SHIFTER KART CLASS

F125

Data acquisition systems are allowed in all kart classes

A. FRAME/DIMENSIONS

1. Chassis must be constructed of carbon steel alloy using traditional tubular construction. Nerf bars are required. Suspensions are prohibited. Differential mechanisms that allow the rear wheels to rotate at different speeds are prohibited.
2. Maximum width measured at any point shall be 55 inches. Maximum length measured at any point shall be 84 inches.
3. 3. All karts may have bodywork consisting of a nose cone, driver fairing, and side-pods. (Full width nose pieces are recommended.) Bodywork may not extend past the rear nerf bar. No metal bodywork is allowed (although metal number plates to allow use of magnetic numbers are permitted). Belly pans are allowed provided that they are fully confined within the frame rails and do not extend aft of the leading edge of the rear axle. No skirts or vertical aerodynamic sealing devices are allowed to extend below the main frame rails (this does not include the front fairing). No wings allowed.
4. Minimum weight for entrants in 125cc shifter karts is 385 lbs. as raced, including driver, regardless of driver gender or class entered. Weights for entrants with karts having other engines are as listed in section D.3.
5. All non-structural weights must be affixed to the kart, seat, or driver in such a way as to prevent said weight from becoming separated from kart/driver or moving freely during competition runs. In addition to bolted on weights, this also allows weights to be placed on the driver underneath a suit, to be placed inside the seat liners/inserts, and to be used with quick change mechanisms, thus facilitating addition and removal of weight during driver changes. Arm or wrist weights are prohibited. Ballast weights may not be mounted to nerf bars or moving parts.

B. **WHEELS AND TIRES**

1. Wheels must be metallic. Five and six inch rim diameters are approved.
2. Tires
    a. Tires must be no larger than 12.5 inches in diameter and no smaller than 9.0 inches in diameter as imprinted on tire. Tire width is limited to 5.5 inches for the front and 7.1 inches for the rear as imprinted on tire.
    b. Tire brand and compound are open. Exception: the tire must not appear on the following list, which may be altered at any time by the SEB upon notification of membership:

C. **BRAKES**

1. Moto and ICC 125cc Shifter Karts: Moto and ICC shifter karts must have disc brakes that operate on all four wheels. The brakes shall be a dual system, arranged in a manner to provide braking for at least two wheels in the event of failure in part of the system.
2. Other Allowed Karts: Other karts that are allowed to compete in F125 (see D.3 below) must have disc brakes that operate on all four wheels. The competitor is responsible for providing the rules to which the kart is prepared (i.e., an 80cc shifter or 100cc clutch type is required to have front brakes). All karts with engine configurations other than moto/ICC 125cc, that are allowed to compete in F125, must have a single rear disc that brakes both rear wheels equally and adequately for the power-plant used. The addition of front brakes is mandatory.

D. **ENGINE**

1. Moto: Engines must be mass-produced, single cylinder, motocross motorcycle engines up to 125cc displacement and of the current year's production or older. No prototype, preproduction, "works type motors," or road race engines are allowed. Engines may be liquid or air-cooled. Induction may be piston port or case reed type only. OE parts can be interchanged from any year model of the same brand name and similar model of motor (i.e., CR to CR, YZ to YZ, etc.), provided that these parts are normally commercially available over the counter in the USA to all competitors.

a. Bore/Stroke: Bore must not exceed 1mm (0.040") greater than the stock, factory dimension. Stroke must be within plus or minus 0.010" of the stock, factory dimension.
b. Carburetion: One carburetor, single-venturi, float bowl type. Twin pump floatless recirculation systems are allowed. Pumpertype carburetors and axle/electric fuel pumps are not allowed. Intake manifold and reed assembly are unrestricted. Must use pulse-driven fuel pump.
c. Crankshaft/Connecting Rod: Crank and Rod Assembly must be OE components. No structural modifications may be made to the assembly (i.e., the machining, boring, or polishing of counter balances or rod, machining for the purpose of weight reduction, heavy metal balancing, altering crank pin location) are expressly prohibited. Sanding or polishing the crankshafts or bearing journals for the purpose of allowing a slip fit of the bearings is allowed. The two main bearings, big end bearing, and small end bearing are not tech items.
d. Cylinder and Cylinder Head: The cylinder and/or head, including ports, power-valves, and castings, may be modified or machined subject to the requirements of section D.1.
e. Water inlets and/or outlets may be modified for aftermarket fittings and/or hoses. Adding or deleting cylinder ports or re-sleeving is not allowed.
f. External Modifications: All exterior engine components (e.g.,cylinders, heads, case halves) must remain recognizable as OE parts. Kick starter assembly may be removed and plugged. The kick start boss may be altered to facilitate the use of a straight intake manifold. However, evidence of the original kickstart boss must be obvious. Machining of the reed block/intake boot mounting boss on the case that reduces the original distance between the outer surface and the piston (reducing intake tract) is not allowed.
g. Ignition:
    1. OE ignition: Only OE ignition components for specific engine(s) are allowed, except that spark plug, spark plug cap, and plug wire are unrestricted. Modifications (i.e., rewinding, alteration of permanent magnets, etc.) to stator and flywheel are not allowed. Exception: modifications to change the static timing are allowed in all Moto engines. Origin of spark coil is unrestricted, but it may not possess any function which serves to alter ignition timing.
    2. Non-OE Ignition: Non-OE Capacitive Discharge Ignition (CDI) may be used provided that the stator, rotor and flywheel (including any wires and connectors) must be OE and may not move by any remote device. Furthermore, the ignition system may not control the fuel induction system in any manner. Ignition interrupt systems (e.g., speed shift and no lift shift systems) are specifically disallowed. The CDI must be normally commercially available over the counter in the USA to all competitors. Use of any non-OE ignition CDI, programmable or pre-programmed, incurs a 20-lb weight penalty.
h. Exhaust Systems: Exhaust system is unrestricted. No on course adjustment of exhaust system is allowed.
i. Piston Assembly: Open, including piston, ring, wrist-pin, and circlips. Coatings are allowed.
j. Transmission: OE cases and transmission gear ratios must be stock for engine used. Shifter mechanisms must be manually operated, no air or electric assisted shifters are allowed.
k. Clutch**:** A wet-type clutch must be used. All components must be in full and original working order. The clutch inner and outer basket & pressure plate must be OE. Lightening of the clutch assembly by machining or grinding is allowed. Springs, discs, and plates may be "after market parts." Clutch may be operated by either cable or hydraulic cylinder but must be manually operated. No electronic or pneumatic clutch controls allowed.

2. ICC: Intercontinental Class C engines must be homologated by CIK (FIA Commission Internationale de Karting) for the ICC class. Competitors running an ICC engine must have a 1998 or newer year rule set which shows their specific engine to be accepted for national competition in the U.S. by a national kart sanctioning organization such as SKUSA, WKA,

Stars of Karting series, or IKF. ICC engines must be run as a package in homologated form, including engine/transmission, induction (intake silencer/carburetor), ignition, exhaust (pipe/silencer), and cooling systems. Only components with specific CIK approval (OE components, unless otherwise specified) for individual engines may be used. Karts with ICC engines must conform to chassis, braking, wheel, and tires regulations of the SCCA Solo rules, Section 19.1, and incur a 35-lb. weight penalty.

3. Other Engines: Engines must be either a) mass produced single cylinder two-stroke engines not to exceed 125cc or b) mass produced single or twin cylinder, four-stroke engines not to exceed 125cc of total displacement. No prototype, preproduction, "works type" motors or road race engines are allowed. Shifter or gearbox type motors are prohibited. Karts with engines under this specification must run at a minimum weight of 360 lbs. Exception: the engine must not appear on the following list, which may be altered at any time by the SEB upon notification of membership: No engines are currently listed.

E. **MISCELLANEOUS SPECIFICATIONS:**
   1. Chain guards are required on all engines.
   2. Overflow lines for carburetor and radiator, if present, must terminate in an overflow bottle of at least 2-ounce capacity.

F. **FUEL:** Fuel must consist of gasoline and oil only. No oxygen and/or nitrogen bearing additives are allowed.

G. **DRIVER SAFETY EQUIPMENT**
   1. Neck Braces: An unaltered, collar type neck brace designed for motor sports use, is mandatory. **Kart-specific neck braces are recommended.**
   2. Driver apparel: Drivers are minimally required to wear jackets made of leather or abrasion resistant nylon or equivalent, and full length pants to prevent or minimize abrasions. **Full abrasion kart suits are recommended.** Shoes, socks, and abrasion resistant gloves are mandatory. **Mechanix Brand gloves and similarly styled will not be allowed.**
   3. Full face helmet with functional shield is mandatory.
   4. Seat Positioning: When normally positioned in the kart for competition, the entirety of the driver shall be within the perimeter of the kart and the driver must be able to reach and operate all controls. Loose cushions or pads that prevent the driver from being adequately supported by the sides of the seat are not allowed.

H. **Additional Requirements and Rules**
   1. Driver's license is required to race shifter kart regardless of age.
   2. Karts will be pushed through the pits, tech and into grid. Karts will not be driven unless they competing on course.

Here are a few links to Karting Gear:

http://apskarting.com/

http://www.saferacer.com/auto-racing-suits/karting/?cat=53&tagarray=9

http://www.accelerationkarting.com/

http://www.cometkartsales.com/store/apparel/apparel.htm

http://www.k1racegear.com/c-11-suits.aspx