

209 Speedway Karters

Super Clone 224 Flat Kart Rules

AGE REQUIREMENT: Minimum age of 16. Age is subject to the Race Director's Approval.

1.0 ENGINE RULES:

1.1 RULES & INTENT:

- A. The intent of this engine package is for advanced drivers.
- B. Birth Certificates are required for all minor drivers

1.2 APPROVED ENGINES:

- A. Ducar 224cc

1.3 ENGINE COMPONENTS:

- A. Must be original, unmodified OEM clone components unless otherwise specified.
- B. Removal of unnecessary OEM Exhaust system, air cleaner, fuel tank, etc. is permitted.
- C. Welding or epoxy repair permitted to the block, head and side cover provided they don't enhance performance.

1.4 EXHAUST SYSTEM:

- A. The header is open and non tech, except the header must be round and the end may be expanded to accommodate a muffler/silencer.
- B. If no muffler is used a safety ring must be present on the exhaust tip to prevent injury in case of accident.

1.5 CARBURETOR:

- A. Huayi/Ruixing, or Tillotson PK-1A type carburetor only. Carburetor is NON-Tech except it must meet the venturi specifications in 1.5 C.
- B. Choke assembly must be in place and functional, shaft and blade may be altered.
- C. Venturi .615" max diameter, must be round, checked with go/no-go gauge.
- D. Jetting is open.
- E. Filter adapter and filter are open.
- F. Any pulse type fuel pump is permitted and can be pulsed from the crankcase, side cover or valve cover.
- G. Plastic carburetor isolator must be unmodified and installed in its original location EXCEPT the Inner diameter size and finish is non tech.
- H. All air/fuel entering engine must pass through the isolator. Subject to spray test (WD 40 or similar) and/or hose check to check for leakage or introduction of air into the intake track. When performing the tests the engine may stall or speed up, both indicate that the engine has failed the test.
- I. No other spacers, manifolds, or pulse adapters may be used.

1.6 FUEL TANK:

- A. Non-Tech. It is recommended that for safety reasons a remote/floor mounted tank may be used.
- B. Tank must be securely fastened.

1.7 FUEL:

- A. 87 or 91 Octane ONLY.
- B. No methanol, No E-85, No fuel enhancers or additives of any type.
- C. Fuel must pass any or all of the following test: -Visual; -Continuity meter; -Gravity test, - Gas, Alcohol and Water Mix.
 - Maximum allowance is 10+ or - on the meter.

D. Fuel meter will be calibrated to Fuel: 87 or 91 Octane ONLY.

1.8 CLUTCH:

- A. Any engine mounted shoe/drum clutch.
- B. No axle clutches.
- C. No disc Clutches.

1.9 CONNECTING RODS:

- A. OEM rods or any unmodified ARC Billet Rod that fits a 1.180" crank journal.

1.10 PISTONS:

- A. Any 70mm (2.756") 3 ring piston.

1.11 CRANKSHAFT:

- A. Standard OEM Crankshaft with a stock stroke length of 58mm (2.283") plus or minus .005". No alterations permitted.

1.12 FLYWHEEL AND IGNITION COIL:

- A. Must use OEM Ducar 224 ignition coil, plug wire, and resistor spark plug boot.
- B. Spark plug is open.
- C. May use an unmodified PVL or ARC 6689 or 6619 Billet flywheels. NO adjustable flywheels allowed.
- D. Minimum flywheel weight is 3.3 pounds. NO machining of any sort. Material may not be added to or removed from the flywheel.

1.13 CYLINDER HEAD:

- A. OEM Ducar 224cc head or YD74 casting, JT21 casting, or other GX200 Series “clone” type heads with as manufactured 27mm intake valve and 25mm exhaust valve with 5.5mm valve stems. NO Hemi style heads.
- B. Head surface at the gasket may be machined.
- C. Head combustion chamber volume, shape and finish are open. The combustion chamber area of the head may be machined or modified.
- D. No porting or head modifications allowed from the valve seat to the carb or pipe mounting surfaces.
- E. The valve seats may have up to 3 angles max.
- F. The outside face of the valve may not be below the floor of the combustion chamber (may not sink the valves).
- G. Head gasket is required, type and thickness are open.

1.14 VALVE TRAIN:

- A. OEM Ducar 224 push rods, push rod guide plate, retainers, springs, keepers and lash cap. Stamped steel 1:1 rocker arms and adjusters only. May use square nose 1:1 rocker arms.
- B. OEM Ducar 224 5.5mm stem valves with 45 seat angles only. No lightening or polishing.
- C. Rocker arm minimum overall length 2.145”. Minimum thickness of the upper valve stem end of the rocker arm is .030”. Surface finish of the contact area of the rocker arm at the valve stem **ONLY** is non tech. Square tip stamped steel rockers are allowed.
- D. OEM valve springs only with a maximum spring diameter of .798” and wire diameter .073” maximum. Maximum spring tension of 10.8 lbs. at .850” compressed height. Each spring is also to be tested using a .750 height gauge and a .250 square no go gauge to check the center spacing of the spring coils. Once inserted into the plate gauge, the spring coils are checked from both sides with the .250 no go gauge. The .250 no go gauge must be parallel to the spring wire and perpendicular to the center of the spring when checking. The .250 no go gauge must pass the check on at least one side of the spring. If the .250 pin does not enter either side the spring is deemed a legal spring. If the .250” pin does not enter one side but does enter the other side, the spring is deemed a legal spring. If the .250 pin enters both sides the spring is deemed **ILLEGAL**. The springs ends must be parallel within .040” when the height of the spring is checked with a veneer gauge. One

side is checked and the opposite side (180 degrees) is checked. Both sides must be within .040 of each other. SPRINGS MUST PASS ALL CHECKS.

E. Installed height of spring is .815" minimum with any spacers or seals.

1.15 CAMSHAFT:

- A. Camshafts are open EXCEPT they must be stock appearing camshaft cores with the ez-spin assembly un-altered and in stock condition, and they must meet the maximum lift specs.
- B. Max intake lift is .240".
- C. Max exhaust lift is .245".
- D. Readings are taken with a dial indicator on the valve spring retainer as run.

1.16 FASTENERS & GASKETS:

- A. Non-tech but must retain their original factory size.
- B. Heli-coils, studs, etc. are allowed for repair purposes.
- C. Solid dowel pins may be used on the side cover but may not exceed .317" diameter, and must remain in the factory position.

1.17 CRANKCASE:

- A. Breathers are to be routed internally through the valve cover as originally intended in OEM configuration.
- B. No additional breathers allowed.
- C. The deck surface of the block may be machined, but the cylinder may not be radiused at the top of the bore. NO gasket matching.
- D. The bottom of the cylinder bore may be machined to clearance the rod.

1.18 SIDE COVER:

- A. Must be OEM Ducar 224. NO material may removed or add EXCEPT to fit a maximum diameter .317 solid dowel pin in the original factory locations.

1.19 STARTER:

- A. Stock pull starter must be in place and functional.

1.20 OTHER:

- A. All karts must have a 6" nylon tie attached to spark plug wire.
- B. Kill switches are highly recommended.
- C. No traction control devices are allowed. Kart must have a solid axle and fixed hubs.
- D. No mirrors.

1.21 PROTESTING:

- A. Any competitor that started the main event may protest any other competitor in the same class for legality within 15 minutes of completion of the main event.
- B. Protest must be made in writing to the assigned tech steward for that race, accompanied by a \$150 cash protest fee.
- C. If kart in question is deemed legal, \$100 will be awarded to the driver receiving the protest, if the kart in question is deemed illegal, \$100 will be returned to the protesting driver.
- D. See General Rules section 2.1 for more details.

2.0 GENERAL KART AND BODYWORK SPECIFICATIONS:

2.1 FRAME:

- A. Frames must be of kart configuration. Not to exceed 90" in overall length.

2.2 WHEELS & TIRES:

- A. Maximum 6” diameter kart type wheel.
- B. Tread tires only.
- C. No Chemical "preps" are allowed on the tire at any time, tire may be washed at the track with water only.
- D. Tires must be dry before coming to the grid.
- E. Grinding, Siping, and grooving allowed.
- F. Right rear tire minimum durometer reading 48 @ 370 lbs., Right rear tire durometer open @ 425 lbs.

2.3 WEIGHT:

- A. Kart and driver 370 lbs., 315 lbs. with an unmodified blue ARC .550” restrictor plate, or 425 with open RR tire.
- B. Specified karts and drivers must go to scales after main event or will be DISQUALIFIED and will forfeit any money or points for that event.
- C. All weights added to the kart must be securely fastened to the kart with a minimum 5/16-inch diameter bolt that is double nutted, or safety wired.
 - If weight is attached to the seat area a large “fender” washer must be used.
- D. Kart Weight must be displayed on the engine shroud or top plate to aid track officials at the scales.
- E. Any kart that loses a weight will be disqualified from that session and lose points/position from that session.

2.4 BODYWORK:

- A. All bodywork components must be constructed of high strength plastic, fiberglass, or advanced composites.
- B. No metallic materials to be used for side panels or front nose piece.

- C. Bodywork must not obstruct the driver's forward or peripheral view.
- D. No panels or bodywork may cover the drivers head.
- E. All karts must have body work or bumpers that protect the leading edge of the front tires from contact with another kart.
- F. No sharp edges or protruding parts.

2.5 BUMPERS AND NERF BARS:

- A. All karts must have front bumpers that adequately protect the driver's feet.
- B. Karts must have nerf bars that adequately protect the kart from side impact and will prevent karts from "hooking" wheels.
- C. "Speedway" style rear bumpers are required and must extend to at least the centerline of the rear tires.

2.6 BRAKES:

- A. Hydraulic brakes are mandatory.
- B. Brake rotor must have a guard "wolf plate" to protect the seat from contacting the brake rotor in the event of a seat mounting failure.

3.0 TECH:

3.1 TECH PROCEDURES:

- A. After the main event the top 5 karts will proceed to the designated tech area, at this point the kart will be considered "impounded".
- B. Karts will be inspected in their finishing order.
- C. Drivers/Crew will be required to assist with removal of parts, drain their oil, and to help facilitate the technical inspection on their kart.
- D. See General Rules section 5 for more details.

3.2 TECH ITEMS:

- A. Post Tech items will include but are not limited to ALL sections of the rules.
- B. Tire Durometer:
 - Right Rear tire must read a minimum of “48” on the house durometer after given adequate time to cool. The Right Rear durometer reading may be taken on the hot grid prior to leaving for the track.
- C. Carburetor air leak and Fuel.

4.1 RACE PROCEDURE & SAFE DRIVING:

- A. Competition is expected to proceed without you endangering yourself or others.
- B. If in the judgment of the race official, a driver bumps, crowds, or pushes another driver, the offending driver may be penalized or disqualified.
- C. A one-way radio receiving device (i.e., Raceceiver) is mandatory for all classes (1 race grace period only).
 - Drivers must have their unit on and working at all times while on hot grid and the track.
 - Failure to observe this rule shall result in your kart not being scored and/or additional penalties.
 - No 2-way radio communication between the driver and crew.

4.2 PENALTIES:

- A. Any kart found in blatant tech or protest violation may lose all points, prizes and recognized finishing position for the event, as well as earned points towards the championship up to that point in time.
- B. Certain nonperformance rule infractions may be handled with a written warning and correct by next race waiver per the governing bodies/tech steward's discretion.
- C. Although the rules are comprehensive, they may not address every situation.
- D. If the rules do not specify you can do something, assume that you cannot until clarified.
- E. The Race Director's decision is final.