot exceed 43 inches from the centerline of the rear axle center section. The outside bead seat of the left rear wheel cannot be less than 31 inches from the centerline of the rear axle center section. The outside of the right front wheel cannot be more than 43 inches from the centerline of the chassis. Overall width will be limited to a maximum of 78". Distance measured from outsides of opposite tires on a perpendicular plane. NOTE: This wheel-offset rule does not apply to roadsters, however roadsters must meet the 78-inch width rule. No portion of car to extend outside tires. NOTE: 78" maximum includes tire sidewalls.
4. No independent suspension allowed front or rear. Torsion bars / coil overs/ weight jacks and spring perches allowed.
5. Full floater stubs and axles allowed on passenger car type rear ends. Quick change type centre sections allowed. Open tube rear ends allowed.
6. No four-wheel drive, front wheel drive, rear-engine or "Oswego" type offset cars.
7. No driver adjustable or external adjustable shocks or gas shocks, weight jackers, traction control systems or wing sliders allowed. Wings must not extend beyond the track of the car and cannot be moveable while the car is in motion.
8. Cars must have complete body panels and be of professional appearance (Tech approved).
9. Cars must have an under pan under the cockpit area and vertical panels to effectively seal the cockpit area from the engine compartment.
10. No bodywork or airfoils may extend over any portion of the front or rear tires, measured vertically from the rear tires outside edge in a straight line forward. Bodies must not exceed more

than 2” outside frame rails and floor must extend to it. Bodies must be sprint car or super modified type and be securely fastened. Bodies may extend a maximum of 36” forward of the front axle centerline.

11. No titanium parts anywhere.
12. No carbon fibre parts anywhere (exception: wing leaders and wheels).
13. Minimum weight: 1700 pounds (including driver). Cars may be weighed at any time during race meet. Any cars can be weighed after Main Event (No Fuel added).
14. Engine height minimum-7” center of crankshaft to bottom of frame rails.
15. Engine to be mounted upright in chassis and be located within the frame rails.
16. All weight ballast to be painted white and indicate car #. Must be securely bolted between the frame rails (Tech approved).
17. Driveshaft and torque arm: All revolving parts inside the cockpit must be shielded by a suitable guard (fully enclosed – Tech approved). Buckley joint must be shielded in such a manner to protect the driver from errant parts and fluids.

REMINDER: IF IT’S NOT IDENTIFIED IN THE RULES, IT MAY BE CLASSED AS ILLEGAL. If in doubt, check with the Tech. Committee FIRST.

BRAKES

1. All cars must be equipped with a hydraulic foot operated braking system capable of stopping the race car in a safe manner.
2. If at any time during competition it becomes evident that a car is without brakes, the necessary repairs must be must be completed before the car can continue.
3. Master cylinders not fixed to the frame must have flexible lines. Copper tubing is not allowed anywhere in the braking system.

ENGINES

Any one of the following engine configurations are permitted:

- A) Current Wilroc iron engines with *Hilborn* injection plus 1.750" restrictors
- B) Current Wilroc iron engines with *Dragon Claw or Engler* plus 1.625" restrictors
- C) “SPEC” iron engine with Hilborn 2 3/16” injection, *no add. restrictors**
- D) Any open (NSRA rules) 360 engine plus 1.500" restrictors*

Restrictor inside diameter shall be no larger than as stated above for your engine configuration. Must be round and centered and in the stacks. Maximum thickness is .250" (1/4") flat design.

Maximum radius or chamfer on inside diameter is .050". No blending or radiusing of stack bell into restrictor opening, no alterations to the restrictors or stacks to enhance air flow. *It is recommended the restrictors be moved up the stacks far enough to allow three 1/8" pop rivets to be inserted directly below restrictors equally spaced to prevent slippage.*

**Wilroc reserves the right to adjust restrictor sizes on a race to race basis to maintain equality between all four engine combinations.*

Configurations A and B

1. No titanium allowed. No use of ceramic or composite internal engine components allowed, Exception – Carb adapter, valve covers, air cleaner, gaskets, bearings, piston rings and spark plugs.
2. No antifreeze or synthetic oils permitted (as track rules).
3. Engine must be naturally aspirated (no turbo, blower, etc).
4. Engines can be teched and sealed by the tech committee prior to the first race. Any engines not sealed will be teched prior to their first race. Cost of gaskets etc. is the owner's responsibility. Arrange with Tech Committee to have engine inspected-they will advise their requirements and schedules.
5. Any GM, Ford, or Dodge cast iron block. After market blocks allowed but all internal specifications of cylinder block must match OEM configuration. I.e. Chev – Chev, Ford – Ford. Steel caps and splayed caps allowed. 1" inspection plug required in oil pan or be prepared to pull pan when requested. Cubic in max 360 plus 1%.
6. Any steel rod allowed.
7. Any standard configuration cast iron cylinder head allowed (No raised runner heads). Porting is OK. No aluminum heads allowed. Screw in studs and guide plates permitted. Lifters – diameter must match original make of block (eg. Chev to Chev.) Valve angle must remain stock, no rollover means just that, and would include angle milling of cylinder heads, which is not permitted.
8. Any stack style mechanical fuel injection is permitted plus the addition of the following restrictors:

A) Conventional style Hilborn injection plus 1.750" restrictors

B) Dragon Claw or Engler plus 1.625" restrictors

**Wilroc reserves the right to adjust restrictor sizes on a race to race basis to maintain equality between all four engine combinations.*

Maximum 8 nozzles and must be in intake manifold, no down nozzles, nozzles must be mounted on intake portion of manifold only. No timed or electronic fuel injection allowed.

9. Any carburetor combination permitted.
10. Unaltered Felpro gaskets required. (Chev #1206/1266, Ford #1262, Dodge #1213) or smaller as approved by WILROC tech.
11. No overhead cams. Any flat tapped camshaft allowed. No roller cam or roller lifters. Stock lifter diameter and configuration, make for make.
12. Cast or forged steel crankshaft permitted (balancing allowed).
13. Any ignition system allowed. No electronic traction control devices permitted. No driver adjustable ignition, except kill switch.

Configuration C - Spec Engine

1. Small block Chevrolet only, maximum displacement of 363 cubic inches. Any GM cast iron block. After market blocks allowed but all internal specifications of cylinder block must match OEM configuration. Steel caps and splayed caps allowed. 1" inspection plug required in oil pan or be prepared to pull pan when requested.
2. Cylinder heads to be Dart Iron Eagle Platinum 215 only, part number 10510020P. Maximum valve diameters, intake: 2.05", exhaust: 1.60"...absolutely no porting. Valve angle to be 23 degrees (+/- 1deg). 60cc minimum combustion chamber volume. Any roller rocker OK, titanium valve spring retainers OK
3. Any flat tappet or roller cam, lift at valve not to exceed .600".
4. Any 3 ring flat top piston only, piston top to be below deck.
5. Steel rods, max length 6"
6. Any steel or cast crank, 50 lbs minimum weight. 3.48"/3.50" stroke only. Minimum rod journal diameter is 2.00"
7. No titanium anywhere except valve spring retainers.
8. Hilborn conventional style injection only, NO Rotary, Dragon Claw, Engler, or three piece style Kinsler or Hilborn. Maximum bore 2 3/16". If larger than 2 3/16" you must use 8 injector stack restrictors, 1 per cylinder with a Minimum of 3 inches of round, continuous restriction at a maximum of 2 3/16". Restrictors must be mounted above butterflies, can be anywhere in stack, no relief holes allowed in any injector. Maximum 8 nozzles and must be in intake manifold, no down nozzles, nozzles must be mounted on intake portion of manifold only. **Additional restrictors may be required. Wilroc reserves the right to adjust restrictor sizes on a race to race basis to maintain equality between all four engine combinations.*
9. FelPro 1206 or 1266 intake gasket only
10. NO MSD pro-mag, points style mag only

11. Wet or dry sump oiling system

Configuration D - Open 360

- As per 2011 NSRA rule book plus 1.500" restrictors*

**Wilroc reserves the right to adjust restrictor sizes on a race to race basis to maintain equality between all four engine combinations.*

EXHAUST

1. No 180 degree headers, no merge collectors, or Tri Y headers allowed.
2. Mufflers required to meet 95 DBA at 100 feet. Must meet local track requirements as directed.

FUEL

1. Alcohol or methanol only. No performance enhancing additives allowed.

RADIOS

1. No transmitting devices in car, WILROC approved radios/transponders only. No electronic monitoring computer devices capable of storing or transmitting information allowed (except tachometer).

STEERING

1. Steering mechanism must be engineered and assembled in accordance with sound engineering principles.
2. All highly stressed steering components must be made from SAE 4130 steel or an alloy, specific by the manufacturer, of the component as equivalent in necessary strength for its intended use.
3. Rack and pinion steering permitted.
4. Steering wheel to be a metal "quick release" design.

THROTTLE

1. Throttle toe straps and a return spring are mandatory. A minimum of 3 return springs must be connected to different locations on the throttle system. One spring must be on the butterfly shaft.

2. If the throttle actuating mechanism is the cable type, the cables must be encased to ensure push-pull action.
3. The throttle pedal must have a wide open stop.

TIRES

1. Tires for 2011 are Hoosier 2048(right rear); Hoosier 2030 (right front); Hoosier M30 (left rear); and Hoosier M10 (left front).
2. Maximum of one RR tire (NEW) per night (PERIOD), Cars are to run LR, and RF for 2 race events , tech will be strictly enforced. RR, LR, and RF tire will be branded and monitored.
3. The tires used in qualifying must be used in all races for the balance of the night. Alternate RR may be used for trophy dash only .
4. If a tire RF RR LF becomes punctured or cut a Wilroc official must be notified to come and inspect the tire before it is removed from the car and if deemed to be unsafe by Wilroc tech A **used** tire that has a **branded** may be used in its place only after a Wilroc tech or official has approved the tire
5. If a used tire is placed on a car the driver will hold his qualifying position and receive all points (passing and finishing position)
6. If a used tire is placed on a car to replace a damaged tire a new tire is allowed to be put on a car for the next race event
7. If a used branded tire can not be acquired to replace a damaged tire a new tire will be allowed to be used in its place **ONLY** after a tech official gives the car permission and not before then
8. If you choose to use a new tire you will be required to start at the back of the pack and no passing points will be given to the driver or car, an additional 10 point deduction will also be given after the main event
9. If a team is caught attempting to circumvent these tire rules ALL MONIES AND POINTS earned on that race night to be forfeited.
10. All tire issues at the track should be brought up with tech and not other teams

WHEELS

1. Steel, aluminum (alloy) and carbon fibre allowed. Bead locks permitted.
2. Wheel weights must be stick on only and be securely attached.
3. Recommended: Any car using a lug nut type right front hub must use all six lug nuts. A 360 degree pressure plate of either 1/8" steel or 3/16" aluminum must be used, between the lug nuts and the wheel face.

WINGS

1. Maximum top wing area 25 square feet.
2. Maximum nose wing area 6 square feet.
3. Top wings cannot extend outside of the rear tire/wheel assemblies.
4. Top wing sideboard height will be a maximum of 30" vertical height and a maximum of 72" length.
5. No wing lip (wickerbill) to exceed 1" in height.
6. All wing assemblies must be securely attached to the chassis of the car.
7. Single stage wings only
8. No wings to be moveable while the car is in motion (no sliders).
9. Top wing numbers on sideboards are mandatory and must measure 16" high minimum. The numbers must be of a contrasting colour and be highly visible.
10. If series sponsors are obtained, WILROC officials will designate areas on wings and/or body panels for sponsor logo/advertising signage to be displayed. Contingency awards may be withheld if signage not displayed.

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, 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 when you have been involved with that racer. Drivers remember that you are responsible for the actions of your crew. Any offending parties will be fined appropriately and disciplinary actions will be initiated as deemed necessary.

PENALTIES

Technical violations will result in ALL MONIES AND POINTS earned on that race night to be forfeited.

1. Verbal Abuse to any WILROC official \$100.00.
2. Assault to any WILROC official or Track Owner/Promoter automatic suspension.
3. Fighting results in a 1-year suspension.

4. Rowdyism in pit area \$100.00
5. Speeding in pits (after warning) cars and quads first offence \$50.00 second offence \$100.00.
6. At anytime during a race no crew or driver will be allowed to approach lap recorders. Fine \$50.00
7. All fines will be withheld from driver's payout. Should the fines exceed the payout, they must be paid in full before offender will be permitted to participate in a WILROC event.

PROTESTS

1. All protests must be submitted in writing to a WILROC Official within 30 minutes after the end of the last WILROC race and will only be accepted from a registered driver. Any engine protest must accompany \$300.00 cash. If engine protest is found legal the monies will be given to owner/driver of protested car.
2. All other protests must be accompanied by \$100.00 cash.
3. If a protest is successful the protester will be refunded his money.

APPEAL PROCEDURE

1. A participant desiring an appeal hearing of action taken by WILROC must submit a written request to the Secretary of WILROC for an appeal hearing accompanied by written reasons why an appeal should be heard, no later than five days after the date of suspension or fine.
2. A non-refundable fee of \$100.00 cash, must accompany the request for an appeal hearing.
3. An appeal panel will be struck and a decision reached within 14 days of the date of the appeal.

NOTE: ALL DRIVERS MUST HAVE A CURRENT RULE BOOK IN THEIR POSSESSION AT EVERY RACE EVENT.