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KIDS CHAMPIONSHIP POWER RACING ORGANIZATION

*Welcome Racers, Families And Fans!!*

# 2012 KC PRO HANDBOOK



Welcome to KCPRO, which stands for Kids Championship Power Racing Organization. KCPRO is a non-profit organization that has been around since 1991. KCPRO consists of two divisions, KCPRO East and KCPRO West. This was done to reduce some of the traveling time and expenses to and from races. KCPRO races are intended for fun only! It is entertainment and enjoyment for everyone in the family. We encourage good sportsmanship between parents and racers as well as anyone involved in the group.

We are looking forward to another great season of racing and with everyone's involvement that will happen. We have a complete set of rules and we have technical officials at the races to keep our racing fair and most import SAFE. Before every race there will be a driver's meeting conducted by our President to review and explain the rules, safety, flags, track, etc. If you have questions or concerns please talk to an officer or technical official.

You must be a KCPRO-East member to accumulate any points or have voting privileges on club issues throughout the season. Membership fees are \$75.00 per family per year. Membership includes reduced race fees, one free yearbook, current ISR Yearbook, and end of season banquet. Race day entry fees for each child are \$10.00 for each class. Non-member fees for each child are \$15.00 for each class raced. Awards/trophies will be given to the top six places in each class. There will also be participation awards for those that did not make the top six.

KCPRO-East has a website at [www.kcproeast.com](http://www.kcproeast.com) which is our main information site and is updated often to inform you of upcoming races, starting times, directions, etc. If you have any thing you would like included on the website contact us at [kcproeast@gmail.com](mailto:kcproeast@gmail.com). Also, most of our correspondence through the race season will be done via email; if you do not have access to email or if you'd prefer to be contacted in a different manner, please let us know by contacting any of the officers.

There will be a year-end banquet following the racing season. The banquet date for our 2012 season is Saturday, March 31, 2012 at Saw Mill Inn, Grand Rapids. This is a fun weekend for the kids as far as prizes, games, and trophies. For parents, we will hold our annual silent auction which is our largest fundraiser of the year, so start looking for donations (anything large or small) for this event. Also, the year end meeting will be held the Saturday (time TBD) of the banquet weekend and will include officer elections for the next year.

Good luck to all our racers, let's have an awesome season!!



### **2010-11 Board Members**

President:	Don Zupec	218-343-4405
Vice-President:	Joe Kleiman	218-393-0972
Secretary:	Tina Metz	715-368-6963
Treasurer:	Cindy Kujala	218-750-0777
Race Directors:	Shannon Sweeney	218-591-4054
	Troy Metz	715-360-6962
	Craig Maturi	218-301-6567
Techs	Jeff Lamourea	218-966-3317
	Korie Osvold	218-590-2920
	Jason Yecoshenko	218-349-5718
	Rick Gutmann	218-591-7012
Tech Director	Kelly Checkalski	218-391-1252

If you have any questions, don't hesitate to contact one of the officers.

### **KCPRO-East Races These 13 Classes**

Amateur Kitty Cat	Beginner 120	340 Jr. Novice
Stock Kitty Cat	Amateur 120	
Improved Kitty Cat	Stock 120	
F-1 Chain	Superstock 120	
F-1 Belt	Improved 120	
	Sprint 120	
	Champ 120	

**2012 KCPRO-East  
Race Schedule**

(Schedule subject to change.)

December 31, 2011 - voted to NOT race

January 7, 2012 - Pike Lake

January 14 - Side Lake

January 21 & 22 - World Championship - 2-day race hosted by WI group

January 28 – Forest Lake, Grand Rapids

February 4 - Fortune Bay  
Block of rooms reserved for Friday & Saturday  
\$80 per night - call Fortune Bay to reserve

February 11 - Ely Lake, Eveleth

February 18 - Longyear Lake, Chisholm

February 25 - Fish Lake

March 3 & 4 - Northern Lakes Nationals at Side Lake - Non Points

March 31 - Banquet at Saw Mill Inn, Grand Rapids

**RACE DAY**

8:00 – 9:00 Registration

8:30 – 9:30 Safety Tech & Hot Laps  
(must pass safety tech prior to hot laps)

9:45 – 10:00 Drivers Meeting  
(drivers and parents MUST attend)

10:00 Racing Begins

**GENERAL RULES FOR ALL CLASSES**  
**(this is an abbreviation – please refer to ISR Yearbook for complete rules)**

1. **SAFETY** (See General Rules – ISR Yearbook) -
  - A. Helmets, goggles or shields, ISR-approved chest protectors (see ISR Yearbook – General Rules and Regulations – Driver Protective Equipment), over the knee shin guards, and over the ankle boots are required.
  - B. Racer must have a working tether cord attached to them while racing.
  - C. Functional brakes are mandatory.
  - D. Chain and clutch guards are mandatory.
  - E. Heim joints may be used on steering arms for better control.
  - F. Gas tank venting is mandatory.
  - G. Ski loops are mandatory
  - H. Racer must wear safety orange with a 12”x12” minimum.
  - I. It is **MANDATORY** that the driver’s helmet must be a minimum of 75% international or blaze orange.
  
2. **FUEL:**
  - A. No alcohol allowed. Fuel may be checked to meet I.S.R. rules.
  - B. No oxygenated fuels (commonly known as ethanol) allowed. If you are not sure about your fuel have it tested before you race.
  
3. **STAGING AREA:**
  - A. The staging area will be near the entrance to the track.
  - B. Make sure your racer is at the staging area prior to his or her race; this helps the event run smoothly. Once sleds are at the line a 2-minute rule will be in effect.
  - C. A posting is usually put up at the staging area for all races. Please check boards frequently to see where your racer is; things can change throughout the day.
  - D. A minimum of three racers will be pulled from each heat to advance to the next round of racing.
  - E. A round-robin race format will be used when there are more than two heats in a class.
  - F. Parents are encouraged to assist in getting their racer to the starting line, but must be off the track before the race will start.
  - G. A track stand is required in staging area.
  
4. **INSPECTION/TECHING:**
  - A. The tech officials may call a pre-race tech inspection at a designated time prior to the start of racing.
  - B. A tech inspection following the race may take place to tear down a sled to see if it is legal. If found illegal, the racer will lose their points for that day in that class and will not be eligible to race in that class for two races.

- C. Pre-teching: For every race, brakes, tether switch, and throttle will be checked. Gas and stud length could also be checked.

**5. RESTARTS:**

- A. The flag person will restart the race if all racers do not clear turn two of the first lap. Turn two is marked by a large orange cone.
- B. If the race needs to be restarted after the completion of the first lap, it will be done as a staggered start. Line up will be determined by the position of the racers on the previous lap.
- C. If there are two or more racers involved in a crash the race will be red flagged and restarted. If a racer is disabled alone, he/she will be pulled off to the side of the track. If track help cannot get them going again, the racer must sit and wait until the heat is complete. Any crash in F1's, Improved 120, Champ 120, or Open Champ 120 or the 340 classes will be red flagged.
- D. No pushing or shoving. The inside machine has the line. Racers are required to drive safely and in a manner that displays good sportsmanship.
- E. If a racer causes the race to be restarted more than once due to excessive pushing, they may be placed in a second row or asked to put their hands on their helmet when restarting the race.
- F. Two minutes will be allowed to repair a sled before or after the race starts.
- G. Parents, racers, spectators, etc. must remain off the track while a race is underway.

**6. POINTS SYSTEM:**

- A. You must be a KCPRO member to accumulate year end points.
- B. There will be no points awarded for Amateur classes; they will receive year end certificates.
- C. Lowest pointed week raced will be dropped in the year-end calculation of points for each individual pointed class (does not include cup totals.)
- D. One point will be awarded in each class that the racer has paid for and attempted to race and will be in addition to actual race points.
- E. In the event that only one racer registers and pays for any specific race class, and only that racer attempts to participate in that race class, they are required to complete a minimum of one lap for the heat, and a minimum of one lap for the final, in order to obtain first place points.

Point standing in all classes will be calculated as follows:

Final: 1 <sup>st</sup> = 16	Consolation: 1 <sup>st</sup> = 10	Attempts: 1 pt per class
2 <sup>nd</sup> = 15	2 <sup>nd</sup> = 9	
3 <sup>rd</sup> = 14	3 <sup>rd</sup> = 8	
4 <sup>th</sup> = 13	4 <sup>th</sup> = 7	
5 <sup>th</sup> = 12	5 <sup>th</sup> = 6	
6 <sup>th</sup> = 11	6 <sup>th</sup> = 5	

- F. KCPRO-EAST CUP: The KCPRO Cup is run for the Kitty Cat, 120s, and 340 classes. You must pick two different classes (within the Kitty Cats for the Kitty Cat Cup, two within the 120s for the 120 Cup, and Junior Novice

for the 340 cup) **before** the first race of the year. Your **total** finishing points will be added together between your two different classes to determine your total points for the year end cup. No points will be dropped in the calculation for the KCPRO Cup.

**7. RACE LOCATIONS:**

- A. All races will be held on ice surfaces, both land and water.
- B. Most events will be held on Saturdays.

**8. REGISTRATION:**

- A. Yearly membership is \$75.00 per family. KCPRO must have a copy of each child's birth certificate for each member.
- B. TIME: Registration is from 8am to 9am. Racing begins at 10:00. Times may vary due to circumstances, ex. Weather, location, etc.
- C. RACE FEES:      Members = \$10.00 per class  
                             Non-Members = \$15.00 per class

These fees are for each racer.

Fees will be increased for our special races – to include the Northern Lakes Nationals and Rainy Lake Kitty Cat Championship.

### **-KITTY CAT RACING-**

One thing to watch for when buying used kitty cats or parts make sure they meet Stock specifications. Some changes may have been made that could lead to disqualification. BE CAREFUL!!!

### **-AMATEUR KITTY CAT-**

1. Eligible ages are from 4-12.
2. All Stock class rules apply to Amateur class.
3. If a racer enters the Improved Stock or F1 classes they are no longer eligible to race in the Amateur class.
4. If a racer wins five Amateur finals in one year, they are no longer eligible to race in the Amateur class.

### **-STOCK KITTY CAT-**

1. Eligible ages are from 4-14.
2. Any year Kitty Cat chassis is eligible but only Suzuki engines may be used.
3. All original parts must be in place and intact.
4. All engines must be factory stock with no modifications of any kind.
5. Brakes must be operational at all times.

### **-IMPROVED STOCK-**

The Improved Stock class is a faster class for the more experienced Kitty Cat racers and takes only a gear change to prepare the Stock Kitty Cat to enter.

1. Eligible ages are 5-14 with one year race experience.
2. All stock class rules apply except Kawasaki engines may be used.
3. Stock OEM drive clutch (Max Torque brand, 11 tooth) and stock clutch engagement RPM must be maintained.
4. Handlebars may be altered.

### **-FORMULA 1-**

1. Eligible ages are from 5-14 with one-year race experience.
2. There will be two F-1 classes; a **Belt Drive class** and a **Chain Drive class**. The chain drive sleds will be permitted to enter the belt drive class but belt drives will not be permitted in the chain drive class.
3. No cleated tracks are allowed.

**-120/4 STROKE RACING-**

**ELIGIBLE SNOWMOBILES**

Arctic Cat Z120/Sno Pro  
Bombardier Mini Z  
Polaris XC/XCR 120

**-BEGINNER 120-**

1. Eligible ages are 4-5 year olds.
2. All other stock class rules apply.

**-AMATEUR STOCK 120-**

1. Eligible ages are 4-12 years.
2. If a racer wins five Amateur finals in one year, they are no longer eligible to race in the Amateur class.

**-STOCK 120-**

The snowmobile must have original OEM, or factory designated replacement, engine, hood, track, skis, frame, cowl, gas tank, carburetion, air box, suspension, and clutch supplied by the manufacturer for the particular model.

1. Eligible ages are 6-14 years.

**-SUPER STOCK-**

1. Eligible ages are 6-14 years with one year race experience.
2. **Same rules apply as Stock with the exception of: Gear change only....**

Arctic Cat = 34 tooth gear

Polaris = 32 tooth gear

Ski-Doo = 32 tooth gear

**-IMPROVED STOCK 120/IMPROVED STOCK 120 LEMANS-**

1. Eligible ages are 6-14 with one year race experience.

**DRIVE-**

1. Gear ratio may be changed.
2. Clutch may be replaced with aftermarket clutch of the same basic centrifugal design. No variable ratio systems allowed.

**STOCK CLASS RULES APPLY IN ALL OTHER SECTIONS.**

**-SPRINT 120-**

1. Eligible ages are 7-14 years with one year race experience.
2. Modifications allowed in lower 120 classes are allowed in Sprint 120 class, combined with Champ 120 engine rules for model raced.

**-CHAMP 120-**

1. Eligible ages are 7-14 years with one year race experience.
2. Modifications allowed in other 120 classes are allowed in Champ 120 class. Along with Champ 120 engine rules for model raced.

**-JUNIOR NOVICE (340)-**

1. Eligible ages are 10-14.
2. Snowmobile must not exceed 40 mph while racing (verified via radar gun.)

## **-HOW TO SET UP A STOCK SLED-**

There is one decision that must be made before you do anything. Is your Kitty Cat going to be used for pleasure or racing? The two just do not mix! Unless, of course, you plan on burning a lot more midnight oil than you already will be.

In setting up a **Kitty Cat** there are two **KEY WORDS: ALIGNMENT** and **FRICITION**. If certain components are out of alignment, that creates friction. So if you have a problem with one or the other or both that does only one thing: **REDUCES HORSEPOWER**.

You must start by stripping the sled down to the tunnel. First put back in your head shaft, making sure that it turns o.k. Reinstall the track into the sled. Tighten down the head shaft. Spin the head shaft with the track, making sure the bogie wheels on the shaft spin real free. This should be checked after each weekend of racing. Install tail shaft back into sled. Make sure to adjust it square. Keep spinning the track as you are adjusting it. Stop when it feels right to you. Do not make it to tight! Now on to the **front end**.

With the front end all disassembled, look at the spindles and the triangle that sits on top of it. Make sure it fits tight: **THIS IS VERY IMPORTANT!** If the triangle fits loose on the spindle there are two things you can do: 1. Take a center punch and peen over the edge around the square so that it fits over the spindle tight. 2. Buy new ones. When checking this, also make sure the spindles are in good shape. Fit the spindle in the chassis and see if it wiggles around. If it does, you need to tighten it up. Get some plastic shims ranging in thickness from .0025 to .015. Once you have them tightened up, go ahead and install your triangle plates. Now to the **steering rods**. You should get rid of the over the top type of ball joint because they become very sloppy. Replace them with a heim joint because it gives you more surface area on the ball. Your steering will always be tighter in this area, which is a good safety factor. Now install the ski and tighten the coupling to the spindle. Don't over tighten: just take the slop out of it. Tighten up the leaf springs a little to take the slop out of that also. When you go to a heim joint, you may have to notch the frame for the tie rod to go through.

The next thing is to have your engine checked to see about getting the maximum horsepower available. Suzuki and Kawasaki engines both put out 3.3hp. I have seen engines as low as 2.6hp out of the box, but with a few adjustments you can get it up to 3.3hp. Checking this can be done by finding someone who has a dynamometer. You also need to work on the governor to make it not function. Loosening the arm that is attached to the governor shaft can do this. This will allow the shaft to turn freely inside the arm. You can also use a wire or tie strap through the spring. When the engine starts revving higher than 5000 rpms, the engine will starve for fuel or run out of fuel in the corners so here is a list of thing you will need to do. 1. Vent the gas cap better by drilling 2 or 3 more holes with a 1/16-drill bit. 2. Tear out the fuel screen that is inside of the fuel tank. 3. Make the fuel line as straight as possible and tie in a fuel filter and still keep the line straight. 4. Rejet the carb and replace the stock main jet (72.5) with a 70 jet. There is a 67.5 jet but you have to be careful. That jet could cause an engine seizure. 5. Then you need to read just the float level by pushing down the tab that pushes on the fuel inlet needle and straighten the tab that limits how far the float goes down. Be careful on how far down you push the tab. If you push it down too far it will let fuel in all the time. The best thing to do is to blow into the fuel inlet while holding up the float, then drop the float

down a little bit and you should start blowing air in the carb, push it up and it should stop you from blowing.

The other subject that should be talked about is carbides and studs. Set your sled on level ground and take off the steel runner on the bottom of the ski. Now take a socket and put it under the skis somewhere in the middle. With the socket under the skis, tip each end of the skis until the balance on the socket without touching the ground. There you will find the center of down force. Put the center of the carbide runner under the skis where you found the center of down force. As far as the studs go, using picks or studs is the only way to go because you have all your pressure pushing down on one single point. Taking normal studs and grinding them does not work too well. Woody's makes a 5/8" steel pick combine with a fender washer 1" in diameter with a short T nut. This works better. They stay sharp for a long time.

This covers about 35% of the task of setting up a stock sled, the other 65% is up to the driver. Another important thing is to PRACTICE-PRACTICE-PRACTICE but most of all just have fun!

- B. The above information was taken from an article written by BILL TRIPP, KIDS PERFORMANCE.

