Go Kart Building 101

"Where Do I Start?"

10 Things You Should Know
Before Building, Buying
Or Fabricating a Go Kart.

You'll Be Glad You Did.

by

The Go Kart Guru
Alias: Gamblighini

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WARNING:

Go-Karts are powerful vehicles that must be operated with caution under adult supervision. Always wear a safety helmet, and other safety items must be kept intact and functional. Gamble Industries LLC assumes no responsibility for injury to persons using, or in the area of the Go-Kart, or any physical damage caused by the Go-Kart.

Driver Safety:

- The go-kart should be operated in a safe manner.
- Always wear a safety helmet when operating the go-kart.
- Do not wear lose clothing
- Lose hair should be fastened back and up in the helmet.
- The vehicle should never be used without proper adult supervision.
- Operate the go-kart on a flat smooth surface clear of obstructions, which could present a hazard.
- Never operate along with other vehicles.
- Never operate in areas with pedestrians, trees, curbs, cars, bicycles, etc.
- Operating vehicles in a SAFE and REASONABLE manner is YOUR RESPONSIBILITY!!

The operation of a motorized vehicle can be very dangerous and can result in serious injury or even death.

SAFETY WHEN WORKING

- Always wear safety glasses.
- Many weldments and metal pieces have sharp burrs from cutting and or drilling. Grind away sharp surfaces, and make sure there are no sharp edges on the go-kart.
- When grinding or filing metal, always wear eye protection.

Always wear the proper coverings when welding, such as a welding helmet, welding gloves, leather coverall ect…

Go Kart Building 101: *Where Do I Start? 10 Things You Should Know Before Building, Buying Or Fabricating a Go Kart. You'll Be Glad You Did.*

Where do I start? That is a great question. I get asked that question every day. People ask "I want to build a go kart, but I just don't know where to start." I have people every day who look at the web page and they are asking the same question but differently "How do I build a go kart?"

Well I am glad you pursued that question, because Go Kart Building 101 is about asking the right questions. I know that sounds silly or too simple, but it really does come down to asking the right questions. Asking the right questions will believe it or not make the difference between 4 crying boys and 4 happy boys. Asking the right questions will make the difference between $200 and over thousands of dollars in your go karting experience.

I have put together 10 of the most essential things or questions that you need to ask yourself before you commit to building, buying or fabricating a go kart. Each one of these items needs to be addressed to really have a fulfilling go karting experience. Go karts are about having fun. Why not maximize your fun and look at these questions?

1. One Seater or Two Seater? (Who is riding it?)

The biggest question most people over look, is who is riding it?

- How Many People are riding it?
- Can an adult and a child ride it together?
- Will the go kart be any fun with just one rider?
- Is the go kart too big for even small riders, and will they actually be left out?
- Is the go kart going to be able to accommodate small riders and larger drivers?

These questions should be answered before you proceed further. Even before you discuss price.

There was this family that had three boys and a father who was enthusiastic about go karts. All the kids wanted to ride the go kart, but in reality only the father could ride the go kart by himself. Putting the kids on his lap was not very safe or realistic, so once they got the gokart, it sat. It sat because only the father could enjoy it, and that proved to be only so much fun before the go kart sat idle.

If the go kart choice had been made in the beginning to accommodate more than one rider, the go kart would have been used a lot more.

Another family having the same a similar dilemma had smaller boys who loved riding around in gokarts, but the go kart was too big for them at that age. To get the go kart to be able to allow them to ride would have taken extensive modifications, and was never undertaken. Not until the kids became older was the go kart accessible to them. But by that time they had drivers licenses and were disinterested in the go kart.

As we go down the list you will see how each one of the 10 things correlates, or relates to “Who?” is going to ride this go kart. Make sure this question is answered and clear at the outset.

2. How Is The Go Kart Powered?

This sounds like an obvious question “How is the go kart going to be powered?”, but it actually is quite important when you are considering “Who is riding it?” and the question later on down the road “Where are you riding it?”

Is the go kart going to be:

- Gravity Powered?
- Pedal Powered?
- Electric Powered?
- Gas Powered?
- Other Powered?

If the go kart is going to be gravity powered, then considerations of how you are actually going to get the go kart up the hill again need to be answered. Is there a game plan there? If a small child is riding this gokart, then it cannot weigh much more than him, so that they can pull it back up the hill. You want to have fun with this go kart (and speeding down a hill can be fun) but if it is way too heavy to pull back up the hill, it may rarely get used.

If the go kart is pedal powered, make sure that the construction is light enough for whoever is riding it to be able to actually pedal it. Sometimes you can build something that actually is pedal powered, but it is way too heavy and as a result, in order to get the thing to move you have to gear it way down and the go kart doesn’t go very fast. When thinking pedal power, you need to think LIGHT. Light as in PVC piping, or aluminum framing. Again, who is primarily going to be riding this thing: a child, or an adult?

If the go kart is electric powered adequate electrical resources are required. Normally 12 volt batteries will be used, however, they do weigh a lot and consideration for load carrying capabilities of tires, wheels bearings and where to stow the batteries is key. Additionally, just running a circuit to a motor is not going to cut it. Typically sophisticated Electronic Controllers (which are designed to bleed off heat to give variable speed) are needed to run the electric motor. Also a large-duty electric motor will be required to move the whole go kart. Electric go karts will become more and more prevalent as battery technologies increase, but the primary red flags are cost and weight.

Gas engine powered go karts are by far the most popular and have the most readily available parts. Gas engines do however, have elements of danger and concern: IE the engines get hot, they run on gasoline (which is flammable) and they have spinning components even when sitting in an idle position. Gas engines are the most versatile, in that they offer (Continued on next page)

2. How Is The Go Kart Powered? (Continued)

the freedom of riding in all conditions. They do not require charging, subject to fatigue (pedal power, pulling up a hill), and if geared up right can go almost anywhere.

Settling the question about how the go kart is going to be powered then helps settle the other questions that come down the line.

3. What Kind of Material Am I Intending To Make This Go Kart Out Of? Is It Practical Etc…?

The question of "What material am I going to make this go kart out of?" actually is the age old question that spurns innovation. So I am not going to say that making a gas go kart out of wood is stupid, or dumb. I would just caution that sound principles of design are not thrown to the wind.

Some of the most fantastic automobiles are made out of epoxy or custom materials, basically glorified plastics, that make the vehicle light and strong.

I get a lot of people looking to make a go kart out of wood, and I presume this is because it is the most readily available material at their disposal. Additionally they have a background in wood and know how to work in it very well. I have seen some very ingenious type go karts on the web that are made out of wood. Unfortunately, I have yet to see one that is designed to take the rigors of off roading, the vibrations of engines, and the abuse of youth.

Typically the go kart style made out of wood is the wagon style steering system, which I must warn, is very unstable and really is not suited for anything going above 10 mph.

In the Go Kart Building 401 Prep Course the concept of which material to use, and how to build a frame adequate to handle the rigors of go karting are discussed in much greater detail. I would suggest that if you are struggling with stresses and strengths of things that you look into downloading the 402 Prep Course.

The material question needs to be answered though so you can determine what tools you are going to need, where and how you are going to procure your go kart materials.

Basically at this point you will be assembling a bill of material. This is the step towards finding out how much the go kart is going to cost, and if you can really make the go kart for $200 or not. (Continued on next page)

3. What Kind of Material Am I Intending To Make This Go Kart Out Of? Is It Practical Etc…? (Continued)

Note to reader: This Prep Course is entitled Go Kart Building 101, but you will notice that as we progress down the list, you will find that at least some basic understanding of mechanical principles both in engine mechanics and gokart operational mechanics will be very beneficial in saving money. Over the next five years you could save hundreds of dollars in engine repair bills alone. I would suggest that you also down load Engine Repair 101 as a primer in engine diagnostics. As you will see, Engines are reviewed in minor details here, but this is just sufficient to steer you clear of troublesome go karts.

You do not, however, have to steer clear of these go karts! You could buy a gokart with a faulty engine at a good price and fix the engine yourself for the cost of the parts, which usually only runs around $10 or $20 at the most.

I will let you in on a little secret: How to Build a Go Kart is more about saving lots of money here and there and making smart moves. These primers are designed to save you money, time and aggravation. Read on my friend….)

4. How Much Am I Going to Spend over the next 5 years on this go kart?

This is the question most people ignore. They look at the go kart as being a great deal but forget to answer the question of "How Much Am I Going To Be Spending Over The Next 5 Years On This Go Kart?"

This questions falls into two camps:

- The guy who is buying a used go kart
- The guy who is making a new go kart

First lets discuss the guy who is buying a used go kart or even a new go kart for that matter. He needs to take into consideration the potential problem areas on the go kart. Secondly, the guy who is making a new go kart needs to consider the consequences of using old parts or the long term effect of faulty designs. The following list is a compilations of problem areas that go karts see:

- Chain
  - Is the chain big enough for the go kart?
  - Does it appear worn out yet (the links are sloppy)?
  - Notice I did not say "Is the chain dirty?!" A dirty chain may be a healthy chain. Look at the article on Chain Care.
  - Is the chain rusted solid? Will it ever be able to be loosened? (Sometimes chain can be freed up by penetrating oil, but the life of the chain is numbered probably in months after freeing it up.)

- Clutches
  - Is the clutch wobbly? If it is, the bearing inside the clutch is worn out. This does not mean the clutch is junk, it just means that the clutch bushing needs replacement.
  - Is the clutch sized properly for the go kart, or is it worn out because the go kart is too heavy for the engine/clutch combination?
  - What type of clutch is it?
    - Is the clutch a centrifugal clutch?
    - Are the shoe weights worn significantly?
    - How about the driving bell, does it show signs of metal fatigue?
    - How about the driver, is the clutch driver shearing because of over torque? (Continued on next page)

4. How Much Am I Going to Spend over the next 5 years on this go kart? (Continued)

- Clutches (Continued)
    - Is the clutch a belt clutch?
        - Is the belt significantly worn?
        - Are there signs of belt cracking?
        - How often was the go kart driven? (This will give you an indication of whether the belt drive was working well. If the belt drive does not work well, it will not be driven very much. A test drive would be recommended.)
        - Is the belt tension system easy to work with, or are there more parts than you can remember or count on one hand? (If the number of parts exceeds 10 {including bolts and nuts} then the cost goes up exponentially.) Maintenance and knowledge of drives is important with this system.
    - Is the clutch a variable speed clutch? (Industry name: Comet Clutch)
        - Is the belt for the clutch worn?
        - Is there heat fatigue on the clutch pulley surfaces?
            - If there is excessive belt wear and heat fatigue that means that the clutch is used a lot or that is it slipping a lot. It can mean that the go kart is driven at low speeds primarily, which means the clutch is not fully engaging and is burning up the clutch parts.
            - Belt and heat fatigue can also be an indicator of the clutch not being matched well for the go kart.
                - Not being matched well can mean that the go kart is too heavy
                - Or that the clutch is not engaging in the rpm range of the go kart engine: translation*: the engine can not crank out 5000 rpms to get it engage. The engine only operates as 3600 rpms max. If so the clutch actuates at a higher rpm and therefore the camming action does not occur quick enough and causes the pulleys to slip and generate heat on the pulleys and burn the belt.*

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4. How Much Am I Going to Spend over the next 5 years on this go kart? (Continued)

- Smoking Engine
  - A smoking engine means a couple of things. What I mean by that statement is two things:
    - Smoke when the engine is running under hard load
      - When there is smoke when the go kart is accelerating it means that the bore is worn out a little bit and causes oil to blow by the rings on the piston and then get burned during the combustion process. A little oil smoke under hard acceleration is indicative of wear that will require servicing in about 30 to 40 hours of running. Keep an eye on the oil level, and check your plugs periodically.
    - Smoke when the engine is just running
      - When the engine is smoking while the engines is just sitting idle, that means there is severe blow by on the rings of the engine. The engine will not last much more than 10-15 hours with this type of oil blow by. Significant internal engine modifications will be required, which will include: ring replacement (at a minimum) and reboring the cylinder.
      - A unique engine oil supplement is recommended for smoking engines. It is called Engine-All. The treatment causes the ring caps to be decreased and the scored walls on the cylinder to be filled in. As a result the smoking may become drastically reduced in 20 to 30 hours of running!
      - If the engine cylinder is aluminum (not lined with cast iron), boring out the cylinder has mixed results. I would suggest using Engine All to fix the problem to start.

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4. How Much Am I Going to Spend over the next 5 years on this go kart? (Continued)

- Knocking Engine
  - A knocking engine is where the engine makes tapping or knocking sounds which are prevelant under loading conditions. This knocking comes from premature wear in usually the rod and crank interface. This occurs if the engine has been run low on oil at one time. If the engine was run low on oil at one time, this means the engine was overheated, and premature failures will occur in other areas, such as exhaust valves, rings and a potential thrown rod. A knock in the engine means a complete overhaul and rebuild. Which includes a rod, new rings, new valves (potentially) and a new piston (with a bored out cylinder, because the piston may be slapping the side of the cylinder making a knocking sound as well). At the very minimum a new rod.
- Hard Starting Engine
  - A good solid engine should start with one pull. Also the compression should be so high on an engine that it should "pull your arm off" as we used to say. It should take a good jerk to pull the engine over and get it to start.
    - If the engine pulls over easily and does not start up quickly it is indicative of loose rings, or a loose intake or exhaust valve. Typically a good valve job will take care of the compression problems, especially if the engine is fairly new.
    - If the engine has good compression but is hard starting usually what you have is a faulty carburetor or loose intake manifold. The vacuum leak caused by the loose intake manifold will cause the engine to only start when the choke is engaged. Tighten the intake manifold bolts.
    - If the engine again, has good compression, but fails to start, the ignition may be faulty, or failing. On old engines that have been sitting for awhile the fix is to replace the points. This requires a qualified mechanic to perform this minor fix.

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4. How Much Am I Going to Spend over the next 5 years on this go kart? (Continued)

- Loose Steering Linkages
  - Loose steering linkages is pointing at the steering assembly in general. Are any of the parts loose? The steering knuckles are they loose? The tie rods, are they loose?
  - Loose linkages are easy to fix, usually tightening them down fixes the problem. However, if the go kart has been driven with loose linkages for some time, the linkages mounting eyes may become wallowed in the plates and cause the correct alignment to be difficult to place. Corrective welding or new plates may be required to fix this problem.
  - Loose linkages may be indicative of vibration. A bent rear axel or an unbalanced front tire may put a vibration into the steering system which will rattle everything loose. Corrective measures of the tires and axels will need to be considered.
  - A heavy vibration from the engine and drive train may be present. This vibration is more than just a threat to the steering system, but to the integrity of the drive train, the frame strength and any other bolted on part. Be sure to check out all these variables and take care of them if they are an issue.
- Worn Sprocket Teeth
  - Worn sprocket teeth is indicative of a stretched chain.
  - A stretched chain comes from three areas:
    - No chain lubrication
    - Long Hours of running
    - The chain is too small for
      - Weight of the go kart
      - Too much power going into the size chain

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4. How Much Am I Going to Spend over the next 5 years on this go kart? (Continued)

- Worn Front Tires
  - Worn Front tires is indicative of the following:
    - Misalignment of the steering system
    - Inadequate steering design: the angle of incidence may be so severely off that the wheel wear prematurely inside or on the outside. Typically on the insides though. Also the steering knuckles may be undersized and become wallowed out, tranfering the slop into premature tire wear.
    - Too Much Weight on the front wheels (or wheels are too small for the go karts front end)
    - The knuckles are bent and the wheels are canted or bent at an angle to the ground (they are not square or perpendicular to the ground.) Typically if the knuckles are bent the frame work is too weak for the weight of the go kart. Frame buttressing my be required.
- Rusted Joints
  - Rusted joints may seem harmless enough but they are signs of potential stress fractures. On a frame the paint will peel away, or crack at the high stress areas. To define stress, it is an area where the metal has stretched like a rubber band. In effect the metal has thinned out, and so has the paint in this area. Because he paint is fractured, water can get in and rust the cracked paint surface area. Look for rust areas because they show potentially where fractures may start occurring.
  - Rusted joints also mean that the unit was sitting outside, or in weather that is not most friendly to mechanical systems. Look for stiff mechanical systems, like faulty brake cables and throttle cables. These will have to be replaced. Additionally, the chain, brakes and bearings may have been rust damaged too. The engine may be frozen up, make sure you turn it over. (Frozen engines can be brought to life, without ever taking them apart, do not discount a frozen engine as dead)

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4. How Much Am I Going to Spend over the next 5 years on this go kart? (Continued)

- Cracks on the Underside of the Frame
  - Cracks always develop on the opposite sides of loads. For example, if you sit on thin board, the crack will develop underneath your bottom, not on the top. The same principle is being applied here. Look on the bottom of the go kart for frame cracks.
  - Look underneath the steering knuckles
  - Look underneath the seating area
  - Look underneath the back bearing area
  - If any cracks are present, buttressing will be required. Welding usually does not fix the cracking problem, because the crack will just develop on one side of the weld again. Add gussets to enhance the joint. Additionally add side supports if necessary.
- Bent Steering Knuckles
  - Bent steering knuckles is a sign that:
  - The front end is under designed
  - The go kart has been going over jumps and rough terrain
  - The gokart got in an accident
  - Look for other areas of failure as well.
- Wobbly Rear Wheels
  - Wobbly rear wheels is a sign of bent axel
  - A bent axel is a sign that the go kart has been over rough terrain or jumps
  - A sign that the go kart is too heavy for the axel. A larger axel will be required or more support will be required on the axel. (See the Go Kart Building 401 for more details axel sizing and support)
- Torn Seat Cushion
  - This may seem minor, but torn seat cushions are indicative of the following issues:
    - Rodent infestation: re-upholstery will be required (it will smell like rat fesses)
    - The go kart was ridden into something and or flipped and got into and accident (check the go kart for bent or cracked mechanicals)

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4. How Much Am I Going to Spend over the next 5 years on this go kart? (Continued)

With all the items in the list checked over tally up how much you estimate the costs for repairs will be and subtract from the selling price.

Example: Racing Go Kart: asking price: $800
Problems: Smoking Engine, bent axel, cracked undercarriage, and wobbly steering:
Repair Engine: $200
New Rear Axel: $80
Reweld and fix frame: $100
Repair Steering and replace bad front tires: $100
estimated cost for repairs = $480

Offering price = $800- $480 = $320

5. What Kind of Drive System Does It Have?

What Kind of Drive System Does It Have is a very important question when it comes to performance. Performance as in:

- How fast will the go kart go?
- How steep a hill will it climb?
- Will I be able to go off roading?
- Is this go kart only suited for a track?
- What kind of engine will I be using: vertical or horizontal?

The kind of drive system that is available or selected will regulate how well this go kart will perform.

Are you going to be able to make this go kart actually drive, or is it going to be night to impossible to figure out:

Example converting a vertical 10 hp engine to run your go kart. How are you going to do it? (Answer: take Go Kart Building 201 to get the inside scoop on How to convert a vertical engine to drive your go kart)

You also do not want a drive system that can make your go kart go 100 mph especially if you are expecting 5 year olds to drive it. Is the drive system de-tuneable, where the go kart can go only 5 mph if you want it too, without burning up belts and clutches?

6. Where Can I Drive It?

Most people get glassy eyed when they see a go kart (people who love go karts that is) and tend to forget about where in the word they are going to drive this thing. Sometimes the images in your mind go to race tracks and passing Ferraris, but really now, are you going to be driving this thing on a race track?

It is a good idea to know where you will be driving this go kart. In your driveway, on your uncles farm, (obviously not on the street because that is against the law) in cornfields, in your yard? Do you have a big enough yard to ride a go kart? Are their laws against go karts in your neighborhood? Have you permission to ride it in the parking lot across the street, or will they call the police?

7. Accidents and Insurance

Most people do not want to face this, accidents do happen. What contingency plans do you have that will cover an accident? Do you have insurance? What if a neighbor rides your go kart and hurts themselves, do you have insurance that will cover them, or how will this be handled?

The grief of fretting mothers needs to be considered at the outset. Put yourself in a mother's shoes, and you will get the idea. Go karts are equal to: noise, recklessness, danger and death to a mother. Your job here is to minimize those risks…

Hence the next section….

8. Safety: How am I going to drive it?

Lets face the music. Go Karts are dangerous. They are moving vehicles that can slam into things, like trees, cars, people and garage doors. They also can flip over skid along with the occupant underneath. (Been there, done that! Read the Development files to get the whole story)

Go kart engines are hot. Wheels and axels are spinning. Chains can catch fingers and clothing. There are all sorts of hazards to a go kart.

There are also hazards to chain saws too. You can cut you leg off if you are not careful. The key here is "careful."

What measures are you going to invest in that will make your riders "Careful."

8. Safety: How am I going to drive it? (Continued)

Obviously a training program is recommended. All kids should be taught how to ride safely, smartly and cautiously. This machine is a weapon if used recklessly. People outside the go kart are in as much danger, if not more danger than the rider. So proper driving techniques is key. Invest in a good driver training book if necessary!

Safety also includes safety equipment like pads, suits, helmuts, shoes and gloves. Depending on the environment, but I would suggest always wearing protective clothing all times when riding a go kart. An accident is just waiting to happen, especially when you are least expecting it. All it takes is a blown tire, or a false swerve and over she goes.

Seat belts are all the rage, but in go karts they may or may not apply. Specifically racing go karts do not have seat belts because the object of the belt is defeated in the racing style go kart. The occupant is better off breaking free of the go kart than sticking with it. Obviously, however, proper full body safety protection is required. This can be an extensive investment.

Seat belts, however, are required, especially in full frame gokarts, because if the gokart were to roll, and the occupant did not have a seat belt, they would get tangled up in the framework and actually get seriously hurt. The roll cage is just that a cage, and not being belted in, the cage becomes the enemy.

Also make sure that guards and shields are considered as part of the safety protocol. Legislature regarding gokarts has been passed to make sure that hair is not snagged by moving axels on go karts. The axels are to be shielded to prevent entanglement.

9. Storage

Now we can take a breather. Safety is always a little nerve wracking. No one wants to spoil a splendid go karting day, so be sensible.

But storage is key as well. Most people again just assimilate possessions, but start to have NO room to put these things. Very often the go kart is relegated to the outdoors. Trouble is, that most go karts do not fair very well outdoors.

Make sure that you consider the storage options for the go kart. An extended period of only a week in the outdoors, especially in the spring during the rain storms and the chains and cables can become rusted pretty bad.

A simple tarp is sufficient in some instances, however, be aware of bees, and wasps, and varmints like mice and raccoons. A good cat can sometimes keep away at least the varmints, but bees and wasps, that's another story!

Bee aware!

10. Tool Requirements

The mouth is drooling, the ears are hearing exhaust notes not audible to anyone around, the mind is drifting as the go kart is being either dreamt up or looked at, but not a clue as to how, and where it is going to be repaired, fixed, welded and torn apart.

There is no substitute for a good shop. I can tell you that I did not have a shop, did not have a garage, did not even have a place to plug in my welder, but I made a go kart frame in my front yard. So a shop is not essential, but it does help a lot.

Make sure you have a place to work on the go kart that is clean, and organized. You may say “Oh you are just a neat freak!” No actually, I am not, but it sure does help when I am. The one rule of the shop that will make this whole project go smoothly is: “Every tool has its place, and every place has its tool.” Make sure the two are happy and you have a happy shop. You know where things are, and you can get the items fixed in a jiffy.

As far as equipment is concerned, the essentials are:

Ratchet Set
Hand Wrench Set
Screw Driver Set
Driver Set (includes tex drivers!)
Locking Pliers
Knuckle Busting Adjustable Hand Wrench
Electric Drill and drill bits
Hack Saw
File
Grinder
And not necessary but very helpful in a jam: Welder

I have built whole go karts with a hack saw, so if you want some muscles, join the hack saw club. Otherwise invest in a saws-all! (Continued next page)

10. Tool Requirements (Continued)

As far as construction materials are concerned:

The must haves are:

Assortments of :

Bolts (best to have grade 5 and higher)
Nuts (again grade 5 and higher: grade 2's will shear off and can be dangerous in go kart environments)
Nylock Nuts
Washers
Lock Washers
Drywall Screws
Assortment of Springs
Nails
Bailing Wire
Duct Tape

Nails and bailing wire will get you out of a jam more than once! Nails can be used as clips pins that retain joints together. Bailing wire is used to hold springs and actuate throttles. Very good for carburetor work!

11. Maintenance Schedules

Consideration for how often the go kart will be torn down and looked at, is usually not in the cards for most go karters. The go kart should be torn down completely and examined for cracks and wearing parts. All joints should be examined for premature wear, and all high stress areas, like the steering knuckles and the seat areas should be examined for cracks and pealed paint.

To keep the go kart from rusting away, the paint job should be updated about once every two years. Usually the paint will chip off where rocks and brush hit the frame-work. Application of rust resistant paint is encouraged.

Obviously, change the oil at the end of every season. I highly recommend the Engine-All treatment on all motors (accept two cycles). Engine–All will greatly increase the engine life, and prevent seize ups.

Sometimes we get overzealous with the power washer and over clean the go kart. It is very easy to drive all the good lubricants from the joints, especially in bearings and chain links. Be sure to soak the chain and grease the bearings after a power washing.

A good maintenance program will save you hundreds of dollars in the long run if you are consistent with it.

My rule of thumb is: Every 10 rides = a thorough going over =

- Chain check,
- Clutch check,
- Bearing check,
- Steering check,
- Oil check,
- Brake check
- Engine gasket
- Engine head bolt check

12. Bonus: Is the Go Kart Modifiable?

Is the go kart modifiable? Unless you are looking at the gokart as is, most do not look at the go kart as having POTENTIAL:

- Can this go kart be retrofitted with a larger motor?
- Bigger tires?
- Larger Brakes?
- Can it be switched over from a one-wheel drive to a live-axel?
- Can I adapt a vertical engine to this go kart?
- I know this go kart is too narrow and will flip easily, but can I change it to be wider, have a lower stance and never flip again?

These questions need to be asked especially if you are buying or designing a go kart that you want to have an exciting future. Can you modify it? Then comes the hardest question of all:

Can you put it back just the way it was so that your 5-year-old brother can ride it?

So to recap the ten items are:

- **One Seater or Two Seater? (Who is riding it?)**
- **How Is The Go Kart Powered?**
- **What Kind of Material Am I Intending To Make This Go Kart Out Of? Is It Practical Etc…?**
- **How Much Am I Going to Spend over the next 5 years on this go kart?**
- **What Kind of Drive System Does It Have?**
- **Where Can I Drive It?**
- **Accidents and Insurance**
- **Safety: How am I going to drive it?**
- **Storage**
- **Tools and Equipment**
- **Maintainence Schedules**
- **Bonus: Is the go kart modifiable?**

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