



## **POWRi Hornet Specifications**

# Index

<b>Appearance</b>	<b>2</b>
<b>Body</b>	<b>2</b>
<b>Braking System</b>	<b>2</b>
<b>Cockpit</b>	<b>3</b>
<b>Drive Shaft</b>	<b>3</b>
<b>Electrical System</b>	<b>3</b>
<b>Engine</b>	<b>3</b>
<b>Frame</b>	<b>4</b>
<b>Fuel System</b>	<b>4</b>
<b>Rear-End</b>	<b>4</b>
<b>Roll Cages</b>	<b>4</b>
<b>Springs, Shocks, &amp; Struts</b>	<b>5</b>
<b>Steering</b>	<b>5</b>
<b>Suspension</b>	<b>5</b>
<b>Tires and Wheels</b>	<b>5</b>
<b>Transmission</b>	<b>6</b>
<b>Weight</b>	<b>6</b>

## 1. Appearance

- a. All racecars must be numbered with large legible numbers on both sides, on top and on the nose and rear panels. Numbers on the sides of the racecar should be in contrasting color from the body and be at least four (4) inches thick and at least eighteen (18) inches high. The top numbers should be at least four (4) inches thick and twenty (20) inches high.

## 2. Body

- a. Any front-wheel-drive compact car with a three- or four-cylinder engine is permitted. All cars must remain strictly O.E.M. with unaltered O.E.M.-appearing body. Station wagons, convertibles, Honda CRX and/or two-seat sports cars are not allowed.
- b. The maximum wheelbase must be one hundred seven (107) inches with a maximum difference of one (1) inch from side to side. O.E.M. steel unaltered floor pans only. Inner fenders may not be removed. The hood and trunk lid/hatch must be securely fastened. All doors must be securely welded or bolted. All glass, exterior lights, chrome, plastic trim, and hood insulation must be removed. Hood may be gutted. Dash may be removed or remain in place. Maximum seven (7) inch front and rear sun visors are permitted. Opera window may be closed. Skirting is permitted but must maintain O.E.M. in appearance.
- c. The Vehicle Identification Number (V.I.N.) must remain clearly visible and unaltered in at least one of the O.E.M. locations. Any car missing the V.I.N. will not be allowed to compete.
- d. Bumpers must be approved O.E.M. in O.E.M. location and must be welded, chained, or cabled to frame. Front and rear tow hooks are mandatory. O.E.M. bumper covers should remain in place. If O.E.M. bumper covers are removed, then bumpers must be capped to fenders.
- e. One horizontal bar at a maximum one and three-quarters (1.75) inches O.D. tying front frame horns together ahead of radiator is permitted. One additional bar of a maximum one (1) inch O.D. may be added for radiator protection but must be behind the bumper and within the limits of the body and no wider than O.E.M. frame horns.
- f. Maximum one (1) inch wide by two (2) inches tall steel or Lexan rub rails are permitted but must be bolted flush to body. Sharp edges on bumpers, rub rails and/or bolts are not allowed. Other than rub rails, bars may not extend past the outside edge of body. Bumpers must be in stock location. Front and rear bumpers must be capped to the fender (the width of the bumper). Reinforced bumpers are not allowed.

## 3. Braking System

- a. Must utilize steel, unaltered, O.E.M. operative, four-wheel disc or drum brakes, and must match year, make and model of car used.
- b. Master cylinder must be O.E.M. and in O.E.M. location.
- c. Brake shut-off and/or bias adjuster is not allowed. Electronic brake actuators are not allowed.
- d. Steel brake lines are mandatory and must be visible for inspection.
- e. Anti-lock braking systems are not allowed. Parking brakes are permitted but must be disabled while racing.
- f. Brake shut offs and/or bias adjusters are not allowed.
- g. Must maintain minimum O.E.M. dimension for hubs, rotors, and calipers.

#### **4. Cockpit**

- a. Minimum three windshield bars mounted in front of driver. Aluminum high-back racing seats are required and must be securely mounted to roll cage using three hundred seventy-five one thousandths (0.375) inch bolts with washers. Driver must be sealed off from track, engine, transmission, and fuel cell/tank. Mirrors are not allowed. Except for roll/door bar clearance, gutting is not allowed. All flammable material must be removed. Front and rear firewalls must remain and have no holes. The interior must remain open.
- b. Loose objects and/or weights are not allowed.
- c. Air bags are not allowed.
- d. Rear view mirrors are not allowed.
- e. Radios must be removed.

#### **5. Drive Shaft**

- a. All drive shafts must be O.E.M.

#### **6. Electrical System**

- a. One (1) 12-volt battery is permitted only. Must be securely mounted with positive terminal covered. Battery must be in Marine type case if mounted in driver compartment and battery (not battery box) must be secured with metal brackets to floor or roll cage and then covered.
- b. Only O.E.M. starter is permitted and must be in O.E.M. location. Car must leave initial staging area on demand and unaided or go to rear of that race.
- c. Unapproved cameras, transmitting, and/or listening devices are not allowed. (Exception: one-way RACEceiver radio used by Officials).
- d. Must utilize one 12-volt ignition system only. Ignition boxes and/or performance chips are not allowed. All ignition components must be unaltered, O.E.M. and match the year, make and model of car used. Factory harness may be trimmed, no aftermarket race
- e. harness.
- f. Aftermarket analog tach, oil pressure and water temp gauges only. Vehicle computer (ECU) should be stock appearing and mounted in accessible location for inspection. Aftermarket programming of the ECM is permitted. No aftermarket tach drivers.
- g. All ignition parts must remain out of reach of the driver.
- h. Kill switch is required and must be within easy reach of the driver. The switch must be clearly marked "OFF" and "ON."
- i. Transponders must be mounted vertically behind the engine, less than two (2) feet from the ground and unobstructed by any metal.

#### **7. Engine**

- a. The engine and radiator must be O.E.M. in O.E.M. location for the year, make and model of car used.
- b. Solid engine mounts and/or safety chains are permitted.
- c. Accusumps and/or accumulators are not allowed.
- d. Only 3-or 4-cylinder in-line engines are permitted. A double overhead cam is recommended.
- e. All engine components must be unaltered O.E.M. for the year, make and model of car used, and must match V.I.N. Drive belts may be removed. Balance shafts may be removed.
- f. Must use O.E.M. crank, rods, valve sizes, stroke, etc. Aftermarket racing heads are not allowed. High performance and/or sports car engines of any kind are not allowed.

- g. Turbo-charged, super-charged, rotary engines and/or engines utilizing variable cam-timing are not allowed. Variable cam timing engines are permitted if wiring harness to timing solenoids are removed to disable variable cam timing.
- h. Unapproved alterations to any engine are not allowed.
- i. Maximum two (2) inch diameter exhaust pipes from manifold and must extend past firewall. No aftermarket Headers.
- j. (Exception) GM may swap to drive by cable throttle body, peddle and PCM.

#### **8. Frame**

- a. Sub frames must be stock and unaltered.
- b. Wheelbase must be a maximum of one hundred seven (107) inches with a difference from side to side of one (1) inch.
- c. Titanium products, parts and/or components are not allowed anywhere on the racecar.

#### **9. Fuel System**

- a. Must have complete, unaltered, O.E.M. fuel system for year, make and model of car used.
- b. Gasoline only, maximum 93 octane. E85 and/or performance additives are not allowed.
- c. A gas tank ahead of the rear axle is permitted but must have a shield installed beneath. Gas tank behind rear axle must be replaced with a maximum eight (8) gallon fuel cell and relocated to trunk area; Must mount with minimum one (1) inch square tubing or two (2) solid steel straps around entire cell, two (2) inches wide and one eighth (0.125) inch thick.
- d. Metal firewall or cell cover must be between driver and cell. Fuel cell vent, including cap vent, must have check valve. If racing fuel cell does not have aircraft- style positive seal filler neck/cap system, a flapper, spring, or ball-type filler rollover valve is required.
- e. External electric fuel pump wired to the ignition switch is permitted with aftermarket fuel cells.
- f. Cool cans are not allowed. Fuel lines through the driver compartment must be made of steel. Aftermarket fresh air pipe and air filter is permitted (Ram Air or direct outside air flow is not allowed).

#### **10. Rear-End**

- a. Must be O.E.M.

#### **11. Roll Cages**

- a. A six-point, full-perimeter roll cage is required. Must use minimum one and one-half (1.5) inches O.D. with ninety-five one thousandths (0.095) inch wall thickness tubing. Rear hoop must have "X" bracing configuration. Rear kickers are required. Forward brace bar is permitted from main cage to front strut tower. Must have one and one-quarter (1.25) inches minimum O.D. cross bar in top halo. Cage must be electric welded and attached using adequate plating at a recommended minimum of one-quarter (0.25) inch. Iron, galvanized pipe or fittings, square tubing, brazing, or soldering is not allowed.
- b. A minimum of three (3) horizontal door bars on the driver's side and two (2) horizontal door bars on passenger side are required. Both sides must have vertical bracing from top to bottom door bars. All tubing must be minimum one and one-half (1.5) inches O.D. with ninety-five one thousandths (0.095) inch wall thickness. Steel door plates of 18 gauge or forty-nine one thousandths (0.049) inch minimum thickness must be securely welded to the outside of door bars on driver side. Plate must cover the area from top door bar to frame and from rear down post to five (5) inches in front of seat. Must be visible for inspection.

- c. Roll bars within the driver's reach must be padded with a material deemed acceptable by Official(s). Fire retardant material is highly recommended.
- d. Installation and workmanship must be acceptable to Official(s).
- e. With helmet on and driver securely strapped into the racing seat, the top of driver's head must not protrude above the roll cage.
- f. A tow hook on the front and rear is mandatory.

## **12. Springs, Shocks, & Struts**

- a. All shocks and struts must remain O.E.M. in O.E.M. location.
- b. Only O.E.M. springs or O.E.M. replacement springs are permitted. Racing springs are not allowed. Springs may be modified but must mount like factory springs. Spring rubbers are permitted. Bump stops (including O.E.M.) are not allowed.
- c. Aluminum and/or titanium components are not allowed.

## **13. Steering**

- a. Steering must be unaltered O.E. and remain within the original bolt pattern for the type of car used. Steering linkage must be unaltered approved O.E.M. in stock location, replaceable by stock part and must match frame.
- b. May be modified to suit the driver but must remain on the left side of cockpit (no center steering).
- c. Factory steering column may be replaced with factory length, from the factory collapsible shaft, with solid steering shaft. Quick-release metal coupling on steering wheel is permitted. Plastic couplings are not allowed.
- d. Aftermarket remote reservoir power steering is not allowed.

## **14. Suspension**

- a. All components and mounts must be unaltered, O.E.M. and match year, make and model of car used. (Exception: Recommended right rear safety hub, 1987-95 Caravan hub assembly for example).
- b. Brace bars are permitted between strut towers in front and rear. Any other bracing on the front end is not allowed.
- c. Weight jacks, modifications, racing components, aftermarket and/or homemade traction devices are not allowed.
- d. Rear wheels must track straight ahead and be in alignment with front wheels. No more than two (2) degrees of camber is permitted on any wheel (Exception: The right front wheel may have a maximum of four (4) degrees of camber).

## **15. Tires and Wheels**

- a. Only O.E.M. unaltered 13-, 14-, 15- or 16-inch-diameter D.O.T. passenger tires are permitted. Minimum 60 Series, M, N, P, Q, R, S, T and H speed rated tires only are permitted. Racing, mud, snow and/or recap/retread tires are not allowed. Softening, conditioning, grinding, sanding, siping and/or grooving is not allowed.
- b. Must utilize O.E.M. steel, O.E.M. aluminum or aftermarket steel wheels with standard bead bump and maximum seven (7) inch width and four (4), five (5) or five and one-half (5.5) inch offset. Reinforcing of wheels is recommended.
- c. Tires and wheels do not have to be the same series, size and offset.
- d. Wheel spacers and/or bleeder valves are not allowed.
- e. Must use one (1) inch O.D. steel lug nuts on steel wheels.

**16. Transmission**

- a. Must utilize unaltered O.E.M. transmission that came in the year, make and model of car used.
- b. All forward and reverse gears must be operational. The flywheel, flex plate, clutch assembly and torque converter must be unaltered O.E.M. for the year, make and model of car used.
- c. Mini-clutches and/or couplers are not allowed. Must have inspection hole in bell housing (accessible from top).
- d. Transmission coolers in driver compartment are not allowed
- e. Torque dividing final drive or CVT transmissions are not allowed
- f. Locked differentials are not allowed.

**17. Weight**

- a. Ballast (extra weight) of any kind is not allowed.
- b. Any item deemed as ballast will be required to be removed.
- c. All cars are required to weigh a minimum of two-thousand three hundred (2,300) pounds. Any car not meeting this weight will not be allowed to compete unless O.E.M. parts can be reinstalled in factory locations to reach the minimum weight rule.