

## Wing Kart Rules

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### General Information

**Flags: Please make sure your driver knows and understands the flags before coming onto the race track.**

**Green** - The practice, qualifying or race session has started and the track is open for racing.

**Yellow** - Slow down to a reasonable speed and in a single file line. Do not race back to the start/finish line.

**Red** - Come to a stop as quickly and safely as possible.

**Black** - You need to exit the track and are no longer being scored due to rough driving or a parts failure. A rolled black flag is a warning.

**Blue w/ yellow stripe** - The lead drivers are coming to lap you. Maintain your line to allow them to pass.

**White** - There is one lap remaining in the race.

**Checkered** - The race has officially completed.

**These rules are intended as a guideline. The rules can be adjusted based on the situation. All calls made by the race director are final!**

### **General Rules**

- Raceceivers are mandatory in all classes. It is the driver's responsibility to make sure their RaceCeiver is working properly.
- Transponders must be in good working order and installed in the correct position. If your transponder does not work, you will not be scored. Transponders are to be mounted on the steering upright.
- Driver's age at the start of the series is their competition age.
- Birth certificates are required and can be requested at any time.
- Absolutely no crew and/or family members are allowed on the racing surface unless allowed by a series official.
- Zero tolerance policy for fighting, foul language, verbal, or physical abuse. The driver is responsible for themselves and their crew members. Any of these violations will have you removed from the track with possible suspension.
- All karts must have a 5 point safety harness and aluminum high back seat. Approved helmets, neck braces or restraints are required.

- Closed toed shoes are required.
- Suits and arm restraints are highly recommended. No shorts, cut off or holey pants.

#### Points

<b>1st - 50</b>	<b>8th - 42</b>	<b>15th - 35</b>
<b>2nd - 48</b>	<b>9th - 41</b>	<b>16th - 34</b>
<b>3rd - 47</b>	<b>10th - 40</b>	<b>17th - 33</b>
<b>4th - 46</b>	<b>11th - 39</b>	<b>18th - 32</b>
<b>5th - 45</b>	<b>12th - 38</b>	<b>19th - 31</b>
<b>6th - 44</b>	<b>13th - 37</b>	<b>20th - 30</b>
<b>7th - 43</b>	<b>14th - 36</b>	

**All non transfer karts will receive 25 points.**

**There will be no drop races.**

**One driver substitution allowed.**

#### Race Track Rules and Information

- Practice will be 5 laps, qualifying will be 3 laps, heat races and B main events will be 8 laps, A main events will be 20 laps.
  - Cadets will run 12 lap A main events.
  - Beginner Box Stock will run 15 lap A main events.
  - Classes with less than 5 karts will run 15 laps.
- Competitors will draw at registration for their qualifying order. Failure to go on track in the assigned order will result in the loss of the fastest qualifying lap.
- No invert after qualifying unless noted for special events.
- All initial starts will be double file. The leaders should maintain a fair, consistent speed and stay side by side until the starting area.
- Restarts will be single file and the leader can start anywhere in the starting zone. The entire field must remain single file until passing to the outside of the cone at the start/finish line. Failure to do so will result in a docked position. If done a second time the driver will be sent to the rear of the field.
- The leader/front row will get two attempts at a proper start. After two failed attempts the leader or front row will be docked one position or row.
- Stalled karts get two attempts to be restarted by a track official only. If a kart stalls a third time they will be sent off of the track.
- As soon as the track is clear from the previous event, the next event will enter the track. Drivers are expected to be on time and in position. Failure to do so will result in going to the rear of the field.
- Rough driving will not be tolerated and may result in loss of positions or black flagged.

#### Hot Pit

- Any driver who visits the hot pit before or during an event will go to the rear of the field. During the A main only, drivers can visit the hot pit one time but must return to the track before the “one to go” signal or wait until the next caution. Karts involved in the caution will be given 90 seconds in the hot pit.
  - There will be a three spin rule implemented. Any driver involved in three incidents will be asked to exit the track.

## Tires

- A set of 4 ST3 tires for the wing classes that will utilize the slick tire will consist of 3 11x6.00-6 and 1 12x9.00-6.
- You must run the purchased set of tires for a minimum of 3 race days. You are eligible to purchase a new set after that time but are not required to. Individual tires are allowed to be purchased once eligible after the 3 race days. You do not need to purchase an entire set of tires after the initial set is purchased.
- Tires will be scanned in at the time of purchase and are to be turned into impound at the end of race day for the classes utilizing the ST3 tires. Failure to turn your tires in at the end of race day will result in the purchase of a new set at the next event.
- Only one set of tires (4) is allowed to be checked out at a time. You must check out your own tires. You cannot check out anyone else's tires.
  - Drivers who are substituting for someone who has tires in impound will be allowed to check out that driver's tires for the day.
- The flat kart classes utilizing the T-18 will be allowed to bring their own tires or tires will be available for purchase at the track for \$320. These tires will not be impounded and are subject to sampling at any time. Only one set is allowed to be used for the entire race day. Tires must be submitted for check in before practice.
- A set of flat kart tires consists of 11x5.50-6 on the left sides and 11.5x8.00-6 on the right sides.
  - Wheel sizes must be 6.5x6" on the left sides and 10x6" on the right sides.
- Minimum tread depth rule for the T-18 tires for flat karts post race is .050.
- Yamaha 450, Young Guns & Open will utilize the T-18 tires only.
- Any mounting or dismounting of tires must be done at the tire impound trailer. Any flat tires should be brought back to the tire impound trailer for an exchange.
- Tires will be handed out at a designated time before each event.
- Absolutely no prepping allowed. Tires can only be cleaned after the feature event at the provided water stations. No grinding, sanding, wire brushing, siping, grooving or alterations of any kind allowed to the tires. No heating of the tires allowed.
- All winners tires will be sampled and sent off.
- Tires can be protested for a \$250 fee. If the tire/tires protested is found legal, the protester must purchase the protestee a new tire/tires along with receiving \$50 of the protest money. If the tire is found illegal, the protestee receives \$50.
- First offense of tire altering is a \$500 fine, 1 race suspension (non droppable) and the purchase of a new set of 4 tires. Second offense is a \$1,000 fine and banned for the

remainder of the series. Third offense is suspension from all Carolina Wing Kart Series events.

- All tire samples will be sent to Blue Ridge Race Lab. The results from the lab will be final. No exceptions.

## **Class Rules**

### **Kart and Bodywork**

- Bodywork can be made of any material except wood. No sharp edges.
- Right side sail panels are not allowed. Left side sail panels are allowed but cannot extend beyond the rear cage.
- Must run a box stock size wing (center 32" x 35", left board 40" long and 20" high, right board 40" long and 14" high. Must be within +/- 2 inches)
- Measurements include any lip on the side panels. Only 1 bend is allowed. Lips cannot exceed 1 inch. Flat panel wing only. No airfoil.
- Must utilize a sprint car style rear bumper. No square flat kart style bumpers allowed. Must extend back a minimum of 7" from the end of the frame rail. (Bumper design must be approved by series officials).
- Maximum height for side pods is 12". Maximum width is 8.5". All side pods must be at least one inch away from every component of the motor including the air filter.
- All body work is subject to approval by series officials.
- All weights must be securely fastened using the proper hardware. Weights must be painted white with the kart number on them.
- Kart must have a wing, hood, and tail. No front wing allowed.
- Roll cages are mandatory and must be fastened in four locations with minimum grade 5 bolts.
- Kart must have legible numbers on both sides of the wing and be legible to the scorers. No duplicate numbers. Any duplicate numbers must have a letter added to them.
- No traction control devices of any kind allowed.
- No ratcheting hubs allowed. Live rear axle only. No carbon or titanium axles allowed.
- All karts must be equipped with a chain guard that protects the driver in an event of a chain failure.

### **Beginner Box Stock**

Drivers are allowed to compete in the Beginner Box Stock and Box Stock divisions if eligible. Please use proper discretion when deciding what classes to run.

Beginner Box Stocks will run Briggs LO206 engine. All

engine rules are listed on [Briggs Racing - Kart Racing Engines, News, Videos](#). The only change will be the spec exhaust pipe listed below.

- LO206 engines must run an unaltered RLV 5530 exhaust pipe with an unaltered RLV B91XL muffler.
- Support from the head to the exhaust pipe is required.
- Header bolts must be double nutted or wired.
- Muffler must remain stock and cannot be altered in any way.

Must run **Green** slide, unaltered, with slide lock.

#### **Fuel**

- Must run 87 octane pump gas only. No additives allowed.

#### **Clutch**

- Shoe type clutch only.

#### **Box Stock**

Drivers are allowed to compete in the Beginner Box Stock and Box Stock divisions if eligible. Please use proper discretion when deciding what classes to run.

Box Stocks will run the Briggs LO206 engine. All engine rules are listed on [Briggs Racing - Kart Racing Engines, News, Videos](#). The only change will be the spec exhaust pipe listed below.

- LO206 engines must run an unaltered RLV 5530 exhaust pipe with unaltered RLV B91XL muffler.
- Support from the head to the exhaust pipe is required.
- Header bolts must be double nutted or wired.
- Muffler must remain stock and cannot be altered in any way.

Must run the **black** slide, unaltered, with slide lock.

#### **Fuel**

- Must run 87 octane pump gas only. No additives allowed.

#### **Clutch**

- Must run a shoe type clutch.

#### **Cadet**

Drivers are allowed to compete in the Beginner Box Stock and Cadet divisions if eligible. Please use proper discretion when deciding what classes to run.

Drivers who have won a championship in the Cadet class at the Carolina Kart Series are no longer eligible to compete in the Cadet class.

Cadets will run Briggs LO206 engine. All engine rules are listed on [Briggs Racing - Kart Racing Engines, News, Videos](#). The only change will be the spec exhaust pipe listed below.

- LO206 engines must run an unaltered RLV 5530 exhaust pipe with an unaltered RLV B91XL muffler.
- Support from the head to the exhaust pipe is required.
- Header bolts must be double nutted or wired.
- Muffler must remain stock and cannot be altered in any way.

Must run **Red** slide, unaltered, with slide lock.

#### **Fuel**

- Must run 87 octane pump gas only. No additives allowed.

#### **Clutch**

- Shoe type clutch only.

### **JR Wing**

This rules package is based on the 2021 Briggs & Stratton 206 engine platform. Below are the only allowed changes to those rules.

#### **Carburetor**

The carburetor will be converted to run on methanol. The modifications listed below are the only allowed changes. Parts will be compared to a known stock part.

- Main jet hole size is a non-tech item. The main jet must originate from a stock main jet.
- Low speed jet hole size is a non-tech item. The low speed jet must originate from a stock low speed jet.
- Main fuel nozzle thru hole is a non tech item with no other modifications to the nozzle.
- There are two methanol needle jets available from Briggs & Stratton. One of the two must be used without modifications.
  - PT# 555649 (DID) or PT# 555691 (BHA)

#### **Fuel**

Methanol must be used and pass tech.

#### **Air Filter**

- Any air filter is permitted.
- Air filter must mount directly to the carburetor.
- Air filters may not be used as an air ram and must filter from all areas as raced.
- Any open areas in the air filter must be covered with a filter sock.

#### **Cylinder Head**

Below are the only allowed changes to the cylinder head. All other dimensions and 206 rules will apply.

- The cylinder head gasket surface can be machined.
- There is no overall minimum head thickness check. The combustion chamber must have a minimum depth of .300 inches.
- Any single or dual valve spring allowed.
- Any aluminum or steel retainers allowed. No titanium retainers are permitted.

#### **Head Gasket**

- Cometic H3590040S MLS head gasket (BSA-304-40 Dyno Cams Number). Must be used without gasket sealer.

#### **Flywheel/Ignition System**

- Stock, unaltered flywheel with stock, unaltered plastic flywheel fins must be used.
- Ignition timing is non tech. Offset timing key or no timing key is optional.
- Ignition coil must be changed to Briggs PT# 557125 "Red" 7100 RPM Coil.

#### **Engine Block And Piston**

- Crankcase Seals are a non tech item.
- Block deck surface may be machined.
- Piston pop-up cannot exceed .035" above the deck surface.
- When measuring piston pop-up use a .500" square bar stock in parallel with the wrist pin. Use a dial indicator to check the pop-up in the center of the bar.
- Piston must be changed to Briggs World Formula piston. The piston must remain as supplied from the factory. Two sizes of pistons will be approved for use.
  - PT# 557121 Std. Bore
  - PT# 557122 +.010 Over Bore
- Max Bore is 2.705.

#### **Piston Rings**

- Factory Briggs rings must be used.
- Three rings are mandatory and installed in the correct manner.
- Rings must be self supporting in the bore of the engine.
- No machining of rings allowed with the exception of lapping and end gapping.
- Maximum ring gap is .050.
- Rings must be in one piece when removed from the engine.
- Minimum width of the top two rings is .095.
- Thickness of the top two rings is .059-.064.
- Oil ring minimum width is .065.
- Ring groove must be present.
- Expander ring must be installed but may be trimmed in overall length.

#### **Connecting Rod**

- Connecting rod must be changed to ARC-6249 Billet Rod. Connecting rod will be compared to the known stock part from ARC.

### **Camshaft**

- Camshaft must be changed to Dyno Cams AN-Mod1-WC-CR.
  - Max lift at the cam is .310.
  - Max lift at the valve is .310.
  - Max duration at .050 is 248 degrees checked at the valve with zero lash.
  - Max duration at .200 is 153 degrees checked at the valve with zero lash.
- Compression relief should be left in stock form. These engines will remain pull-starts like the current 206 engines.

### **Crankshaft**

- Aftermarket billet non-adjustable crank gear Dyno Cams number DC-1346 is allowed to be installed in stock location on the crankshaft.

### **Exhaust System**

- RLV 5530 header will be used with an unaltered RLV B91XL muffler.
- Support from the head to the exhaust pipe is required.
- Header bolts must be double nutted or wired.

### **Clutch**

- Must run a shoe type clutch.

### **All Flat Karts**

All flat karts will follow NKA engine rules and can be found online at [www.nkaonline.com](http://www.nkaonline.com)

Maxxis T-18 tires (treaded) for the adult clone classes. Absolutely no prepping allowed.

- Left side wheels must be 6.5" x 6"
- Right side wheels must be 10" x 6"
- Left side tire size must be 11x5.50-6.
- Right side tire size must be 11.5x8.00-6.
- The classes utilizing the T-18 will be allowed to bring their own tires or tires will be available for purchase at the track for \$320. These tires will not be impounded and are subject to sampling at any time.
- Minimum tread depth rule post race for the T-18 tires is .050.

### **Yamaha 450 Outlaws/Yamaha 450 Young Guns**

#### **Kart Rules**

- Sail panels are allowed.
  - Right side sail panel must not extend more than 6" past the rear of the cage.



- Left side sail panel must maintain the shape of the cage and may not extend past the rear of the cage.
- Left sail panels are allowed but must conform to the cage.
- No side pods or air deflection devices of any kind may be used. Nerf bars alone are the only item to be utilized and may not be filled in with sheet metal.
- All karts must run both right and left nerf bars as well as front and rear bumpers.
- Hoods and tail tanks are mandatory
- Numbers must be displayed on both sides of the wing and must be legible from the scoring tower.
- No front wings are permitted.
- Axles must be constructed out of either steel or aluminum.
- Must have ALL bumpers to race. front, rear, left nerf & right nerf.

### **Wing Dimensions**

- Right side panel must not exceed 48" +or- 1/2" Max Length or 20" tall at any point.
- Left side panel must not exceed 48" +or- 1/2" Max Length or 28" tall at any point.
- Center section may not exceed 40" wide x 42" Long at any point.
- Floor pans may not extend outside of the frame, nor should they go back past the lower steering post or any more forward than the front of the frame.

### **Engine Rules**

- Must be a factory OEM fuel injected Yamaha 450 between the years 2010-2023.
- Must run factory tune as it came from the factory for that year's motor.
- Engine must remain 100% stock as it came from the factory with the only exception being a stock replacement Carrillo rod part number 8823.
- Chain guards are mandatory.
- Wi-Fi boxes and tuners of any kind are not permitted, subject to tech at any time.
- Your ECU plug needs to be accessible and marked for the tech person, This is your responsibility in tech, not the tech man. If your ECU tune is unable to be read for any reason, this will result in a DQ.
- Wiring harness and all other electronics must remain stock and unaltered.
- All gears must be in working condition and may not be lightened or altered.
- All Outlaw and Young Gun Karts must have the approved FMF Q Core or Dasa 99 DB muffler.
- Intermediates are allowed to compete in the Young Guns class (Millbridge engine rules)

### **Tech procedure:**

#### **Track tech items include, but are not limited to:**

- Clutch
- All gears are operational

- Stock default tune
  - Throttle body
  - Visual inspection of intake and exhaust port
  - Young Guns restrictor
- 
- Items to be teched for each event.

EBR Racing will be the series Yamaha affiliated tech officials and will handle all full protests of engines.

Protest fee will be \$500.00 in which 50% will go to EBR regardless and the other 50% will go to the engine owner if the motor is deemed legal or back to the individual that protested if the motor is illegal.

### **Yamaha 450 Outlaws**

- Ages 16+
  - Exceptions may include experience in the outlaw class or intermediate class
- Minimum weight is 500 lbs

### **Young Guns/Intermediate**

- Ages 10-16 years old
  - Exceptions include past box stock champions or have 6+ races of Jr Wing or Intermediate experience
- Minimum weight is 450 lbs

If it is not stated in these rules that an item is allowed, then it needs to be considered illegal unless otherwise instructed by series officials.

## **Open**

### **Kart Rules**

- Minimum weight for open 2 or 4 strokes up to 550cc is 500 lbs.
  - Stock Yamaha 450 (450 outlaw rules) is 475 lbs.
- No methanol or ethanol allowed.
- Sail panels are allowed.
  - Right side sail panel must not extend more than 6" past the rear of the cage.

- Left side sail panel must maintain the shape of the cage and may not extend past the rear of the cage.
- Left sail panels are allowed but must conform to the cage.
- No side pods or air deflection devices of any kind may be used. Nerf bars alone are the only item to be utilized and may not be filled in with sheet metal.
- All karts must run both right and left nerf bars as well as front and rear bumpers.
- Hoods and tail tanks are mandatory
- Numbers must be displayed on both sides of the wing and must be legible from the scoring tower.
- No front wings are permitted.
- Axles must be constructed out of either steel or aluminum.
- Must have ALL bumpers to race. front, rear, left nerf & right nerf.
- Floor pans cannot extend beyond the frame rails and cannot extend past the rear seat mount of the frame.

### **Wing Dimensions**

- Right side panel must not exceed 48" +or- 1/2" Max Length or 20" tall at any point.
- Left side panel must not exceed 48" +or- 1/2" Max Length or 28" tall at any point.
- Center section may not exceed 40" wide x 42" Long at any point.
- Floor pans may not extend outside of the frame, nor should they go back past the lower steering post or any more forward than the front of the frame.

### **Engine Rules**

- 2 stroke or 4 stroke engines up to 550cc allowed.
- Single throttle body or carburetor. No supercharger or turbos.