

2011 MIDGET CLASS RULES

Vehicle Rules:

Class Description:

A self propelled land machine that has four (4) wheels that contact the road surface, the two forward wheels are used for steering and the two rear wheels to drive. Cars shall be the "Upright" type. Drive shaft shall be between the driver's legs. Engine/transmission shall be in front of the driver, bolted together with no offset mechanism.

General:

- A] The minimum wheel base shall be 68 inches, the maximum 76 inches, measured from the center of the front wheel hub to the center of the rear axle hub.
- B] Maximum car width shall be no more than 65 inches measured from the outside tire edge to the opposite outside tire edge.
- C] Minimum car weight shall be 1200 pounds with driver post race.

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Article 1 – Chassis:

A. Frame:

1] The frame to be constructed of no less than 1 ½" X .120 wall mild steel tubing of grade 1020 or better for the main frame rails and roll cage loop. If 4130 chromoly is selected 1 ¼" X .095 is acceptable for the roll cage.

B. Roll Cage:

- 1] Roll cage shall have front-to-rear or side-to side continuous loops with cage welded to the frame rails and gusseted at the corners.
- 2] Triangulation of the roll cage shall be such as to prevent possible side collapse.
- 3] Any part of the roll cage or frame shall have adequate size grade eight (8) fasteners to prevent separation.
- 4] All welds shall be inspected yearly.
- 5] Roll cage shall extend a minimum of two [2] inches above driver's helmet.

C. Nerf Bars:

- 1] Nerf bars shall be installed to prevent a competitor's tire from entering the space between your front and rear tires [on either left or right side) and causing tire roll up flips.
- 2] Nerf Bars shall be continuous loops and shall not have any sharp or exposed tubing edges so as to not damage competitor's tires.
- 3] Nerf bars shall extend no farther than the outside edge of the rear tires and shall start no further than six (6) inches from the outside of the rear tire.

D. Bumpers:

- 1] Front bumper shall be made of continuous steel tubing loops no wider than the frame rails and shall have a predominant horizontal bar.
- 2] Rear bumper shall be made of continuous steel tubing loops no wider than the frame rails and shall have a predominant vertical bar.

E. Suspensions:

- 1] All four corners of the chassis shall be suspended from some type of moveable suspension (i.e. coil over shocks, torsion bars, leaf spring, etc.).(No independent suspension)
- 2] All four corners of the chassis shall be damped by some type of shock absorber. Any brand or type allowed.
- 3] All suspension parts, steering and chassis components shall be fastened with appropriately sized grade five (5) bolts or better with positive locking nuts.

F. Steering:

- 1] Steering box and rack shall be factory production or after market race car unit only.

- 2] Knee pads or guards shall be installed to cover the steering box inside the cockpit to prevent possible knee injury.
- 3] Steering box may be mounted in any location as deemed by the car builder as long as the steering system is engineered to prevent lock up.
- 4] No more than one (1) inch of free play allowed.
- 5] Kingpins shall have positive pin retainers.
- 6] All steering systems are subject to inspection by Technical Inspectors.

G. Brakes:

Two (2) front brakes and one (1) rear brakes are required.

- 2] One inboard brake on quick changes.
- 3] Brake pedal shall be firm upon application of pressure.
- 4] Brake system shall be hydraulic operation with use of DOT 3 or better brake fluid.
- 5] All brake systems are subject to inspection by Technical Officers subsequent to any racing event. Any car failing a brake inspection will not be allowed to compete until the system meets minimum safety standards.
- 6] All brake lines must be steel, stainless or rubber flex. No plastic lines are allowed.

H. Wheels:

- 1] Wheels shall be metal.
- 2] Wheel diameter shall be a maximum of thirteen [13] inches.
- 3] Wheels shall be fastened to the hubs with a minimum of three (3) lug nuts each or have a "knocker nut" type fastening type of device on spindles/axle assemblies.
- 4] No wheel bleeders or must be disabled.
- 5] No direct mount wheels on right front

Article II- Drive Trains:

- 1] Cars shall be equipped with blow-proof bell housing. NHRA approved trans- blanket, or 180 degree of steel shielding, .125" wall thickness, or 5052 aluminum .250" wall thickness, to cover the top of the bell housing.
- 2] Drive shaft shall be "looped" with adequate material to prevent injury to the driver's legs if the universal joint fails.
- 3] Drive shaft construction must be approved by the Technical Officer.
- 4] Drive lines shall be fully enclosed in the driver's compartment.
- 5] It is recommended that all axles be magnafluxed once a year.
- 6] All vehicles shall be able to achieve neutral gear position.
- 7] Quick-change rear ends only

Article III – Bodies

A. Hoods:

- 1] Hoods shall be securely fastened to the chassis/roll cage.
- 2] If carburetion protrudes through the hood, adequate clearances for the linkages shall be maintained.
- 3] Rear view mirrors are not allowed.

B. Firewall:

- 1] All cars shall have an adequate firewall of at least .030" material between the engine and the driver.
- 2] All excess holes in the firewall shall be plugged.

C. Side Panels:

- 1] Side panels are mandatory to prevent debris (i.e. mud, rocks, etc.) from entering the driver's compartment.

D. Tails:

- 1] Tails and/or tail tanks shall be securely fastened.

F. Appearance:

- 1] Cars may be painted with the owner's chosen colors. No primer or unpainted cars allowed to run more than two events.
- 2] All cars shall be legibly lettered and numbered. No spray can numbers allowed except in emergency situations.
- 3] Numbers shall be on both sides of the body and shall be a minimum of ten [10] inches.
- 4] Car numbers shall be between 0 and 99. #1 reserved for the previous year's point leader.
- 5] No more than one (1) car may have the same number. Letter suffixes are permitted for personal signature. Letter suffixes may be used on an emergency one (1) race basis only, for cars with the same number.
- 6] All slogans and symbols shall be in good taste to enhance our professionalism and their display will be approved by the Race Director.
- 7] No wing type devices outside body. Tech discretion
- 8] Rookie drivers shall "fly" an orange ribbon from the rear of the roll cage for their entire first year. Experienced drivers, new to the class, shall fly a white ribbon for one event only.

Article IV - Fuel System

A Fuel:

- 1] Fuel shall be Alcohol.
- 2] No oxidizing additives may be added (i.e. Nitro methane, Nitrous Oxide, Hydrazine, etc).

B. Fuel Pumps:

- 1] Fuel pumps may be either electrical or mechanical.
- 2] Electrical fuel pumps shall energize and disable with the ignition switch and shall have an oil pressure kill switch.

C. Fuel Lines:

- 1] All fuel lines shall be rubber push-lock or stainless up to the firewall must be

- stainless in motor compartment. No squeeze clamps. Screw- drive clamps only.
- 2] All fuel lines shall be securely fastened to prevent any entanglement from any moving item in their vicinity.
 - 3] Fuel tank shut off is recommended.

D. Fuel Tanks:

- 1] Fuel cells or bladders are mandatory. (Shall be NHRA approved).
- 2] Fuel cells shall be electrically bonded to the frame with minimum #10 AWG conductors.
- 3] Fuel cells shall have a tip-over valve to prevent spills during rollovers.

Article V- Electrical Systems

A. Batteries/Ignition:

- 1] Cars shall have a battery, in full charge condition, for self starting.
- 2] Batteries shall be securely fastened to the frame and shall be fully covered to prevent acid leaks.
- 3] No acid filled batteries shall be permitted in the driver's compartment.
- 4] Distributor/Ignition modifications and add-on after marker ignition components are permitted. Magnetos are prohibited.

B. Wiring:

- 1] No bare, unfastened, or unused wire is allowed.
- 2] All wires shall be of the proper gauge to handle the electrical capacity needed by the vehicle without overheating.

C. Starters:

- 1] All car to be self starting. [Current non starting cars will be grandfathered for 2011 season]

Article VI – Engines:

A. Engine Displacement:

1] 2.0 Litre Engines Z teck north American - Ford Focus

- A] Shall be no larger than 122 cubic inches (2.0 litres).
- B] Stock Camshaft, rods and pistons only.
- C] No porting, polishing, or port matching of the cylinder heads allowed.
- D] No larger than stock valves as per cylinder head series.
- E] Minimum head c/c 46.
- F] Stock type head gaskets only minimum 0:27

B. The formula for finding engine displacement shall be: [Bore radius X Bore radius] X 3.14159 X Stroke X Number of cylinders.

C. Induction/Manifolds:

- 1] Carburetors or Injection:
- 2] Stock Electronic fuel injection systems are allowed. Aftermarket Mechanical Fuel
- 3] No superchargers or turbo chargers of any type are allowed.
- 4] Carburetor linkage shall not go over center with the butterfly in wide open throat position.
- 5] A minimum of three [3] return springs are required, Two [2] at the carburetor /butterfly linkage and one [1] at the foot pedal.
- 6] Manifolds are open to the builder's discretion

D. Exhaust Systems/Mufflers

- 1] Header pipe size and length are open to the builder's discretion.
- 2] All cars shall have mufflers. SPL not to exceed 90 db taken from a point in the spectator area thirty (30) feet from the center of the race track.
- 3] Sound levels shall be monitored by the Tech Director and it shall be the Car Owner's responsibility to maintain legal sound levels throughout the event.

E. Cooling Systems:

- 1] All liquid cooling systems shall have catch tanks to catch overflow liquids.
- 2] No cooling system shall be mounted within or around the driver's compartment, to prevent hot fluid from coming in contact with the driver in case of accident. All expansion tanks and fill cans must be under the hood.

Article VII - Driver/Fire Protection

A. Restraint System:

- 1] All cars shall have adequate five point restraint system. Minimum three (3) inch wide lap belts and three (3) inch wide shoulder harness are mandatory. Two 2 inch allowed with use of Hans head restraint.
- 2] All belts, including submarine and arm restraints shall lock together with a common quick-release lever.
- 3] Lap belts, shoulder harness, and submarine belts shall be securely fastened to the frame with proper hardware and grade eight (8) bolts.
- 4] All safety restraints may not be used after three years from the manufacture date upon the restraints.
- 5] Each car shall have 2 (two) cage nets mounted for driver head protection. With the left side net to have quick disconnect latches for quick egress for during an emergency. Or containment seat is used

B. Fire Protection:

- 1] Driver shall wear a minimum of two layers of fire protection. (I.e. double layer suit with underwear.) {SFI 5 or equivalent}
- 2] Driver shall; wear hood, socks, gloves, and neck collar all made of Nomex or equivalent material. If a Helmet is SA approved, no head sock is required.
- 3] Helmet shall be Snell 95 or better approval. Any helmet involved in an accident is subject to recertification. Any helmet involved where the driver is unconscious or

suffers head trauma shall be returned to the manufacturer for rebuild. Any helmet with exterior signs of damage or thrown down in the presence of an official will be confiscated, with no return for use.

4] No open face helmets allowed.

5] All cars shall have a 5 LB. fire extinguisher with ABC rating in the pits ready at all times. On board fire systems highly recommended.

C. General:

1] Seat shall be securely bolted to the chassis minimum of 4 grade bolts or better No quick fasteners allowed.

2] Seat shall be constructed of metal of at least .090" thickness.

3] Seat shall provide adequate lateral support to left and right, as well as back. Head rests shall be part of the seat.

4] Padded steering wheel centers are recommended.

5] Steering wheel quick releases shall be of metal construction

6] Car must be equipped with belly pans to extend from front of engine to rear and must be lined with oil absorbing dipper

7] Maximum 1 new tire per race.[Tech official must be notified of new tire]

8] Tire treatment allowed.

9] Right rear tire WMRA rules

10] Cars must be under own power before turn 1. {Cars not able to be under power by turn 1 will be disqualified for that race.}

11] Non Ford Focus cars may compete but will not be eligible for track records or year-end awards.