



How to get started in Competitive Kart Racing

By RMS Kart & Performance LLC

RMS Kart & Performance LLC is a karting service business that helps various customers in the karting community. We offer our customers Kart Mechanic Services, Briggs LO206 Engine Rebuilds, Data Analytics, Driver Coaching, Chassis Cleaning and Prep. We are a Margay Ignite Kart Dealer with a Concept Haulers Motor Speedway showroom in Norway, Illinois. In today's reading, our goal is to educate a newcomer individual on where to start in the karting sport.

It can be overwhelming for a new individual wanting to enter the sport of karting. The biggest question is: "where to start". There are many kart tracks, repair shops, engine, and chassis brands all over the states. Your best first step will be to google "go-kart tracks" or shops near your area. Afterward, go ahead and stop by your local track or shop. If you find yourself going to a track, observe the scene. Check out the karts on track, the different age drivers, and the different engine speeds. Stroll around the pits and check out drivers and crews working on their karts. If you're not shy, meet some experienced drivers, teams, track staff, etc. Introduce yourself as a newcomer to the karting sport. Ask questions like what popular class options are at the track, the track's competition race dates, and what chassis brand is popular. After spending a day at the track, witnessing the karting atmosphere, and learning from experienced individuals, you now have a baseline idea of what you want to get involved with.

The three topics you should learn about are:

- What kind of condition kart chassis do you want?
- Understanding different kart engine packages.
- What other essentials should you consider when purchasing a kart?

What Kind of Condition Kart Chassis Will Best Suit You?

You are now considering what chassis condition will best suit your interest/budget and needs. For someone just getting into karting, buying a "race-ready kart" package, new or used, is preferred. A Race Ready package includes an engine, mount, tire with rims, seat, bodywork, and everything needed to have a fully assembled kart. This is an excellent way to enter the sport to help save you time from searching elsewhere for an engine, tires, or whatever is needed to complete the kart. The thing you should consider is whether it is new or used. A used chassis is previously owned and can have anywhere from 1 race event to 12+ races. If you decide to buy a used chassis, you should ask the previous owner if the kart has been through any damage or heavy repairs, such as frame straightening or welding. This will help you understand and be aware of the condition of the kart you want to acquire. A new kart will come assembled from the manufacturer's shop,

fresh off the assembly. Purchasing a new kart can ensure a long-lasting life if you commit to maintaining and cleaning it, considering how much time and abuse you give it. For the driver looking to get out to the local track on the weekends just to tinker around and enjoy the need for speed, purchasing a used kart would be the best option. For the driver who wants to gain experience, try different setups, and eventually enter competition races, the best bet would be to purchase a race-ready kart as new or gently used (1-5 races old). All chassis manufacturers and shops have different pricing, but for some thoughts, used race-ready chassis can range anywhere from \$1000-\$4000, while new race-ready packages can range from \$4500-\$5000+. If you are choosing a go kart to race competitively, will you want to research what your local track/shop supplies in terms of parts and services. This will save you a hassle from having to search for parts outside of your area.

Understanding the different kart engine packages and how they work

While choosing your first kart, it is a good idea to consider what engine you would like to utilize during your karting endeavor. There are two forms of karting engines in the United States: 4-stroke and 2-stroke. The 4-stroke engine has Intake and Exhaust valves, which allow the Air/Fuel mixture to enter the cylinder from the Intake Manifold, which is connected to a carburetor to supply the air and fuel. When the Intake valve closes, the piston compresses the air & fuel in the cylinder upwards to the spark plug. Then, the spark plug combusts the mixture and sends the piston downwards in the cylinder. Before the piston can reach the top again, the exhaust valve opens, releasing the burnt air/fuel mixture out of the cylinder and through the pipe. Depending on track, class weight, and gearing, a 4-stroke can reach anywhere from 45-60mph. 4-Stroke engine manufacturers and builders have their preferred oil to use inside the engine block to help lubricate the interior accessories. 4-Stroke engines can turn from 32000-36000rpm on the bottom end (corner) to around 61000rpm on the top (straightaways). Due to its easy maintenance and affordable cost, this would be the best option for a karting newcomer. Many 4-stroke engine brands exist, from Briggs to Honda, Clone, Predator 212, and more. The most popular 4-stroke karting engine in the United States is the Briggs & Stratton LO206 Engine.



The 4-Stroke Briggs & Stratton LO206 Engine

Many clubs and series all over the country have various classes with this Engine package. With the engine block sealed to prevent competitors from making alterations inside the block to gain performance advantages, this package heavily depends on maintenance and driver skill. The maintenance side includes oil changing, carburetor and clutch cleaning. The Briggs LO206 is undoubtedly the best way to step into karting as a newcomer.

The 2-stroke engine is lighter and does not include any valves like the 4-stroke. A 2-stroke entails more of a routine rebuild service due to its higher rpm speeds. Fuel and Oil are mixed in a fuel jug and then poured into the fuel tank on the kart. The mixed Fuel and Oil enter the carburetor, while the air goes through an airbox and enters into the carburetor through an open-throttle shutter. As the piston in a 2-stroke comes downward, this compresses the fuel/air mixture through a "transfer port," reaching the top of the cylinder

above the piston deck. When the piston compresses the mixture, the spark plug ignites, sending the piston downward again and allowing the mixture to exit the cylinder through the exhaust port and into the exhaust pipe. A 2-stroke engine roughly turns at 6000-8000rpm on the bottom end (Corners) while spinning at 14000-17000rpm on the top end (Straightaways), depending on class header restrictions. A newcomer should understand the maintenance cost and higher speeds of the 2-stroke engines. Many 2-stroke engine brands exist, such as IAME, Vortex ROK, Rotax, and OKN. The most common 2-stroke engine comes from IAME.



The 2-Stroke IAME KA100cc Engine

This 2-Stroke engine package is currently the most popular way to get into 2-cycle kart racing in the United States. Many club tracks and regional series offers this engine in different age classes that can also cater to national leagues.. Rebuilds can averagely take place anywhere from 6-8 hours of run time. IAME also offers a 60cc version of this engine for Cadet Drivers aged 7-12, which is classified as the “IAME Swift 60cc”.

Both 4-stroke and 2-stroke engine packages bring different values to the driver. The 4-Stroke allows the driver to enter karting at a reasonable cost, perform easy maintenance, and have a popular class option. While the 2-Stroke tests the challenges of the driver with higher top-end speeds and quicker acceleration out of corners. The Briggs LO206 and IAME KA100 have club, regional, and national class options at various club tracks and sanctioning series. The driver is encouraged to choose what will make their karting experience the most enjoyable.

What other essentials should you consider when purchasing a kart?

Buying a kart will be considered an investment in your karting adventure. It is also essential to understand and note items you will need to maintain and service your kart on race days. Purchasing a kart stand will allow you to store your kart when not in use, allow you to take your kart to and from the grid area, and work on your kart in the pits. Many kart accessories like axle bearings, chains, and front hubs should stay lubricated. You will want to consider having the following consumables for a baseline: WD-40 or Simple Green for bodywork cleaning, Tri-Flow for bearing lubrication, Chain lube for oil Chain, Brakeleen to keep your brake rotor from rusting, and carb cleaner when you need to service your carburetor. If you choose 4-stroke, purchasing a good-quality of bearing grease will help keep your clutch lubricated on the crankshaft, so it does not seize on. Also, it is a good idea to stock up on a few cases of oil. The Amsoil 4T works well for the Briggs LO206. You will want to acquire a basic set of tools for your kart. Here is a preferred list for beginners:

- 3/8 Drive Socket Set with 3/8 Ratchet
- 3/8 Allen Socket Set
- Philip and Flathead Screwdriver Set
- Combination Open/Box End Wrench Set
- T-Handle Set

- Tire Gauge
- Chain Breaker to remove and install chain.
- Hammer and Rubber Mallet
- Side Cutters and Needle Nose Plier
- Allen Key Set
- ¼ (preferred) Brushless Hex Impact Driver with batteries

Regarding Wrenches, Sockets, and Allen Keys, you will want to determine whether your kart uses SAE (American) or Metric (European) bolts and nuts. Most karts in today's age use Metric, but if you are unsure, it never hurts to ask an experienced driver or mechanic at the track. Another good tool you should invest in, is the Sniper V2 INOX Laser Alignment, which is used to align the front steering system on your chassis. Making sure your kart is properly aligned is crucial for it's performance. As a beginner, if you don't feel comfortable performing alignment jobs by yourself, there are many trusted kart shops and tracks that can help you stay on your feet until you feel confident in doing the work yourself. RMS Kart & Performance does offer Alignment Services for customers.

In Conclusion

We hope these three topics will help introduce the karting newcomer with a positive and exciting influence. There is a lot to learn in the sport of karting, no matter how experienced you are. You have now learned how to research karting, choose how to acquire a kart wisely, understand the two different popular engines in karting and learn about what you will need if you choose to come go kart racing. There are still many topics to discuss in future articles we will write. If you have any questions or ideas what we should add to our list, please fill free to reach out at rmsrecendez@gmail.com or text 630-453-8705. Thank you for taking the time to read this article and we hope you found this helpful!



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