



POWRi Lightning Sprint Specifications

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1. Brakes

- a. No electronic controlled brake bias adjuster (Manual adjustment only).
- b. If at any time during competition it becomes evident that a car is without brakes, the necessary repairs must be completed before the car can continue in competition.

2. Car Appearance

- a. Sprint style cars, including hood and tail
- b. No Rear Engine Cars or Sidewinder Cars.
- c. Minimum of 7" open between right side armguard panel (window) and bottom of the top roll bar.
- d. The front part of the body, known as the nose assembly, shall not be wider than the parallel lines of the body and may not exceed the width of the frame. The nose assembly may not extend forward beyond the confines of the front bumper.
- e. The engine must be covered with a cowling or hood secured in place. The hood or cowling need not enclose the sides of the engine.
- f. Side visors on roll cage will be limited to eight (8) inches tall. Only steel or aluminum floor/belly pan are permitted.
- g. Sun visors must not extend forward more than seven (7) inches from the front of the forward most edge of the roll cage/halo tube and may not be wider than the width of the cage.
- h. Panels attached to nerf bars will not be permitted.
- i. All paneling must not extend past edge of frame rails more than thickness of material. One (1") inch turnout allowed on all body and sail panel edges, except sun visor.
- j. The car must be always equipped with a rear bumper.
- k. Front and rear bumpers and nerf bars must be constructed of magnetic and or stainless steel (NO TITANIUM) tubing with a minimum O.D. of 7/8 inch and having a minimum wall thickness of .065 inch and a maximum wall thickness of .120 inches. A maximum of three horizontal and/or three vertical tubes are allowed in the construction of nerf bars.
- l. All cars must have a tubular front bumper extending forward no more than 21 inches from the leading edge of the front axle. Bumpers must be constructed so as not to cause a safety hazard.
- m. With the exception of the exhaust system, no components or accessories may be attached to the nerf bar assembly.
- n. Mandatory Numbers
 - i. Top wing side panel numbers (must be 14" tall minimum) + tail tank numbers (9" tall minimum).
 - ii. At Non-Wing events a 9" minimum number must be attached on the nose of the forward most panel.
- o. Preferred Numbers
 - i. Top wing number (18" tall minimum) & Front body/nose (9" tall minimum numbers-must be a size that is clearly visible from the scoring tower). Also, you are requested to have a letter "A" or "G" (to designate the type of fuel you are using), located on each side of the tail tank/cover at the fill cap area.

3. Chassis

- a. Minimum weights (wing races) for Car and Driver after the race: 1000cc = 950 lbs.
- b. 1001cc to 1200cc, Max. = 1025 lbs.
- c. Minimum weight (non-wing races) for car and driver after race: 1000cc = 925 lbs.
- d. 1001cc to 1200cc, Max. = 1000 lbs.
- e. Weight added to car must be bolted behind motor plate and forward of rear axle within the confines of the chassis.
- f. Ballast must be painted white and be labeled with the car number it belongs to.

4. Cockpit

- a. No cockpit adjustable shocks. You may use a wing slider adjustment.

5. Components

- a. No Cockpit adjustable components of any kind. The exceptions are electronic wing slider and brake bias adjuster.
- b. All front axles must be constructed of 4130 tubing. Titanium front or rear axles are not permitted.
- c. Non cockpit Adjustable shocks are permitted.

6. Engine

- a. Any 1000cc, normally aspirated, production motorcycle engine may be used.
 - i. Engine model must be in production for two full calendar years prior to use. No limited production engines will be permitted. No current year production engines allowed. The serial number must be clearly identifiable.
- b. 1200cc Exception
 - i. Only the 2000-2005 ZX12R 1199cc.
 - 1. Normally aspirated, production motorcycle engine will be the exception.
 - 2. No internal modifications will be permitted. No limited or other production engines will be permitted. The serial number must be clearly identifiable.
- c. Engine case, cylinders, head, crank, rods, pistons, cams, valves, transmission, coatings, and clutch must remain stock OEM and operational.
- d. Removal of carbon deposits in ports is permitted. No removal of head material and/or modification of valve seats.
- e. No milling of the cylinder head, except for cleanup purposes only. A .010 maximum of head cleanup allowed.
- f. Dry Sumps are allowed, the oil pick-up can be relocated in the crankcase, to facilitate circle track conditions.
- g. Any aftermarket ignitions, exhausts, carburetors, cam chain tensioner and oil pans are permitted.
 - i. No aftermarket electronic throttle bodies. No porting or milling of throttle bodies allowed.
- h. Mechanical or electronic injection allowed with either menthol or gas. No additives are to be used on air cleaners and or air boxes that result in any type of performance enhancement. The ID of the aftermarket fuel injection throttle bodies (electronic or mechanical) can be no larger than the stock fuel injection bodies (1.079mm). Custom ram tubes or insert washers can be used to achieve the stock ID in aftermarket throttle bodies. No porting or enlarging the diameter of the stock throttle bodies.
- i. All replacement parts are to be replaced with original factory 48 State replacement parts or aftermarket parts of same factory configuration. However, mixing of some parts for same name engines may be accepted. In no way can mixing or matching of parts be performance enhancing.
- j. No internal modification of the engine, clutch or transmission including removal, grinding, filing, or altering of ports is permitted.
 - i. With the following exceptions.
 - 1. Additional or heavier clutch springs may be used. No internal modification limits to older style motors (motors years prior to electronic fuel injection) 1200 cc maximum. Decreeing of stock OEM cams is permitted.
- k. All cars must be able to start the first race under their own power without assist.
- l. Oiling system may be modified for reliability. Oil pan, pickup, cooler, lines, tank(s), and pump(s) may be modified or replaced.

- m. The motor plate may not be made from carbon fiber, or any type of composite materials.
- n. Aftermarket Engine Control Module(s) or Fuel Management System(s) will be permitted.
 - i. No electronic traction control may be used. No aftermarket plug-in traction control devices, wheel speed, or chain sensors will be permitted.
 - ii. All electronic components may be inspected, sealed, or confiscated by POWRi or organizer at any time.
 - iii. The maximum penalty for utilizing traction control is a one-year suspension from competition and loss of all points earned for the season.
 - iv. All cars must be equipped with ignition switch or emergency shut off located within easy reach of the driver.

7. Exhaust

- a. Mufflers are mandatory. Exhaust system tail pipe(s) must not be any wider than nerf bar.
- b. The car may be required to have a muffler if local conditions warrant.
 - i. If so, this will be stated on each individual entry blank. The technical director may disallow a muffler that in their opinion is not within the spirit or intent of this rule

8. Final drive

- a. Chain Drive Only, Chain guards must cover the top and driver's sides of chain and a minimum of 3/32" Aluminum for a chain guard.
- b. Engine offset is a maximum of 6" measured at the rear of the engine, centerline of inside cylinders to the center line of the motor plate upright in chassis.
- c. All cars must be equipped with a rack & pinion or gear steering.

9. Firewall

- a. Between engine and driver, minimum of .035" material, no holes or gaps between driver's legs/feet and the motor.

10. Fuel

- a. No plastic or aluminum fuel or oil lines allowed.
- b. Fuel lines must be high quality, automotive type and securely attached. Fuel or oil lines may have aluminum connections and fittings.
- c. No oil coolers/radiators may be mounted in the driver's compartment area.
- d. No metal fuel tanks allowed. All tail tanks are required to have bladders. Jaz type plastic tanks are acceptable.

11. Fuel System

- a. Maximum 112 octane gas, E85, or Methanol.
- b. No oxygenated fuels will be permitted.
- c. All fuel is subject to testing at any time. Any fuel that does not conform to these standards, as administered at the track, will be considered illegal. The use of illegal fuel could result in disqualification from the event and/or the entire program.
- d. All tanks must have a minimum of four mounts to the chassis.
- e. Fuel tanks may not be mounted to the chassis utilizing any portion of the access plates or the nut plates bonded into the fuel bladder.
- f. The engine must be equipped with a fuel shut-off device.
- g. A Midget/Micro/Sprint tank must have a bladder.
- h. Metal tanks are not permitted.
- i. Rollover valves will be mandatory.
- j. All tanks/fuel cells must be securely mounted between frame rails and behind the driver. JAZ type fuel tanks with a positive locking cap will be permitted.

12. Heim joints and/or rod ends

- a. Minimum size, 7/16" steel with 3/8" bolts (or 1/2" aluminum) for tie rods, radius rods, watts link, drag link, pan hard bar, etc...

13. Roll cages

- a. Minimum of 1 1/4" X.095 or 1 3/8 X.083 wall thickness (above main frame rails), chromoly tubing.
- b. The roll cage must have cross brace (3/4" diameter minimum) behind seat for shoulder harness support.

14. Tires

- a. MUST be Hoosier tires (tire sizes listed below). The current Hoosier contract is in effect through 2021.
- b. Front tires: 68.0/7.0-13 D12, D15.
- c. Left rear tires: 74.0, 76.0, 77.0, 78.0, 80.0 /10.0-13 / D12 or Harder.
- d. Right rear tires: 82.0/12.0-13 SP2, SP3, SP4, or Spec 80.
- e. Any device(s) used for warming the tires prior to competition is prohibited.
- f. Any solvents or a chemical applied to the tire that alter the chemical makeup of the compound or have the effect of altering tire durometer is prohibited.
- g. Sipping and/or grooving is permitted.
- h. Electronically controlled tire pressure bleeders will not be allowed.

15. Wheelbase

- a. 65" Min. to 73" Max. Maximum rear width 66" width, measured outside of left rear tire to outside of right rear tire.

16. Wheels

- a. The number of allowable wheels is restricted to two (2) front wheels and two (2) rear wheels on each car.
- b. The wheel diameter must be 13 inches.
- c. The wheel width is limited to eight (8") inches for both front wheels.
- d. The rear wheels are a maximum width of ten and a half (10.5") inches for the left rear, and twelve and a half (12.5") inches for the right rear.
- e. An approved tire bead locking device must be used on the outer bead seat of the right rear tire and wheel assembly.
- f. All bolts are mandatory in bead lock and wheel centers.

17. Wings

- a. Top wing to be maximum 16 sq. ft. The wing must be a single airfoil with maximum wicker bill of 2" tall and bent at 90°.
- b. Wicker bill is not included in the airfoil dimensions. All four sides of wing body must be a straight line from corner to corner.
- c. Side panels to be maximum RS 1460 sq.in. AND LS 1680 sq.in.
- d. The top wing cannot extend outside the wheels/tires; it must be centered on the cage.
- e. Front wing to be a maximum of 576 sq.in. Must be single airfoil. Side panels maximum 12"H X 26" L.