

# VKA Event Guidelines REV. (Effective January 1, 2018)

Revised 1/19/18

With Appendix A



**The Vintage Karting Association**

A Nevada Corporation

*These Vintage Karting Association (VKA) Guidelines are for vintage karts manufactured in the years 1956 through 1988. The VKA promotes vintage kart exhibitions in two ways; Static Display for judging with emphasis on originality and workmanship with period correct details, and Active Demonstrations where the karts operate on a track in a safety minded manner. These VKA Guidelines are written for the participant, sponsor, and promoter so events can be organized in a similar manner across the country with safety as the priority issue. Although these Guidelines are intended to promote safety and consistency between events across the country, implementation is the sole responsibility of the promoter and the track owner. VKA is not liable for implementation of these Guidelines.*

## **A. Safety**

Safety is the most important aspect of any motor sport and is paramount in the exhibition/demonstration of vintage karts. Safety is addressed in the relevant portions of this document. Safety should be highlighted at each event.

- The track owner/promoter should have a signed liability waiver by the participant for each event.
- Safety issues must be discussed at the drivers' meeting.
- All participants are required to attend the drivers' meeting.
- The owner/promotor may refuse to allow a driver to participate based on the driver's past kart driving record, the driver's physical condition or advice from track medical personnel or from a hospital or other medical facility.
- An ambulance with trained medical personnel should be present at all VKA demonstration events including all practice sessions or trained medical personnel should be readily available.
- Effective 2017, only 2010 and later Snell approved helmets should be used for VKA karting events. Helmets should be presented at pre-tech for inspection.

## **B. Planning and Preparation**

For each VKA event, a VKA representative should be recognized as the focal point for coordination and promotion. The responsibilities of that person include:

- Publishes information for the event.
- Acts as liaison between the event and VKA.
- Supports the establishment of a panel for judging and/or collects voting information for kart show awards.
- Promotes the need for a person to report on the event for publication in the VKA Newsletter and Website.

2018 Changes are highlighted in yellow.

## C. Demonstrations Events

The organization and rules of the event and grouping of VKA classes are the prerogative of the track owner/operator. The VKA encourages the adoption of these *Guidelines* for safety and uniformity to all vintage karting events across the country. The VKA seeks to recreate the look and feel of actual karting events of the 50's, 60's, 70's & 80's and perform for the enjoyment of spectators and participants. Actual operation of vintage karts on the track provides the greatest spectator appeal and photographic opportunities needed to promote vintage karting. Providing a fun and exciting opportunity to drive these machines. The demonstrations in two different levels will encourage more people to join the sport. Tier I demonstrations will be "flagged" demonstrations, with scoring and awards (see Paragraph 11). Tier II demonstrations will be "non-flagged" demonstrations with no scoring and no awards (see Paragraph 12, below). Maintaining operational karts will allow "karting veterans" to once again use their special driving and mechanical talents and to pass them on to those new to vintage era karts.

### 1. Drivers

- a. All drivers must attend the drivers' meeting to be eligible to participate in the event.
- b. Juniors: 10 years minimum and under age 15 should run in the Junior Class with a single engine. Additional safety briefing and compliance is recommended for this class.
- c. Drivers 15 years of age or older are permitted to operate any type of single engine vintage kart. There is no maximum age.
- d. Drivers of dual engine karts should be 18-years minimum age.
- e. All first-time drivers, novice and juniors in a VKA event should demonstrate their driving ability to the satisfaction of the track owner/operator at the event in order to participate. They should also start all Heats in rear of the grid. This should apply to the first three events that the driver competes in. They should display an "X" on the back of their helmet.
- f. No alcohol, illegal drugs, or legal drugs that would impair driving ability should be allowed.
- g. All drivers must demonstrate proficiency and control of a kart on the track.
- h. Drivers who weigh 190 pounds or more at Registration, may be place in a "vintage weight" class as a Promoter's Option.

### 2. Driving Rules

The Host Track should explain the driving rules at their track during the Drivers' Meeting. It is the right and responsibility of the Host Track to determine the rules and procedures of the vintage karting event to ensure a safe event. Additionally, VKA encourages them to adopt this entire package of guidelines to provide uniformity to all vintage karting events across the country.

- a. Contact between karts and overly aggressive or reckless driving will not be tolerated. Rules and acceptable conduct on the track and in the pits should be conveyed at the drivers' meeting prior to group participation. Safety is paramount. Clean passes, no contact, no strafing, no cutting off and no "Texas starts" before the green flag.
- b. Drivers must attend drivers' meeting with special emphasis on safety. They should be briefed and the Starter/Flagmen should advise them regarding pace lap speeds and techniques. Discuss direct drive starting procedures and the presence of a driver when starting the engine.

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- c. These words, or something that conveys the expectations of the track owner/operator and the promoter regarding drivers' responsibilities, should be read at the Drivers' Meeting: *"When two karts are entering a turn together the kart that is behind, whether it be an inch or several feet, is required to negotiate the turn without endangering or impairing the progress of the kart in front. Conversely, the kart in front should not take a deliberate line of the course for the reasons of crowding a following competitor off the course."*<sup>1</sup>
- d. Drivers who make contact with another karter at anytime during the practice or demonstration Heats should determine if their kart is safe to continue. If not, they should stop or return to the pits immediately, depending on the extent of the damage. After returning to the pits, both drivers should seek each other out and discuss the bumping incident and try to resolve and correct why incident happened.
- e. Drivers with questionable kart driving record may be denied registration by the track owner/operator or promoter.

### 3. Official Entrant/Entry

The driver is the official entrant for an event when properly documented by the track owner/operator and having participated in the drivers' meeting. The driver (entrant) may enter more than one kart (entry) at an event. Entered karts should be classified according to Vintage Class Structure (see para. 6).

### 4. Personal Protective Equipment Promoters Will Require:

- a. Snell approved full-face helmet with face shield. In 2017, only 2010 and later Snell approved helmets should be used for VKA karting events. Helmets should be presented at registration for the event for inspection Vintage Helmets are not allowed.
- b. Helmet support (Neck Collar) – Preferably the new Leatt<sup>®</sup>-Type.
- c. Leather, Vinyl, Cordura<sup>®</sup>, or abrasion resistant nylon jacket. Driving suits, Nomex<sup>®</sup> undergarments and earplugs are permitted and are strongly recommended due to possible damage to hearing.
- d. Full-finger protection gloves, leather or nylon.
- e. Long pants of a durable material.
- f. Shoes or boots.
- g. Hair protruding more than 4" from the helmet must be secured under the helmet.
- h. Juniors must wear approved rib protectors.

### 5. Kart Equipment

No official tech teardown inspection should occur at VKA events. "Self-Policing" may occur among class entrants. Violating the equipment guidelines for the purpose of performance gain is inappropriate behavior. Those engaging in such behavior are not welcome at VKA events.

- a. All karts (except reproductions) should be initially available during the class era.
- b. Karts can be an original production kart from the Historic Era (1964 and before), a continuation kart (identical to the original model, but produced after the Historic Era), a

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<sup>1</sup> 1968 IKF Rule Book; Race Rule #19

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reproduction of a Historic Era production kart, or a homebuilt design actually produced during the vintage era.

- c. Every effort should be made to use appropriate equipment from the kart's proper era. Documentation of questionable items is encouraged. If a similar part or accessory did not exist during the Vintage Kart Era, then it doesn't belong on the kart now (approved safety issues being the exception).
- d. Authentic variations may be authorized at the race official's discretion.
- e. Seat belts should not be allowed in any open frame karts, but are required in FKE types.
- f. Modifications that increase performance or handling that change characteristics of era designed karts should not be permitted.
- g. No bodywork should be permitted except number panels (not applicable to FKE karts).
- h. **Tires:**
  - Rear Engine Karts – See Tire Schedule (Para. 6b, below)
  - Sidewinders – See Tire Schedule (Para. 6b, below)
- i. **Engines:**
  - Should have been initially produced in the class era.
  - Engines can be stock or modified. Period correct modifications are permitted. (See **Sec. 6.c.v. for Over-bore Guidelines.**) Original stroke should be maintained with exception of engines in the historical era (1956-1961).
  - If the engine or accessory was used in the era of the kart, then it can be used at a VKA event.
  - See detail of approved engines. (Para. 6c, below)
- j. **Exhaust:**
  - Box-type mufflers or tuned expansion chambers (no slipper types).
  - Some events may require a form of muffler to participate due to local noise restrictions.
  - Open headers permitted at the discretion of the Promoter. There will be situations in the Historic class that require the use of open headers.
- k. **Clutch and Chain:**
  - All karts participating in VKA demonstration events should use #35, #40 or #219 chain as designated by the **Class Guideline, Sec. 6.**
  - Clutches are not required.
  - If clutches are used, they should be of the type used prior to 1987, except:
    1. Wet clutch used prior to 1985 are permitted on any kart except Sportsman, Historic Class, Mac49/Saw, Junior/Women and Sportsman S/W Stock Appearing.
    2. No DXL or disc type clutches permitted on Rear Engine Karts.
    3. No Axle Clutches permitted.

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4. Common clutches allowed at VKA events are Max Torque, Rev Grip, Comet, L & T wet disc, Horstman DXL, Burco, Hartman, Noram and other vintage style clutches. No modern style clutches allowed.

- A third bearing support or guard to contain the clutch in the event of crankshaft breakage should be on all Rear and Sidewinder karts using an oil bath outboard mounted clutch (toward the outside of the chassis). Construction of clutch guards must be of a material equal to or greater in strength than .090" aluminum.

**l. Weight**

- There are no minimum or maximum weight limits although drivers who weigh 190 pounds or more at Registration, may be place in a "vintage weight" class as a Promoter's Option.
- Any weights or ballast must be securely fastened.

**m. Fuel:** Gasoline/oil or Methanol/oil. No power inducing additives such as oxygenated fuels, hydrazine, nitro, nitrous oxide, or propylene oxide, *etc.* should be used.

**n. Brakes:** Modern brake upgrades are permitted and recommended. When using a modern caliper, it is recommended that a modern-type disc is used for compatibility. Scrub brakes should not be used in racing events, except on Historic Class machines if they were original equipment. The use of modern European Braking systems is not in the spirit of Vintage Karting; MCP, Ripley and Airheart Brakes are consistent with historical preservation and are readily available.

**o. Axles:** When using modern type axles which require wheel hubs, it is recommended that rear axles have a locking collar next to the wheel hub and two collars on the dual karts. It is imperative to keep the rear wheel hubs from moving inwards.

**p. Original wheels** are recommended, otherwise any two-part or modern single-piece wheel is acceptable. Wheel and tire width should be consistent with original equipment. Example: Rear engine dual karts had a maximum tire width of 6 inches.

**q. Seats:** Must be maintained in their original design. Creating additional side panels to hold the driver in a rear engine kart is not acceptable. Sidewinders may use equivalent modern seats.





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## 6. VKA Event Class Guidelines - VINTAGE CLASS STRUCTURE<sup>2</sup>

(The **Junior/Women Class** was created for the benefit of novice drivers to come into Vintage Karting at a lower budget level, and to use this class to improve their skills in order to progress to other desired classes. Women of any age over **10** may run in this class.)

<b>1. HISTORIC</b>	1956 to 1964 rear engine karts and engines; single, dual, or triple engines, 16.5 c.i. (270cc) max displacement; <b>Must have vintage-style dry clutches or direct drive</b> ; box muffler; vintage tire required; Promoter may split class as per VKA Guidelines (Para. 6a, below); duals/triples in front. This is a non-points, Tier II demo class.
<b>2. JUNIOR/WOMEN REAR OR SIDEWINDER</b>	<b>Junior (Boys/Girls ages 10-14)</b> - Single 100cc (6.1 c.u. in.) max. American Fan Cooled Engine ( <i>i.e.</i> West Bend, McCulloch, Power Products, Homelite) or West Bend 820. All engines will run single HL 1” or smaller carb throttle bore. Any intake allowed, but West Bend must use V-Reed or Go Power, 4 or 6 petal cage, Vintage-style dry clutch, box muffler and vintage tires required. Yamaha KT100 engine may be used with WA55 Walbro carb, dry clutch, “limited” exhaust system and vintage tires. (See Yamaha Limited Class for pipe requirements.) (Junior and Women class can run rear or sidwinder kart.)
<b>3. SPORTSMAN REAR</b>	Rear American engines; 8.2 c.i. (135cc) max displacement WB-820 with 8.2 c.i. (135cc) max displacement must be industrial-type; McCullochs must be 6.1 c.i. (100cc) <b>max displacement or saw blocks over 80cc. Small single intake manifold allowed (WB V-reed, Homelite reed, Go Power reed, etc.). Manifold to have an HL bolt pattern, single reed cage manifold only. Single HL 1-inch maximum throttle bore carburetor.</b> Small Mac flat-back carb OK. Must have <b>vintage-style dry clutch, box muffler and vintage tires. MC-91, 92 and 93 engines are allowed. Single Carb manifolds only, No V-4, V-6 or V-12 manifolds. No 91-93 Mac Carbs; No 91-93 Mac Manifolds.</b>
<b>4. MAC 49/SAW</b>	Rear engine karts; Mc49 or 80cc saw block engines. 1.375 maximum stroke; Aftermarket small single intake manifolds <b>allowed (WB V-reed, Homelite reed, Go Power reed, etc.) or factory Mc 49 intake. Manifold to have an HL bolt pattern. Single HL 1-inch maximum throttle bore carburetor</b> or small Mac flat-back carburetor; Vintage style dry clutch; Box muffler; Vintage tires.
<b>5. SINGLE REAR 6.1</b>	Rear engine karts; American <b>engines only</b> , 6.1 c.i. (100cc) max displacement; pipes and oil clutches allowed; no disc clutches; any carburetor combinations, vintage tires.
<b>6. SINGLE REAR 8.2</b>	Rear engine karts; American <b>engines only</b> , 8.2 c.i. (135cc) max displacement; pipes and oil clutches allowed; no disc clutches; any carburetor combinations, vintage tires.
<b>7. DUAL REAR, B- &amp; C-OPEN</b>	<b>C-Open:</b> American <b>engines only</b> , 16.5 c.i. (270cc) max displacement; pipes and oil clutches (no disc clutches); vintage tires. Any Historic B or C Class dual engine rear karts may run this class. <b>B-Open:</b> American <b>engines only</b> , 12.2 c.i. (200 cc) max, dry clutch, box mufflers, #35 chain, and vintage tires. (B-Open to be run in concert with C-Open and scored separately.)
<b>8. SINGLE 6.1 S/W AMER.</b>	Pre-1980 sidwinder with American fan cooled engines, 6.1 c.i. (100cc) max displacement; engine clutches only; pipes allowed; modern tires allowed; one-inch axle. Max kart width of 48 inches.
<b>9./10. SINGLE 6.1 FOREIGN 8.2 AMERICAN SW</b>	<b>Pre-1980 sidwinder with American fan cooled engines, 8.2 c.i. (135cc) max displacement or Foreign or American engines, 6.1 c.i. (100cc) max displacement produced before 1980;; engine clutches only; pipes allowed; modern tires allowed; one-inch axle. Max kart width of 48 inches.</b>
<b>11. SINGLE 8.2 S/W FOREIGN</b>	Pre-1980 sidwinder with Foreign or American engines, 8.2 c.i. (135cc) max displacement produced before 1980; engine clutches only; pipes allowed; modern tires allowed; one-inch axle. Max kart width of 48 inches.
<b>12. OVER-60</b>	Drivers 60yrs +; Rear or pre-1980 sidwinder karts; American, fan-cooled, 6.1 c.i. (100cc) max displacement engines; pipes allowed; oil clutches allowed; no disc clutches; vintage tires; any carburetor combinations. Promoters should consider separating the sidwinder and rear engine karts for scoring purposes when participation is sufficient to do so. Allow sidewinders to start in the front. Max kart width of 48 inches.
<b>13. DUAL SIDEWINDER</b>	Sidwinder with Foreign or American engines, 16.5 c.i. (270cc) max displacement; engine clutches only; pipes allowed; modern tires allowed. <b>Tire compound durometer minimum of 48. Bridgestone YLC and MG tires allowed. May use any approved single sidwinder tire (see par. 6b, below); 1¼” axle allowed if original; karts and engines must be manufactured prior to ‘83.</b>

<sup>2</sup> Drivers who weigh 190 pounds or more at Registration, may be place in a “vintage weight” sub-class as a Promoter’s Option.

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<b>14. 80-87 SIDEWINDER</b>	1980 – 1987 sidewinder with Foreign or American engines, 6.1 c.i. (100cc) max displacement; pipes allowed; engine clutches only; modern tires allowed; 1¼” axle allowed; kart and engine must be manufactured prior to 1988 – see Engine Schedule. (Para. 6c, below) Max kart width of 50 inches.
<b>15. SPORTSMAN S/W (STOCK APPEARING)</b>	Sidewinder (pre-1980) with 6.1 c.i. (100cc) max displacement, American fan cooled engine; single carburetor (Mikuni, Tillotson, or McCulloch), any size throttle bore; Factory V4 intake; modern tires allowed until 12/31/2018; box muffler; <b>vintage-style</b> dry clutch (Horstman Rev Grip or Max-Torque). <b>Effective 2019: Vintage tires only.</b> <b>West Bend-Only Class-</b> Stock appearing West Bend 820 with stock bore and stroke (fan cooled), box muffler, small, single West Bend factory manifold and V4 reed cage with a 1” max throttle bore, HL carb, modern style tires, pre-1980 sidewinder with 1” axle, OEM Max-Torque dry clutch with no add-ons. To be run in concert with Sportsman S/W, but scored separately. For drivers 15 years or older. Max kart width of 48 inches.
<b>16. YAMAHA PISTON PORT</b>	Sidewinder karts (thru 1987) with single 100cc (KT100S), 1975 to present; piston port only; max. bore - 2.090”; max. stroke - 1.816” ; "stock appearing" - internal modifications allowed; factory ignition system only (exception- “RVL” TCI replacement module OK); Walbro WB3A carburetor only; pipe allowed; Horstman DXL wet disc, Hartman, L & T wet disc, Burco, Max Torque clutches only (no modern clutches); Third bearing support required; 1” or 1¼” axle; modern tires; gasoline only. Max kart width of 50 inches. <b>219-chain allowed.</b>
<b>17. YAMAHA LIMITED</b>	Sidewinder karts (thru 1987) with single KT100s, piston-port engine, max bore – 2.090” – max stroke = 1.816” – WKA stock specification guidelines to apply; factory ignition systems only (exception- RLV TCI replacement module allowed); Walbro WB3A carb with max 0.950” venture; “limited” pipe (FY-Sr/K1/K2) at 12” minimum length (piston to start of first cone) <b>no tapered headers</b> ; Horstman DXL, Hartman, L+T, Burco, Max-Torque clutches only; no modern clutches; no direct drive or Tomar clutches; 3 <sup>rd</sup> bearing support required; Max kart width of 50 inches. <b>219-chain allowed.</b>

**The following are PROMOTER OPTION Classes ONLY**

<b>OPTIONAL CLASS      Straight Axle Sidewinder</b>	
<b>ENGINES</b>	Period Correct 100cc max; Foreign motors to have single carburetor as manufactured, and must be produced prior to 1975. (See paragraph 6c.iv for allowable foreign engines.).
<b>TIRES</b>	Vintage-style tires (square corners); 6” Max width per durometer guidelines
<b>CLUTCHES</b>	Period correct clutches (e.g., Rev Grip, Horstman, Burco, Hartman, Max-Torque. <b>NO DISC CLUTCHES</b>
<b>EXHAUST</b>	Any can, period correct pipe, or box muffler
<b>REAR AXLE</b>	1” only, unless manufactured with 1¼” from the factory
<b>FUEL</b>	Gas or alcohol
<b>WEIGHT</b>	No weight restrictions
<b>TECH</b>	No tech
<b>CHAIN</b>	<b>#35</b>

<b>OPTIONAL CLASS      CLASSIC DIVISION FOR KARTS 30 YEARS OLD OR OLDER (ALLOWABLE YEAR WILL CHANGE ANNUALLY)</b>	
<b>ENGINES</b>	Period Correct 100cc max.
<b>TIRES</b>	Modern tires OK
<b>CLUTCHES</b>	
<b>EXHAUST</b>	Period Correct
<b>REAR AXLE</b>	
<b>FUEL</b>	Gas or alky OK; no performance enhancing additive (e.g. nitro)
<b>WEIGHT</b>	No weight restrictions
<b>TECH</b>	No
<b>CHAIN</b>	#35, 219, or other period correct chain

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<b>OPTIONAL 4-CYCLE STOCK DIVISION; 1987 or older; 16 or older; catch tank required; chain guard.</b>	
<b>ENGINES</b>	Briggs & Stratton; 5hp; Raptor-style Flathead; stock carb & gas tank; Carb max dia. 0.695" no-go" measured from engine side; bore 2.625" "no-go"; stroke 2.440 "no-go"; intake valve 1.125" (plus or minus 0.010)" "no-go"; exhaust 1.00" (plus or minus 0.010)" "no-go"; no titanium valves; max cam lift 0.234" (check as run); flywheel stock B&S (#555667) no modifications (min. wt. 6#-4oz.)
<b>TIRES</b>	Modern tires OK
<b>CLUTCHES</b>	Period Correct dry clutch
<b>EXHAUST</b>	RLV B91
<b>REAR AXLE</b>	1" or 1 ¼" OK
<b>FUEL</b>	Gas or alky OK; no performance enhancing additive (e.g. nitro)
<b>WEIGHT</b>	No weight restrictions
<b>TECH</b>	Yes
<b>CHAIN</b>	#35

<b>OPTIONAL 4-CYCLE MODIFIED DIVISION; 1987 or older; 16 or older; catch tank required; chain guard.</b>	
<b>ENGINES</b>	Briggs & Stratton; 5hp; Raptor-style Flathead; Tillotson carb allowed; 0.900" "no-go" venturi max; any manifold; external fuel pump allowed (must be pulsed from manifold; bore 2.645" "no-go"; stroke 2.440 "no-go"; intake valve 1.125" (plus or minus 0.010)" "no-go"; exhaust 1.00" (plus or minus 0.010)" "no-go"; no titanium valves; no cam check; no stock flywheels; billet flywheel mandatory (min. wt. 4.05#-)
<b>TIRES</b>	Modern tires OK
<b>CLUTCHES</b>	Period Correct dry clutch
<b>EXHAUST</b>	RLV B91 (outlet holes 0.1285" "no-go")
<b>REAR AXLE</b>	1" or 1 ¼" OK
<b>FUEL</b>	Gas or alky OK; no performance enhancing additive (e.g. nitro)
<b>WEIGHT</b>	No weight restrictions
<b>TECH</b>	Yes
<b>CHAIN</b>	#35

## 6a. VKA class guidelines

Kart Manufactured between 1956 and 1987 are eligible for participation.

Open Headers and Silencers- At the discretion of the Promoter.

Classes 1-12 Require a 1-inch axle. Karts and Engines must be from 1956 to 1979 era.

Vintage tires - 65 durometer min refer to VKA Acceptable Vintage Tire schedule.

Modern tires - Dual S/W – 48 durometer minimum; Single S/W – 56 durometer minimum. Refer to VKA Acceptable Modern Tire Schedule (Para. 6b.)

Modifications- Allowed with vintage period type components.

Direct Drive- Allowed in all classes.

Kart Chassis- To remain in their original design from their model year. Brake upgrades allowed. Reproduction and Specials allowed, but should be vintage-type.

Dual S/W- 48 durometer minimum: Single S/W- 56 durometer minimum. Refer to acceptable modern tire schedule.

**Historic Classes:** The Promoter at his discretion, depending on turn out at the event may separate the historic classes into two groups:

### 1956-1961 Era

- MC-1, MC-5, MC-6, MC-10, MC-20, West Bend 510, 580, 700
- Power Products AH58, super AH58

- Homelite K-82 to K-100
- Clinton A400, A490, A500, E-65





2018 Changes are highlighted in yellow.

These current production tires should have a minimum tire durometer of 65 @ 70 deg. temperature. The committee may add or delete from the above list as needed for the continued enjoyment and stability of vintage karting.

The following Vintage tires are also acceptable but are no longer being manufactured:

Tex Con Tires	General Tires	Firestone Tires	Continental Tires
Eliminator Tires	Good year Tires	Major Tires	A-1 tires

The VKA does not recommend the use of the above vintage tires for racing events, as many of them may be over 30 years of age. These tires are mostly used for show karts.

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## **Acceptable Tires for Sidewinder Karts at VKA Events**

Due to the limited availability of original construction tires, use of modern kart tires of 56 durometer and greater are acceptable. Bridgestone, YHC, YKC, Dunlop SL1, SL-3 & SL-4 and Burris MG-HZ Red; Hoosier R-60A, MoJo D1, Dunlop DDM and **DEM (58 durometer)**, **Dunlop R6 (56 durometer)** and Evinco Blue are acceptable.

**Exception:** Where sidewinders are combined with rear engine karts in classes 2 and 12 – those classes require the use of Vintage style tires.

## **6c. Engine Guidelines**

### **i. Engine Guidelines for kart classes from 1956 through 1979:**

*All Clinton	*All West Bend/Chrysler
*All McCulloch Yamaha KT-100A and KT100	*All Homelite Standun
*All Power Products Maico	Saetta
*Poulan S-200	*Partner R-10
Villiers Pre 1962	Excelsior Pre 1962
Zundapp Pre 1962	Komet K-88, K-78
Komet K-55GHR	Komet K-77
Koenig	KT100S
Komet K-88TT	LMR 100
Parilla SS-21	Parilla TT-22, 23
BM-SS96	BM-SS100
BM-104	BM-130
Komet K-99, K299	Dap 100cc
Atlas II	Hewland Arrow
Manx 100S	Corsair T-80&T-81

(Any other engines used during the time-period may also be used.)

\*American fan-cooled engines

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**ii. Engine guidelines for 1980-1987 Class: 6.1 cubic inch (100cc)**

Any of the Pre-1980 Motors:

Atlas II	Komet K11	Parilla SS22
Corsair T72	Sirio 45	Parilla TT25
Corsair T80	TKM BT82	Parilla TT27
Corsair T80RV/81	TKM RL66	PCR 50/50
Corsair T91	TKM RS98	PCR 100cc PP
Hewland Arrow	TKM S-89	Rotax 100
Komet K-80TT	Parilla SS20	

Any other engines approved by IKF or WKA from 1980-1985

**iii. Promoter’s option class for 1980-87 Class for 8.2 cubic inch engines**

All the above to include the following:

- Komet K-30
- Komet K-35
- DAP Corsair T-60
- DAP Corsair T-62
- TKM-135

**iv. Allowable foreign engines for Straight Axle Sidewinder Class**

<b>KOMET</b> 77      88      88tt 78      78tt	<b>BM</b> 100      104 96 (ss)      96/3 tt	<b>DAP</b> T70      T71 T80      T81
<b>PARILLA</b> BA13      TG14 GP15      SS20 TT22	<b>SAETTA</b> V18	

**v. Engine Over-bore Guidelines**

**Maximum over-bore for 80cc and 100 cc engines is 5cc.**

- 4.9 cubic inch (c.i.) (80cc) engines may be over-bored to a maximum displacement of 5.18 c.i. (85cc).
- 6.1 c.i. (100cc) engines may be over-bored to a maximum displacement of 6.4 c.i. (105cc).
- **MC-49** with stock stroke of 1.375”, can have a max. bore of 2.190” (using a +.024” MC-91-style piston)
- **McCulloch 6.1 c.i. engines** with stock stroke of 1.635” to 1.645”, the max bore is 2.230” (using a +.065” MC-91-style piston)
- **Yamaha KT100**, piston-port with stock stroke of 1.816”, the max bore is 2.090”
- **Other 6.1 c.i. engines (foreign, West Bend 610, etc.):** Calculate the displacement using the following formula where V= volume or displacement; r = radius or ½ bore; and S = stroke:

$$V = 3.1416 \times r^2 \times S.$$

[To convert c.i. to cc, multiply the c.i. by 16.387.]

## 7. Exhibition Grouping

In an effort to make demonstrations as realistic as possible while providing the greater safety of similar performance, karts should be grouped as best as practicable. Considerable attention should be given to the different handling capabilities of the various classes especially sidewinder vs. hard tire rear engine karts. Grouping of classes should be at the discretion of the track owner/operator.

## 8. Pre-Tech Preparation

All drivers and participants should check to ensure they have the proper safety equipment needed for the event. The equipment must be sufficient for the level of participation which includes pit crew duties.

- Gloves
- Helmet – must conform to Current Snell Standards
- Helmet collar
- Pants
- Gloves
- Eye protection
- Readily accessible fire extinguisher

## 9. Safety Technical Inspection

All karts must pass a safety tech inspection before being permitted onto the track. The determination of the inspector on questionable items will be final. The following are items for compliance to participate in demonstration events:

- a. **Suitability for competition:** The basic design of the kart should be suitable for the level of performance in its class while providing the level of safety that was available during its appropriate era. A kart should be considered legal if it remains as it was manufactured.
- b. **Appearance:** The kart should be neat, clean and provide a professional appearance.
- c. **Kart Number:** Karts should be prominently display a 3” (minimum) number on a panel, driver, or helmet for track official or spectator reference.
- d. **Tires:** In good condition and appropriate for the era of the kart.
- e. **Wheels:** Void of defects that would affect safe operation. Wheel bearings should be properly adjusted ball or roller type. (no split race bearings). Wheel balancing weights shall be securely fastened.
- f. **Axle Nuts:** Cotter-pinned or safety wired both front and rear.
- g. **Brakes:** Should be foot operated with proper operation and stopping capability suitable for the anticipated performance of the class. Scrubber brakes will be allowed only on Historic Class machines if they were original equipment. Single rear wheel brake should be allowed on Historic machines that were so equipped. Brake linkage must be cotter pinned or safety wired. Any locking type nuts on the brake mechanism which are subject to heat should not be of the plastic insert type. All hydraulic connections must be tight and free of leaks. Vintage Karts using brake calipers of modern design should have a modern design brake disc.
- h. **Throttle:** Karts should be equipped with a foot operated throttle with a spring of suitable strength to return the pedal. The carburetor should have its own return spring that will close the throttle in the event the throttle linkage becomes disconnected.

2018 Changes are highlighted in yellow.

- i. **Fuel Tanks:** Securely fastened and may be front or rear mounted. Historic class karts may have engine mounted tanks. No pressurized tanks are permitted. No portion of the fuel tank should protrude above the frame causing it to be unprotected in the event of a rollover.
- j. **Chain oilers:** Should not be allowed except for enduros.
- k. **Clutches:** Should not be required. Wet clutches should be permitted only if they do not leak.
- l. **Guards:** All chain, belt or gear drives should have a suitable guard to prevent injury in the event of a chain or drive belt failure. It should not be required that the entire drive be enclosed. Any axle mounted sprockets that are not in use must be removed or enclosed.
- m. **Front Suspension and Steering:** Steering shaft should be a minimum of 5/8" cold rolled steel. Steering wheel should be attached by spline or tapered and keyed hub. The hub should not be welded to the steering shaft or secured by a bolt (in shear) passing through the shaft. (Variations and early original equipment permitted). Steering rod ends must be of universal swivel type joints with jam nuts. Linkage bolts must be a minimum of 1/4" grade 5. (Some very early karts had 3/16" rod end bolts: They should be replaced with Grade 8 and inspected often for signs of failure.) All steering assembly bolts, including tie rod ends, spindles and linkage, must be cotter pinned or safety wired. Steering wheels must be cotter pinned or safety wired/lock nutted. Steering must not pass over center, even when reasonable force is exerted. (Karts that do not meet these guidelines should be allowed in static displays only.)
- n. **Frame:** Structurally sound with no defective welds. Minimum wheel tread 28 inches. Seat back and floor pan shall have no voids large enough to allow any part of the driver's body to pass through. Front and/or rear bumpers are not required, but if installed, they shall be solidly attached. All parts and structures of the kart must be suitably attached so as to prevent them from leaving the kart during operation, thereby constituting a hazard.
- o. **Driver's Compartment:** All parts of the driver should be limited to the confines of the width and length of the kart. The feet should not extend beyond the bumper when the pedals are fully depressed. The seating must provide lateral support of the driver. (Some early vintage karts did not have side support, use single engine only). Seat belts are not permitted (required for FKE). (Karts that do not meet these guidelines should be allowed in static displays only.)

## 10. Event Shows

See the VKA Kart Show Guide for all event show criteria.

## 11. Demonstration (Tier I)

Tier I Events are flagged and scored.

### CIK, Motocross, or compatible Scoring Guideline

The event should consist of three Heats of equal value. Starting positions for Heat One may be determined by one of the following methods: Order of Registration, Pea-Pick, or Qualifying, but

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regardless of the starting position for Heat One, the grid for Heat Two will be completely inverted from Heat One and Heat Three will be based on the combined score from Heats One and Two.

All novice and rookie drivers should have an 'X' on the back of the helmet and start at the back of the grid.

**In order of Registration-** Starting position will be assigned at registration – Earliest entry will start with the pole position.

**Pea-Pick System-** Karts will be grid in descending pea-pick number.

**Qualifying System-** Karts will grid with fastest time to the front.

### CIK SCORING

Position	Points	DNS Points = Number of gridded karts PLUS 4.
1 <sup>st</sup>	0	DNF Points based on drop-out position PLUS 2. (e.g., for a grid of 5 karts, the first to drop out receives 7 points; the second to drop-out receives 6 points, and so on.)
2 <sup>nd</sup>	2	
3 <sup>rd</sup>	3	
4 <sup>th</sup>	4	
5 <sup>th</sup>	5	
... and so on		

**Sec. 11. SCORING GUIDELINES ARE NOT FINAL. THEY ARE STILL UNDER CONSIDERATION BY VKA BOARD.**

### MOTOCROSS SCORING

Position	Points	Position	Points	Position	Points	DNS Points = 0
1 <sup>st</sup>	400	6 <sup>th</sup>	95	11 <sup>th</sup>	22	DNF Points based on drop-out position (e.g., for a grid of 5 karts, the first to drop-out receives 5 <sup>th</sup> Place points; the second to drop-out receives 4 <sup>th</sup> Place points, and so on.)
2 <sup>nd</sup>	300	7 <sup>th</sup>	71	12 <sup>th</sup>	17	
3 <sup>rd</sup>	225	8 <sup>th</sup>	53	13 <sup>th</sup>	13	
4 <sup>th</sup>	169	9 <sup>th</sup>	40	14 <sup>th</sup>	9	
5 <sup>th</sup>	127	10 <sup>th</sup>	30	15 <sup>th</sup> -20 <sup>th</sup>	1	

In the event of a tie, the winner should be determined by the fastest time, if times are not available, then the winner of the third Heat shall prevail.

In the event of a tie with less than three Heats, the winner should be determined by the fastest time, if times are not available, then the winner of the last Heat shall prevail.

All DNF will start ahead of DNS. (Novices should start at the back of the grid.)

Participant must take the Green Flag to be eligible for points.



2018 Changes are highlighted in yellow.

## **12. Demonstration (Tier II)**

Tier II Events are non-flagged and not scored.

Tier II event is meant to be: no formal flagged Heats, scoring or awards. Tier II is for practice, testing, kart/motor shakedown and karter get together. If some karters wish to form their own class and have a friendly Heat, that would be the promoter's option.

### **Amendments to VKA Guidelines**

◆ *In April 2010 THE VKA BOARD MADE THE FOLLOWING AMENDMENT TO THE VKA GUIDELINES:*

- Change the timeline to include all manufactured karts through 1979.
- All single sidewinder karts prior to 1980 must retain a 1" Axle
- All dual sidewinders may run an axle up to 1¼ inch diameter
- Add an option class for karts produced from 1980-1985 with 100cc engines
- Admit 100cc Yamaha engines to the sidewinder foreign classes -
- Adopt the Motocross Scoring System for all demonstrations.

◆ *In JANUARY 2011 THE VKA BOARD MADE THE FOLLOWING AMENDMENT TO THE VKA GUIDELINES:*

In 2012, Rear Engine Karts will no longer be permitted to Run Modern Style Tires, Traditional Style Tires will be mandatory for VKA events. A list of acceptable Vintage Tires is available on page 8.

◆ *On February 13, .2011 the VKA Board approved the updates to the VKA Guidelines and Approval of the Mac 49/Saw Class*

◆ *On October 9, 2011 the VKA Board approved the updates to the VKA Guidelines. Class restructure, Eligible engines and Karts*

◆ *On December 9, 2012 the VKA Board approved the updates to the VKA Guidelines. Class restructure, Eligible engines and Karts – Addition of the Promoters option class for Stock Appearing*

◆ *On November 10, 2013 the VKA Board approved the updates to the VKA Guidelines. Redefined third bearing support and clutch guard; redefined fuel statement (added propylene oxide); added "Women" to "Junior;" redefined Sportsman Rear/Sidewinder and Stock Appearing to separate Sidewinder and Rear karts; clarified Mac 49/Saw to eliminate large block/stroked engines from the Class; turned "Stock Appearing" into "Sportsman Sidewinder" and expanded carb use; added "Yamaha Piston Port" Class.*

◆ *On November 16, 2014, the VKA Board approved the updates to the VKA Guidelines. Tier I & II events were defined; the age for Juniors was lowered to 10; common clutches were identified; Class 2, Junior/Women was re-defined; the use of "vintage style" clutches was included; tire durometer minimums were re-defined; the age of Dual Sidewinders was defined; clarifications to Yamaha Piston Port Class were made; and engine guidelines were clarified.*

2018 Changes are highlighted in yellow.

◆ *On Jan 10, 2016, the VKA Board approved the updates to the VKA Guidelines. These changes attempted to make clear that VKA is not a sanctioning organization and these Guidelines are intended to allow promoters to have a consistent set of standards around which they can hold a vintage karting event that will simplify a vintage karter's preparation for vintage karting events across the country. Changes were also made to emphasize the need for current, full-face Snell Helmet certifications, safe driving during the drivers meeting (and on the track) and the use of*

*small aftermarket intakes in certain classes. Two additional tires were listed under Acceptable Tires for Sidewinder Karts. A new option class for 2015 was introduced for straight axle sidewinders and 3<sup>rd</sup> bearing supports or clutch guard for oil clutches on rear engine karts was added.*

◆ *On Nov. 13, 2016, the VKA Board approved the updates to the VKA Guidelines. These changes reinforced the need for current Snell rated helmets (2010 or later), clarified the acceptable age/date of vintage karts to 1987, expanded the Junior class to include 100cc engines and certain Yamaha engines and carburetors, expanded the Dual Rear class to include a sub-class of B-Open, limited maximum kart width, limited wheel diameter, limited Over-60 to fan-cooled engines, created a Yamaha Limited class, expanded Class 15, SW Sportsman to include a sub-class for West Bend (US820) engines.*

◆ *On Dec. 10, 2017, the VKA Board approved the updates to the VKA Guidelines. These changes mesh the period correct progression of vintage karting with the VKA Guidelines. Two engines were added to the approved list of 1980-1987 engines; foreign engines were removed from Rear 6.1; Sportsman Rear will allow MC-91 through 93 engines; and Classes 9 & 10 were combined over-bore guidelines were established; Stock Appearing Sportsman S/W will eliminate modern tires at the end of the 2018 Season; two, 4-stroke classes and a Classic Division were added as a Promoter's Options.*

#### **VKA Disclaimer**

The VKA assumes no responsibility for the enforcement or compliance of these *Guidelines*. It is entirely the responsibility of the track owner, event organizer and event director to determine what guidelines are acceptable for their individual event. Event organizers may publish these guidelines under their own promotional materials for their event. Utilization of the VKA name, logo, or endorsement without express permission of the VKA will not be permitted. VKA assumes no responsibility for any claims as a result of any event incidences, accidents, crashes, injuries or deaths.

## APPENDIX A TECHING YAMMY KT-100S



This is the official VKA procedure for an engine inspection for Class 16, "Yamaha Piston Port". In this procedure, we're checking bore, stroke, ignition components and visually inspecting outside of engine to be stock factory configuration.

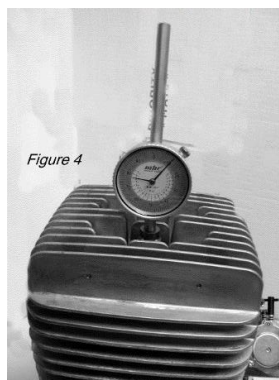
**Fig. 1-** Shown here is the original Yamaha TCI box (top). Below it is the "RLV" replacement box. Either one is allowed. The RLV is half the cost of the original one.



**Fig. 2 & 3-** These two views show what the engine looks like from the factory on the outside. No external modifications are allowed. (Note the white discs in the exhaust area and on top of the carburetor. The area underneath these disc diameters are considered "inside the engine" and are non-tech areas.

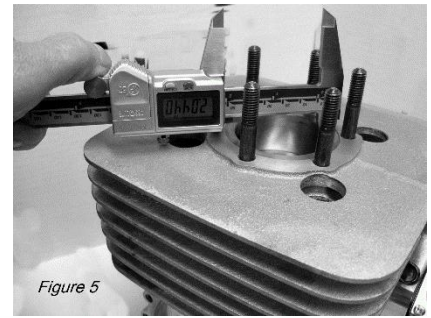


**Fig. 4-** Checking the stroke. Maximum stroke is 1.816" checked here by a dial indicator. Calipers could also be used here with the depth rod end.

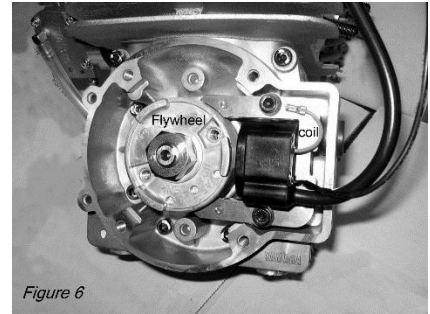


2018 Changes are highlighted in yellow.

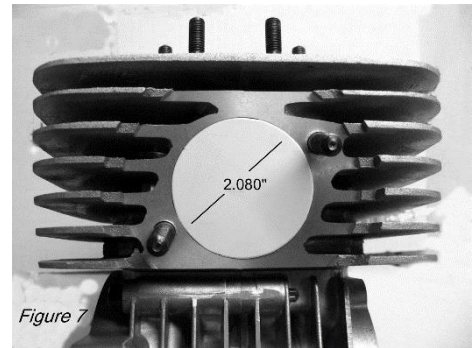
**Fig. 5-** With the head removed, measure the cylinder bore diameter using calipers. Maximum bore is 2.090".



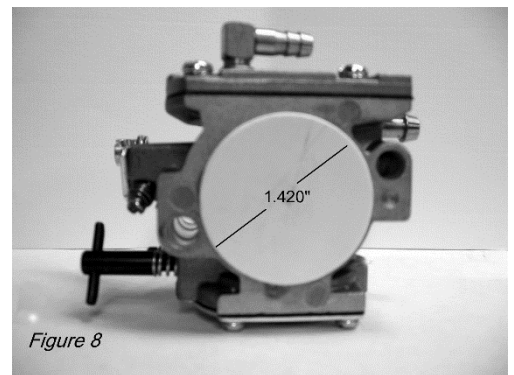
**Fig. 6-** Coil and flywheel are to be original Yamaha parts. Modifications to these components are allowed.



**Fig. 7-** Under the 2.080" disc diameter area is non-tech and is considered inside the engine.



**Fig. 8-** The 1.420" diameter disc area and under is non-tech also. The rest of the Walbro WB-3A carb on the outside is to be as supplied from Yamaha.



This completes the engine inspection. It's entirely up to the VKA Promoter/track owner if an engine inspection is to take place.

*THIS IS VINTAGE KARTING !*



**JOIN THE FUN**