



## Kitty Cat Racing Rules 2010

### General Kitty Cat Rules

**Ages for Kitty Cat:** Any child between the ages of 4 and 14 as of the first race of the season is eligible to compete. (Example, if a racer turns 15 on October 1st, he or she can not longer race.) To compete in the Formula 1 class a racer must be between the ages of 6-14 unless approved by a KC PRO official. It is recommended that a racer have one year of race experience in the Improved Class. Once a racer enters the Improved or Formula class, they are no longer eligible to race in the Amateur Class.

**Amateur Stock:** *Rookie Racers*- Ages 4-12 years old *Must Race Amateur only* **Class advancement:** Any racer that has placed 1<sup>st</sup> three (3) times or finished in the finals (5) times; must advance to stock class. With the exception to the rule are at the officials discretion.

**Stock:** Ages 4-12 year old

**Improved Stock:** Ages 5-12 years old with 1 year experience in KC Stock Class

**Formula 1:** Ages 6-14 years old with 1 year experience in KC Improved Stock Class

### General Competition & Safety Rules

1. Race will be flagged in the event that driver is off a machine that was involved in a two or more sled accident.
2. Driver heat arrangement and assignment is open to anyone who wants to compete.
3. The owner and driver are responsible to ensure that any stock class model meets all of the published stipulations as spelled out in *General Section Sled/Equipment Requirements and Regulations ISR Rules* Any vehicle that does not meet the requirements listed will be subject to disqualification and forfeiture of any prizes or awards, plus eligibility for the next two (2) KC PRO West races and will loose all accumulated points.
4. **Three (3)** laps are recommended in heats and five (5) laps in the final heats.
5. A driver must compete for a full year in stock class and be five (5) years of age before competing in any of the other classes.
6. Mandatory inspection of first place sleds. If it isn't stated in this section that it can be done, consider that it cannot be done.
7. Handle on rear of sled is mandatory.

### General Requirements & Regulations for All Kitty Cat Classes

#### Drive

1. Brake must be functional and operational at all times.

#### Ski Suspension & Steering

1. Rod ends (heim joints) may be used.
2. Spindle bushings may be replaced. Front end geometry may not be changed.
3. The structural integrity of the steering system must be maintained.

#### Skis & Ski Runners

Notice: Effective December 1, 2000 – Ski loops must be added. Minimum 1” diameter material. Loop must have minimum diameter of 3”. If metal, ski loop must be padded.

1. Ski tips must be wrapped or ski loops added. (Three (3) inch minimum diameter loop.)

#### Track Suspension

1. Seals may be removed from bearings in bogie wheels, rear idler wheels and/or rear idler sprockets.
2. Slide rail lubrication systems may be allowed in some classes depending up local, state, and/or federal laws.
3. If slide rail lubrication is used, it must be non-toxic and biodegradable.

#### Track & Traction

1. (Oval) Track studs must not extend more than 3/8 inch above the highest point of the track –OR- for cleated tracks – maximum stud length is 5/8 inch. No stud washer (backing plate) allowed. – OR – for older rubber tracks (without traction ribs) – maximum stud length is 5/8 inch with a commercially available backing plate of 0.180 inch maximum height. Combined maximum height above track of 0.805 inch.

#### Frame & Body

1. Windshield and windshield molding may be removed.
2. Rear tunnel enclosure must be maintained in all classes.
3. There will be **NO ORANGE** allowed on snowmobile per ISR safety rules.



## Kitty Cat Racing Rules 2010

### Kitty Cat Stock Class Rules

1. This section covers the following classes: Stock Classes: Amateur Stock, Stock, and Improved Stock
2. The snowmobile must have original OEM (or factory designated replacement) engine, hood, track, skis frame, cowl, gas tank, carburetion, air box, suspension and variable speed converter supplied by the manufacturer for the particular model. Factory designated replacements allowed. **Note: (Engines) – Kawasaki motors may be used in the amateur, improved and formula classes. Kawasaki motors are not allowed in the stock class. Suzuki motors may be used in all kitty cat classes.**

#### Engine

1. No component of the engine may be altered, changed or enlarged from the engine manufacturer's original stock specifications nor may any additional components be added to the engine.
2. Blueprinting of engines is not allowed. No removal of material whatsoever will be allowed. This is to include polishing port matching, deburring, glass or sand blasting surfaces or material removal for the purpose of engine balancing or other reasons.
3. Governor assembly must be installed on the engine (Governor) must be OEM stock.
  - a. (Governor Stock) Governor must be fully operational.
  - b. (Amateur Stock, Stock, Improved Stock) Governor must be intact but does not have to be functional.
4. Piston must be installed in its OEM orientation. Replacement pistons must be stock OEM for the model.
5. OEM cylinder bore size must be maintained, no overbore allowed.
6. There will be no more than one cylinder base gasket to a cylinder. **No changes in engine dimensions can be made by gasket adjustments. Gaskets (including the carb mounting gaskets) may be trimmed, but must remain OEM.**
7. Spark plugs do not necessarily have to be OEM stock; must maintain ½ inch reach.-(Governor Stock, Amateur Stock, Stock) one half (1/2) inch plug reach must be maintained.
8. No additional fuel pumps may be added to stock carburetors.
9. No carburetor or air silencer changes allowed. No changes allowed to throat of carburetor or any other orifices.
10. Jetting changes are allowed.
11. Filter material may be added to OEM air box. Air box (silencer) and/or its mounting gasket may be removed.
12. A 2.0 inlet valve may be used in the carb.
13. The carburetor insulator black may not be modified or trimmed except for elongating the stud mounting holes.
14. **Exhaust must be OEM as produced for the model. The OEM exhaust system must be used in its entirety. NO internal or external modifications allowed. No welding allowed, even for repair. Muffler components and/or silencing material must be intact at all times.**
15. The OEM exhaust system for the model must be furnished complete on the machine. The exhaust system must be fully contained within the confines of the cowl or the chassis and direct exhaust emissions from the enclosed area. Muffler components and/or silencing material must be intact at all times.
16. Air box (silencer) and/or its mounting gasket may be removed. Air filter allowed.

#### Drive

1. (Governor Stock) Stock drive clutch engagement must be maintained (3,000 RPM maximum clutch engagement with cold engine.)
2. OEM drive clutch with no modifications.
3. No belt drives allowed.
4. Chain guard must be in place.
5. Required sprockets for Stock classes
  - a. Must be steal Hub and steal Sprocket on Kitty Cats.
  - b. Drive Sprocket – 11 tooth
  - c. Driven Sprocket – 42 tooth (no aluminum sprockets allowed)
6. Improved Stock Sprockets
  - a. Gearing changes to the driven sprocket are allowed but the drive sprocket must remain OEM stock eleven (11) teeth.



## Kitty Cat Racing Rules 2010

### Ski Suspension & Steering

1. Front suspension must be OEM stock.
2. Front suspension must remain in its stock location.
3. Ski widening devices and/or height adjustment devices are not allowed in stock unless furnished as OEM and properly filed.
4. Rod ends (heim joints) may be used.
5. Spindle bushings may be replaced but front end geometry may not be changed.
6. An extension may be added to the left handlebar. Maximum 3" wider, maximum 4" down. End must be capped.
7. OEM, for the model, handlebar height must be maintained. (Recommended)

### Ski & Ski Runners

1. Skis must remain OEM for the model and year.
2. Ski suspension components must be OEM.

### Track Suspension

1. The complete suspension must be used as furnished and filed by the manufacturer.
2. There will be no suspension options.
3. Slide rail lubrications systems not allowed.

### Track & Traction

1. Any traction products allowed, but must meet Kitty Cat General Track and Traction rules.

### Frame & Body

**Notice: Effective 07/08 season, Tunnel may be replaced with commercially available aluminum tunnel of OEM thickness and dimensions or OEM steel tunnel.**

1. OEM hoods only.
  - a. Optional colored OEM hood may be substituted for black hoods.
  - b. OEM hood may be painted any color except ORANGE.**
2. It is allowed to open OEM designated (molded in) vent slots on the hood.
3. Windshield may be trimmed
4. Fuel tank may be raised within the confines of the OEM hood and frame configuration
5. An air vent may be added to the fuel tank. Vent must be routed to prevent siphoning when snowmobile is tipped to either side. (Refer to illustration in club year book)

### Ignition & Electrical

1. Headlight may be removed, but lighting coil must remain in place.
2. Spark plug cap does not have to be OEM.
- 3. Data acquisition and data acquisition systems are allowed, (you may not drill holes in any portion of the sled to install sensors/probes.) This includes a tachometer.**

### Fuel

1. No alcohol allowed. Race gas is ok if it does not contain alcohol. Some ethanol pump gas has too high a rate of alcohol. If you have a question on gas, it is your responsibility to have us test your gas before a race. The club has a tester with ISR specs. --please ask



## Kitty Cat Racing Rules 2010

### Formula 1 Class Rules

#### General

1. Any changes or alteration allowed in Stock classes are permitted in Fl.
2. Any Kitty Cat is eligible.

#### Engine

1. Any OEM Kitty Cat engine may be used as long as an original cylinder and crankcase is used.
2. Engine components must retain original OEM part numbers.
3. Engine displacement may not exceed manufacturer's filed specification for stock. Cylinder may be bored to a maximum of .040 inch.
4. Engine components allowable for modifications must begin with stock components, must retain original number of cylinders.
  - a) Cylinder
  - b) Cylinder head
  - c) Crankshaft
  - d) Bearings
  - e) Rods
  - f) Pistons, piston pin and rings
  - g) Gaskets
5. Additional main bearing may be added to mageneto side of crankshaft. Additional support for added bearing allowed.
6. No liquid cooling may be added.
7. No valves may be added.
8. No external crankcase modifications allowed.
9. Rods center to center must remain the same.
10. OEM stroke must remain the same.
11. Carburetor may be modified or replaced.
12. Fuel injection or turbo charger's not allowed.
13. Additional fuel pumps may be added. Pulse fitting may be added to crank case to operate fuel pump.
14. **Removal of recoil mechanism and starter cup to use 12 volt remote electrical starter is allowed. A 1.5 inch hole may be drilled in recoil cover to insert starter drive.**
15. Any exhaust modification or replacement is allowed with the exception of megaphones. The exhaust system must be functionally silenced. The exhaust emission pipe must not protrude more than three (3) inches beyond the chassis or hood configuration. It is recommended that silencers be used. The exhaust pipe must exit downward and extend below the plane of the top of the tunnel.

#### **16. Fan shroud may be removed.**

#### Drive

1. Chain guard is required.
2. Chain guard must cover all rotating components.
3. Clutch and drive system changes are allowed. Clutch and drive system may be modified or replaced. CVT system allowed. Components must be commercially available.
4. **OEM for the model track drive sprockets must be used, may be modified. OEM diameter must be maintained.**
5. Brake system may be replaced. Brake systems must be functional and operational at all times.
5. Conventional style drivers are required.

#### Ski Suspension & Steering

1. May be altered.
2. Handlebars may be changed and/or modified.  
Material strength must meet or exceed OEM handlebar material.  
Must maintain structural integrity and safe configuration.  
Structural integrity and safe configuration are at the discretion of the Race Director.



## Kitty Cat Racing Rules 2010

### Skis & Ski Runners

1. Skis may be changed to commercially available aftermarket skis.
  - a. Oval minimum length (not including ski loop) 12 in. minimum widths 2.75 in.)
  - b. Minimum turn-up for Oval is 1.25 inches as shown in illustration.
2. Ski loop must conform to General Rules and Regulations.
3. Ski runners must meet competition and safety requirements for Ice Oval Racing
4. Ski tips must be wrapped (current factory ski rubber or equivalent) or ski loop added three (3) inches minimum diameter (loop).

### Track Suspension

1. May be altered.

### Track & Traction

1. Twin tracks are not allowed.
2. Conventional style tracks and drives are required.
3. Any traction products allowed, but must meet Kitty Cat General Track and Traction rules.
4. All track cleats must have solid rivets-pop rivets will not be allowed.

### Frame & Body

1. Must begin with a stock tunnel.
2. Chassis may be altered as long as it doesn't jeopardize the safety of the operator or other drivers.
3. Overall sled length may not exceed sixty (60) inches. Measurement will be from the rear of the tunnel extension (excluding snow flap and lifting handle) to the tip of the skis.
4. Snowmobile may not exceed thirty (30) inches in width.
5. Snow flap must touch ground with rider seated.
6. Any hood allowed.

### Ignition & Electrical

1. Ignition may be modified or replaced. (The ignition system includes the flywheel.)
2. Gel cell and dry cell, etc. batteries will be allowed. Conventional lead/acid, wet batteries are not allowed.