



## **POWRi 305 Wing Sprint Specifications**

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## 1. Appearance

- a. Sprint car appearance. The minimum wheelbase is 80"- inches with a maximum of 95"- inches.

## 2. Ballast

- a. Ballast weight of any form or material will not be permitted in the bumpers, rub rails, seats, floor pans, or any miscellaneous and or extraneous components. The rub rails and bumpers must be steel, with a maximum wall thickness of .095. Any ballast must be securely bolted and located between the front motor plate and located between the front motor plate to 12" behind rear motor plate.

## 3. Cockpit

- a. Cockpit adjustable weight jacks, shocks, or wings will not be permitted. Additional reservoir shocks (internal or external) will not be permitted.
- b. Titanium, carbon, and/ or ceramic brake materials will not be permitted. Titanium and/or carbon parts which are, or rotate in, a diameter larger than 1.5" will not be permitted. Carbon drive train parts will not be permitted.

## 4. Compression Ratio

- a. 10.25 to 1 will be the maximum allowable compression ratio. The compression ration may be checked with a whistle, or by measuring the volume of the assembled cylinder using liquid. The absolute minimum assembled cylinder volume measured at Top Dead Center (T.D.C.) is 70 cc. Any type of surfacing the heads will not be permitted without a repair authorization. Original serial numbers and certification marks must remain intact. They may not be altered or obscured. Any & all repairs MUST be pre-approved, and the cylinder heads must be re-certified. If any spec head is found to be modified; it must be replaced with a certified spec head.

## 5. Drive Line

- a. Open drive lines will not be permitted. Safety hoop or strap is required. The center section of the rear end must be centered within the rails.

## 6. Engine

- a. Only the following engine blocks will be permitted. GM 305 V-8s with the following approved casting numbers: 361979 460776 460777 460778 14010201 14010202 14010203 14088551 14016381 14016382 14016383 14094766 355909 14093627 14101147 10243878 4715111 10046164 14102058 A specific Dart Machinery block, purpose built and approved for RACESAVER®, competition is the "Little M" "B" block: pn. 31151411.
- b. If a lightened block is utilized any, and all, ballast needed to make weight must be mounted between the front and rear motor plates. Such weight must be secured by a minimum of 2- ½" bolts, painted white with the car number affixed to the weight. Also read car rule #3 to clarify what may constitute ballast.
- c. A maximum of 315.9 cubic inches will be permitted (+/-0.0). Stroke 3.480"(+/-0.020) Max bore 3.801. If 3.5" stroke, max bore is 3.790 Bore: Plain cast iron. Sleeves will be permitted for repair only.
- d. Only flat top pistons with valve reliefs will be permitted. Pistons may not protrude from cylinder bore.
- e. Only an iron or steel crankshaft, with a minimum weight of 48 lbs. will be permitted, (-1%). The main bearing diameter will be 2.450 (-.030). Weight added to crank except balance metal, which must be welded in place, will not be permitted.

- f. Only 5.700" steel connecting rods, with a rod journal dia. 2.100 (-.030) will be permitted. Oil pan may be removed for inspection at any time.
- g. Only chain cam drives will be permitted. Variable cam timing will not be permitted.
- h. Only plain hub or SFI approved damper will be permitted. The water pump must remain in the stock location.
- i. Only solid .842 diameter ferrous metal flat tappets will be permitted.
- j. Only a cast iron cam, with a firing order of (18436572) will be permitted.
- k. Only a straight wound spring with a flat damper, that conforms to the specifications will be permitted. PSI @ seat 90-120#, @.500 lift 330-355#, Inst. Ht. 1.700 -1.820, Dia. 1.262 +- .005, Wire dia. .193 +- .002, Free ht. 2.130 max. 1.950 min., 5 full coils +/- 1/8th turn as measured from tail to tail.
- l. Only vented, wet sump, in pan, oil systems will be permitted.
- m. Only rockers centered on & retained by the 3/8" rocker studs will be permitted.
- n. The maximum valve lift permitted is: (.510" int. .535" exh.) @ zero lash @ valve retainer. Only standard size & configuration, 7-degree retainers and keepers will be permitted.
- o. Stud girdles, rev kits, or valve train stabilizers, will not be permitted:
- p. Repositioning, boring or bushing of cam or lifter bores will not be permitted. The maximum cam diameter will be 1.869 + .002
- q. Only valves that conform to the RaceSaver(R) original size, configuration, length & weight will be permitted. The sizes are as follows: stem size 11/32", Intake 1.94" .008 stem undercut. Exhaust 1.60", Orig. stem undercut to .315
- r. Ferrous material only Valves, Seats, Retainers, Keepers, Push rods, Springs, Tappets, Cam, Crank, Rods, Wrist pins, Fasteners, Main Caps. Materials and processes including, but are not limited to; Titanium, Inconel, Ceramics, DLC, Nikasil, will not be permitted.
- s. Only point type Magnetos, or Kettering style ignition, will be permitted. Only naturally aspirated, constant flow fuel injection will be permitted.
- t. An additional 100 lbs. penalty will be added to the minimum car weight for use of any electronics, including but not limited to: ignition, ECU's and/or active driver aids.

## **7. Fuel System**

- a. A fuel tank & bladder assy. or Fuel Safe enduro cell meeting FIA-FT3 & SFI Spec. 28.1 is required. A main fuel line shut off is required. An on-board fire suppression system is recommended.
- b. Only pure methanol is allowed. Additives of any type will not be permitted. Fuel is subject to chemical analysis.

## **8. RaceSaver® SPEC cylinder head**

- a. Alterations of any type will not be permitted. Machining, milling, resurfacing, grinding, polishing, welding, acid or caustic work, shot peening, glass beading, coating, or any other process that will alter the machined surfaces or the natural sand cast finish, will not be permitted. The cylinder head must retain all original dimensions & configurations including Valves, springs, retainers, stems, & guides. Only re-seating the valves is permitted. Top cuts that extend into the aluminum of the chamber will not be permitted. Under the seat relief cuts will not be permitted. Alterations to as delivered throat size, 1.810 Int. & 1.345 Ex. (+ .000 - .005) will not be permitted. Bowl changes will not be permitted. Every dimension of these heads has a gauge dimension that must be met for them to be certified. Any changes will result in disqualification. The stamped identification marks may not be altered.

**9. Repairs**

- a. In the event a cylinder head needs to be repaired, a repair authorization must be obtained by contacting RACESAVER® at 540-923-4541 before attempting repairs. After repair, the cylinder heads, completely assembled with all valves, spring, retainers, studs, and guides, must be sent to RACESAVER® for re-certification and registration. Recertified heads will be stamped with RACESAVER® & FGRS logos. The spirit and intent of RACESAVER® Engine Rules shall prevail.

**10. Weight**

- a. The minimum weight with a driver after the race: 1550 lbs. with a fire suppression system. Cars without a fire suppression system must weigh 1575 lbs. Starting weight must allow for fuel burn off.

**11. Wheel**

- a. A right rear bead lock is required. Wheel covers or mud plugs must be securely fastened. Bleeders will not be permitted. The right rear tire will be a Hoosier RaceSaver® plated tire. Any left rear tire with a minimum 35 durometer will be permitted.

**12. Wing**

- a. The main wing may have a maximum of 25 sq. feet, 61"- wide, with 30"-inch x 72"-inch sideboards. The front wing must be a maximum of 2'-feet x 3'-feet with the leading edge no more than 6"-inches ahead of front tires.