

## **2022 REGULATIONS AND SPECIFICATIONS FOR THE KZN KART CLUB 4 STROKE SPRINT SERIES**

### **VERSION 1: JAN 2022**

#### **TECHNICAL REGULATIONS**

The purpose of these technical regulations is to ensure that all competitors will, as far as possible, be able to compete with equipment that is of an equivalent standard. It is also the objective of these technical regulations to contain the costs of acquiring and maintaining equipment.

The regulations clearly define the two classes, namely **KZNNC SOCIAL 390 CLASS** and **OPEN Prokart SSS 390 CLASS**, and ensure that the original intention of the class as a social low cost category, focused on fun and bring in new members to the Club, is encouraged. To further assist this growth, the rules are amended to ensure the Social class rules support its nature and those competitors that wish to become more serious may choose to race with Prokart SSS engines. The classes shall race together in the 4stroke category with points scored separately. Grid positions shall be based on times and there will not be a reverse grid.

Prizes will be awarded for 1st and 2nd for the Open category (until entries have increased), and 1st, 2nd & 3rd for the Social Class.

Amendments are made to Clause 2.0 differentiating between the engines.

To ensure compliance all components comprising the engine package i.e. Clutch sprocket, clutch drum, rear sprocket, exhaust manifold, silencer etc. will be stamped with an identifying stamp.

#### **1. THE BROADER SPECTRUM OF TECHNICAL CONTROL**

1.1 The Promotor, Technical Consultant, or the Clerk of the Course reserves the right to inspect or halt any kart which is deemed to have been illegally modified, if any motor/s has to be dismantled, the cost of reassembly is for the account of the owner of that kart.

1.2 Where not specifically mentioned in these technical rules, any change to the technical specifications of any kart is disallowed.

1.2.1 This includes and is not limited to:

1.2.1.1 Engines

1.2.1.2 Drive Train

1.2.1.3 Brakes

1.2.1.4 Chassis

1.2.1.5 Wheels

1.2.1.6 Tyres

1.2.1.7 Seats

1.2.1.8 Rear Axle

1.2.1.9 Side Pods and other plastics

1.2.1.10 Fuel - no additives

Contravention of the technical regulations will be deemed to afford an advantage, until the contrary is proven beyond reasonable doubt by the competitor, they are excluded.

1.3 Only homologated parts are accepted, except where specifically allowed, any other variations made are deemed to be illegal.

1.3.1 This includes and is not limited to:

1.3.1.1 Adding additional components to any part of your engine and connected parts that are not specifically allowed in these rules. Should you wish to confirm technical validity of such, it must be presented to the committee first prior to race day for consideration before it being allowed by way of including it in these rules.

## 2.0 ENGINES & CHASSIS

### 2.1 KZNKC SOCIAL 390 CLASS

- 2.1.1 Only Honda or Honda Generic GX 390 model T1, T2 and H1 OEM engines or stock engines will be allowed to compete in the series. F400 & SSS Series motors are not allowed in this class.
- 2.1.2 Only OEM Honda or Honda Generic carburetors (Class dependant) with size .92 jet and standard emulsion tube are permissible.
- 2.1.3 Only OEM Briggs and Stratton series approved fuel pumps are permissible.
- 2.1.4 Horsepower: Punjabi shall inspect the motor, skim the cylinder head as required, dyno test when necessary and install their engines seal. Only engines with the Punjabi seal are allowed.
- 2.1.5 The following modifications are permitted and shall be carried out by Punjabi only:
  - 2.1.5.1 The governor may be removed.
  - 2.1.5.2 The oil cut out relay may be removed.
  - 2.1.5.3 Accelerator linkages and routing are free. Only foot operated accelerator mechanisms are permitted.
  - 2.1.5.4 Air induction is by means of the standard OEM air filter, or as an option, the Motrix filter may be substituted, or alternative configurations maybe used as long as the engine complies with clause 2.1.4.
  - 2.1.5.5 Exhaust and manifold: Only standard exhausts and manifolds as supplied with engine package are permitted. No modifications to the exhaust system, that increase the power beyond that specified in 2.1.4 are allowed.
  - 2.1.5.6 Spark plugs: Only NGK BPR6ES spark plugs are permitted. Spark plugs must remain standard. Filing of electrodes or machining of thread body to allow indexing is strictly forbidden.
  - 2.1.5.7 An OEM electric self-starter may be fitted.
  - 2.1.5.8 The flywheel key may not be modified and the flywheel timing may be not be advanced.
  - 2.1.5.9 The Head may only be skimmed as deemed necessary by Punjabi.
  - 2.1.5.10 Thin gaskets are allowed. Gasket thickness may be adjusted by Punjabi to achieve the specified limits.
- 2.1.6 Where necessary for repairs, and to keep costs under control, only the Official Engine builder, Punjabi, may substitute OEM Honda parts with compatible generic parts and vice versa.
- 2.1.7 Chassis are not controlled but must be FIA/CIK homologated chassis.

### 2.2 OPEN Prokart SSS 390 CLASS

- 2.2.1 Only Honda GX 390 model T1, T2 and H1 OEM engines supplied by 4 Stroke Workshop or stock engines will be allowed to compete in the series. Engines supplied will be sealed, together with a dynamometer report indicating that the horsepower is within the following parameters.
- 2.2.2 Only OEM Honda or Hoffman carburetors with size .92 jet and standard emulsion tube are permissible.
- 2.2.3 Only OEM Briggs and Stratton series approved fuel pumps are permissible.
- 2.2.4 Horsepower = Max: 22.5 as per the software output of the dynamometer calibrated at the beginning of the season. Upgrades to the dynamometer's sensors and software modules may require re-calibration of the dynamometer itself, resulting in a change of the maximum horsepower reading. This may result in a different reading as per the regulations and members will be notified of this when the dynamometer changes. All care is taken to ensure that when re-calibration occurs resulting in a change in readings, the maximum output reported by the software is still in line with the series' base tests at the beginning of the season. So in the event the dynamometer has a different reading to the base reading, all new tests will be conducted according to the new base test results.
- 2.2.5 Exhaust and manifold: Only standard exhausts and manifolds as supplied with engine package are permitted.

- 2.2.6 The following modifications, to be carried out by the appointed engine builder only, will be permitted:
- 2.2.6.1 The governor may be removed.
  - 2.2.6.2 The oil cut out relay may be removed.
  - 2.2.6.3 Accelerator linkages and routing are free. Only foot operated accelerator mechanisms are permitted.
  - 2.2.6.4 Air induction is by means of the standard OEM air filter, or as an option, the K&N Red filter may be substituted.
  - 2.2.6.5 Spark plugs. Only NGK BPR6ES spark plugs are permitted. Spark plugs must remain standard Filing of electrodes or machining of thread body to allow indexing is strictly forbidden.
  - 2.2.6.6 An OEM electric self-starter may be fitted.
  - 2.2.6.7 The crank may be machined and/or the head skimmed to achieve the horsepower per clause 2.2.4. This modification shall only be carried out by the 4 Stroke Workshop prior to the engine being tested and sealed.
- 2.2.7 All motors must remain sealed at all times. Broken seals will lead to exclusion from the results and technical check of the motor.
- 2.2.8 Where necessary for repairs, and to keep costs under control, only the Official Engine builder may substitute OEM Honda parts with compatible OEM Hoffmann parts and vice versa.
- 2.2.9 New engines supplied with a temporary seal, may be run in and used in ONE race. The engine MUST be returned to the officially appointed engine builder after one race, to be dynamometer tested and a permanent seal fitted. Failure to return the engine before the next race will result in the engine being impounded at the next race to be dynamometer tested and sealed . Penalty as per penalty schedule.
- 2.2.10 An engine may be changed during an event provided it has been dyno tested and sealed by the officially appointed engine builder, scrutinised and a scrutiniser's sticker affixed for that event. Penalty as per penalty schedule.
- 2.2.11 Chassis are not controlled but must be FIA/CIK homologated chassis.

### **2.3 DRIVE TRAIN**

- 2.3.1 The drive train consisting of clutch, sprockets and chain will be supplied with the engine, when purchased.
- 2.3.2 Final drive. The final drive will be by chain and sprocket as specified by the organiser.
- 2.3.3 Front sprocket = 15 teeth of .428 pitch  
Rear sprocket = 45 teeth of .428 pitch  
Chain = .428 pitch
- 2.3.4 Noram Premier centrifugal dry type clutch with blue springs as supplied by the organiser, to allow a clutch engagement speed of 2200rpm.

### **2.4 BRAKES AND BRAKING SYSTEM**

- 2.4.1 The brake system is free within the following parameters.
- 2.4.2 Single disc acting on the rear axle.
- 2.4.3 One single piston OEM brake calliper as supplied with chassis.
- 2.4.4 One two piston aftermarket replacement brake calliper of the following type:  
Speed EVO system. Homologation number: CIK/FIA153-16/FR/14 17-18/FR/17.
- 2.4.5 A back up cable operated brake linkage must be fitted to all karts.

### **2.5 WHEELS**

- 2.5.1 Front maximum wheel width between bead = 135mm.

2.5.2 Rear wheel width between bead = 215mm

## **2.6 REAR AXLE**

The rear axle will be of hollow steel with an outside diameter of 50mm or 40mm (depending on the chassis standard fittings). No differential of any type is permitted. Maximum width of the rear axle, measured between the outer edges of the wheel rims, must not EXCEED 1400mm.

## **2.7 SEATS**

Only fibreglass seats approved by the Promotor may be used.

## **2.8 SIDE PODS, BIBS, REAR BUMPER AND NOSE CONES**

All karts will be equipped with the regulation side pods, bibs and nose cones. As specified by the organizer or FIA/CIK homologated units. They shall remain in position at all times. Substitutes are allowed.

## **2.9 FUEL**

- 2.9.1 Competitors will provide their own fuel for practice qualifying and race. Only fuel from pump 3 at VANS garage will be permitted for the race.
- 2.9.2 Fuel additives are not permitted. The TC reserves the right to replace any fuel suspected of having additives.
- 2.9.3 ANY modifications to the flow of fuel from the fuel tank through the carburettor are not allowed. This includes modifications and/or addition of parts to fuel pumps, fuel lines, carburettors, fuel coolers and any other part that controls the delivery of fuel to the engine.