

## **PRE-RACE SAFETY TECH GUIDE**

THE INFORMATION CONTAINED IN THIS GUIDE HAS BEEN COMPILED TO ASSIST THE RACER IN PREPARING THEIR KART FOR ON-TRACK COMPETITIVE RACING.

THE PRE-RACE SAFETY IS A GUIDE TO KEEPING YOUR KART AND EQUIPMENT SAFE FOR COMPETITION TO PREVENT INJURIES TO YOURSELF AND OTHER RACERS.

EACH ITEM IS NOT CHECKED AT EVERY PRE-RACE SAFETY TECH SESSION BUT IS CONSIDERED AS A TOTAL SAFETY EFFORT TO PREVENT INJURIES.

PLEASE BE AWARE OF THE FOLLOWING RULES AND PREPARE YOUR KART AND EQUIPMENT SO YOU CAN MEET THESE REQUIREMENTS WHEN PRESENTED.

## General Safety and Tech

Each Karting competitor must have a fire extinguisher or a 5-gallon pail of water in his or her paddock/pit area. Water is considered the most effective extinguisher for alcohol due to its diluting properties. Extinguishers rated for burning liquids will work fine but do not dilute alcohol as well. All competitors with methanol kart participation should have a large water spray bottle or 5-gallon water pail on hand in the grid area in case of fire.

**The main focus is the safety of the driver, karts, and all participants. Loss of parts from the kart during competition i.e. exhaust system, air intake components, LEAD WEIGHT, bodywork, etc. will be Black Flagged.**

## Items to check are as follows:

### Driver Protection

- ✓ **Driver Protective Clothing:** All Junior Classes - Full kart racing suit required, All Senior Classes - Kart racing jacket, long pants in place of full suit allowed
- ✓ **Helmets:** Full-face helmets with a current racing-certified rating. The DOT only rated helmets are not allowed. Must be an in-date racing helmet rating.
- ✓ **Gloves:** Racing gloves required for all classes
- ✓ **Neck Brace:** All classes must have the neck brace approved for racing with proper fit
- ✓ **Shoes:** Racing or closed-toe shoes required
- ✓ **Chest/Rib Protector:** Chest protectors are required in all Junior classes, optional but recommended in all Senior classes
- ✓ Header Pipe properly wrapped

### Braking system

- ✓ No Fluid Leaks
- ✓ Solid Pedal No Sponginess or air in the system
- ✓ All attachment hardware for the braking system should be snug. Hardware must be drilled and safety wired or cotter pinned. The rotor shall have stamped self-locking nuts or be safety wired.
- ✓ The brake system must be a caliper type, lawn kart band brakes are not allowed.
- ✓ Brake pads must be in good condition with adequate lining visible.

### Fuel System

- ✓ No Fluid Leaks
- ✓ Attachment hardware must be snug
- ✓ The appropriate class fuel tank must not be leaking and in good condition. All fuel-carrying lines shall have retention devices at all connections (zip ties or safeties)
- ✓ In general, all fuel tanks must be securely fastened to the primary structure of the kart frame/floor pan. The tank must be located within the main frame rails beneath the steering shaft. The fuel line must be of the necessary length to connect to the carburetor; excessive length is not allowed. The pulse line shall not be of excessive length. The fuel line must be secured to the top of the frame rails away from the ground or other devices that may damage it. Tanks must be made of a puncture-resistant material and have a leakproof fill closure. Fuel and vent lines must be positively retained at all connection points (zip ties or safety clips). Vent lines should be routed out below the seat. No pressurization of the fuel system is allowed.

## Throttle Linkage

- ✓ The throttle return spring must be mounted and active.
- ✓ The carburetor must have a return spring in place, in addition to the pedal return spring.
- ✓ Spring must be stiff enough to overcome any friction in the system.
- ✓ The throttle action must be smooth, and the pedal must snap back when released quickly.
- ✓ The cable must be free of frays and clear of all interference.

## Seat

- ✓ The driver and seat must be a tight fit. Large adult seats will not be allowed for children.
- ✓ The seat must be securely mounted to the frame in at least four places.
- ✓ The seat bottom can be no lower than 3/16" (maximum) below the kart's frame.
- ✓ The seat back should not be beyond the rear axle.
- ✓ Seat design must prevent any part of the driver's body from passing through it and contacting the track.
- ✓ Minimum seat height: 8-11-year-old 10", 12-15-year-old 12", all others 14". Measurement is from the ground to the center/highest point of the seat back. NO seat additions to bypass this rule.
- ✓ No loose cushions or pads are allowed. If padding is added to the seat, it must be securely retained.

## Steering Shaft and Linkage

- ✓ Steering linkage must be free of play.
- ✓ All steering fasteners must be at least grade 5.
- ✓ All steering hardware must be drilled and safety wired or cotter pinned. This includes all mounting hardware used right down to the frame of the kart.
- ✓ Rod end-style linkages are required at tie-rod pivot points. They must be tight and in good working condition.
- ✓ The steering shaft must be one-piece .625" solid or .700" tubing no welding of sections or the steering wheel is allowed.
- ✓ The steering wheel must be 10" diameter minimum 3 spoke design or butterfly type with 10" width and 5" grip area with 4 spokes.

## Frame and Bodywork

- ✓ Frame must be in good condition with no visible bends, heavy rust affecting structural rigidity, cracks, or crash damage. It must be of a proven safe design constructed of nominally round tubing.
- ✓ The floor pan shall be of a design that will prevent any portion of a driver's body from passing between the framework and contacting the track surface.
- ✓ Bodywork must be in good repair, and mounting methods must be secure and of good workmanship. Loose panels must be removed or tightened/repared to prevent them from falling off during the event.
- ✓ No sharp panel edges or added metal material for body mounting or rigidity. Typical mounting straps are allowed. NO additional bumper material and or plates may be added to the nose cone area.

## Nerf Bars and Bumpers

- ✓ Must be installed and securely mounted to the kart. See the NFKC Rulebook for tube dimensions and diameter requirements
- ✓ Front and Rear Bumpers must be present and solidly attached to the frame with through bolts or welds.

## Attached Weight

- ✓ All Weight Mounting Bolts must be 5/16" minimum, Double-Nutted, or Nut w/ Safety Wire;
- ✓ Weight Painted or Coated White
- ✓ Each weight piece must have a kart number and last name marked on it.
- ✓ Large weight pieces of lead, 7.5 lbs. or more, must utilize 2 mount bolts
- ✓ Weight must be located within the main frame rails. No mounting of lead on the Nerf bars or the rear bumper.

## Wheels, Tires, and Axles

- ✓ Tires must be pneumatic and designed for racing applications.
- ✓ Tires must be properly inflated and no cord showing. Rain tires must have a visible tread with no cord showing.
- ✓ Rear wheel hubs/axle must have the safety to prevent the hub from coming off. Clips or snap rings are ok.
- ✓ Wheels must be in good working condition with no bends or visible damage.
- ✓ Wheel bearings must be tight and of a ground ball bearing construction. Split race bearings are not acceptable.
- ✓ Wheel hubs must be metallic.
- ✓ The rear axle may be a solid or tubular one-piece design with a minimum diameter of 25mm. Both driving wheels must be locked to the rear axle.

## Drive Line Components

- ✓ Clutches are mandatory. Outboard-mounted clutches must be guarded against crankshaft breakage. The clutch mounted between the engine seat shall have driver protection, to prevent driver contact and in the event the chain breaks
- ✓ All karts must have chain/gear guards in place to retain a broken chain, drive gear, or clutch from striking the driver.
- ✓ Exposed gears without chains on them must be covered by guarding or have chains wrapped around them.

## Miscellaneous Components

- ✓ The catch can be properly mounted, and the valve cover vent is properly routed and attached.
- ✓ Kart numbers are visible on the nose and both side panels.
- ✓ Kart's rear number panel is visible.
- ✓ Seat Heights from ground to top of the seat back highest point. No material may be added to increase the manufactured seat back height.
  - Senior 14'
  - Junior 12"
  - Sportsman 10"