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FOREWORD

Congratulations on having this new kart.

We recommend that you read this owner's manual before you ride the kart. This manual contains the vehicle structure, operation instructions, safety information and some helpful suggestion. The manual has a special section concerning maintenance. To protect your investment, we strongly recommend you to keep your go-kart well maintained. In case of any problem on your Kart, please refer to the trouble-shooting section. We hope you enjoy riding of your vehicle, and we would appreciate feedback or comments from you.

Our company reserves all the right to revise and explain this manual, and we reserve the right to improve, without notice beforehand, the product after publishing this manual. Some pictures in this manual are sketch maps for reference. In case of any deviation from the material objects, please refer to the actual items.

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1. Performance, Technical Parameter and Structure of Go Kart

1.1 Performance and Specifications

Model	GK1100-2	Displacement	1.1L	
Length	3250mm/128 in.	Bore×Stroke	65.5*78mm/2.6*3.1 in.	
Width	1900mm/75 in.	Compression ratio	9.0:1	
Height	1500mm/59 in.	Rated power	15Kw/5200rpm / 20HP/5200rpm	
Wheelbase	2250mm/89 in.	Max. torque	43.29N.m/2000r/min	
Front wheel track	1470mm/58 in.	Ignition	CDI	
Rear wheel track	1620mm/64 in.	Lubrication	Forced lubrication & Splash lubrication	
Ground clearance	220mm/8.7 in.	Start	Electronic	
Max speed	≤85km/h/53mile/h	Gear shift	5+1 (REV)	
Braking length	< 7m (30km/h) / < 23feet (18mie/h)	Gross weight	528kg/1164 lb	
Climbing capacity	≤35°	Suspension	Front wheel	Rocker arm, independent suspension, Oleo-pneumatic damping shock absorber
Net weight	510kg/1124 lb		Rear wheel	
Loading capacity	2Person or250kg/2Person or 551 lb	Brake	Front wheel	Hydraulic disc brake, right foot control
Fuel tankage	20L		Rear wheel	
Fuel type	RQ-93 (unleaded)	Tyre	Front wheel	25×8-12
Engine oil type	SAE15W/40 SAE5W/30		Rear wheel	25×10-12
Engine model	4Cylinder, 4Stroke, Liquid Cooling	Tyre pressure	Front wheel	25 P. S. I.
Battery	12V45Ah		Rear wheel	25 P. S. I.
Head light	12V 55W	Rear light/Brake light	12V/10W/5W	
Roof light	12V 35W	Turn light	12V 10W	

1.2 Component location and structure

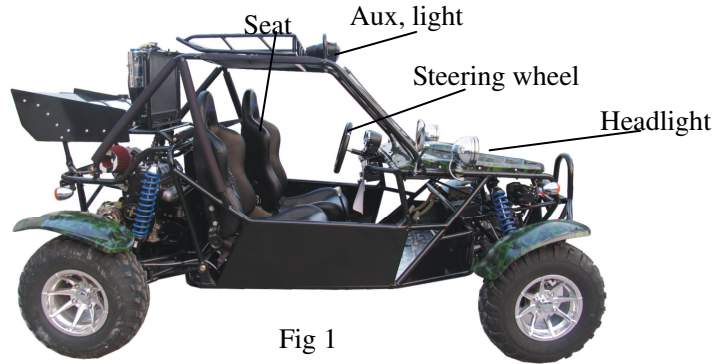


Fig 1

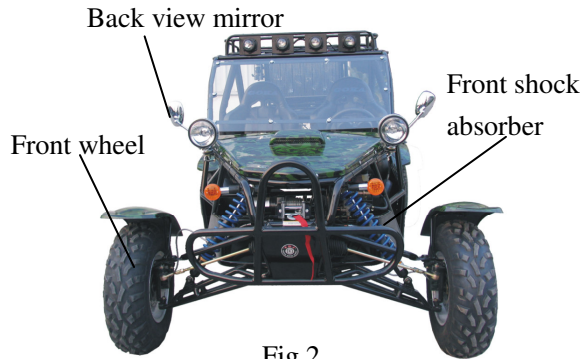


Fig 2

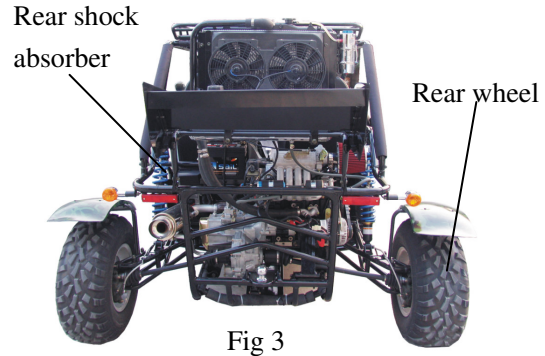


Fig 3

2. The use of Go Kart

2.1 Caution and Safety Note:

Read this owner's manual carefully and make sure you understand it completely before driving this kart.

People under age of eighteen are not allowed to drive this kart.

Please make sure to wear an approved motorcycle helmet and have the seat belt well fastened before driving the kart. Do not drive this kart at night. It's dangerous to drive on an unknown road. Keep a safe distance between your kart and other vehicles. Never risk drunken driving or drive the kart after taking medicine, which will endanger your driving and result in injury even death. Check fuel level before the kart is used. Never refuel the tank while the engine is hot or running. Spilled gasoline should be wiped off prior to starting the engine. Don't drive your kart indoors. Because exhaust contains a kind of tasteless, odorless and poisonous gas called carbon monoxide.

2.2 Instrument and control

- (1) Major control switches are located on the right side of the steering wheel.

(Fig 4)

- (2) Light switch is located on the right side of steering wheel. Horn button is located on the right side of steering wheel (Fig 4)

- (3) Fuel tank

Fuel tank is located above the engine and close to the rear carrier of the kart. Turn the lid counterclockwise to open and then refuel. The tank capacity is 20L.

(Fig 5)

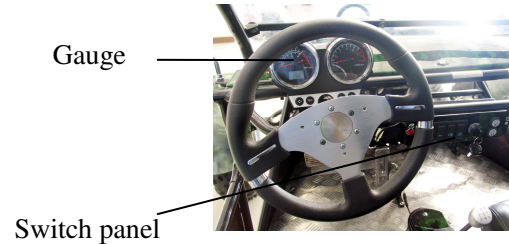


Fig 4

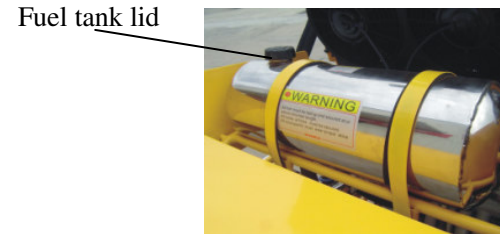


Fig 5

(4) Brake pedal (Fig 6)

Brake pedal is underneath the right side of steering wheel. It controls the front and rear brake discs, operated by right foot. When you release your foot from the brake pedal, it will automatically return to its normal position.

(5) Clutch pedal (Fig 6)

Clutch pedal is underneath the left side of steering wheel, and controlled by left foot.

(6) Accelerator pedal (Fig 6)

Accelerator pedal is located to the right side of the brake pedal and controlled by right foot.

(7) Gear shifting (Fig 7)

(8) The gear shift lever controls velocity of the kart (Fig 7)

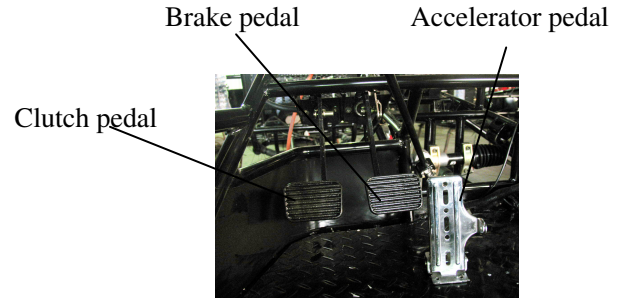


Fig 6

Gear shift lever

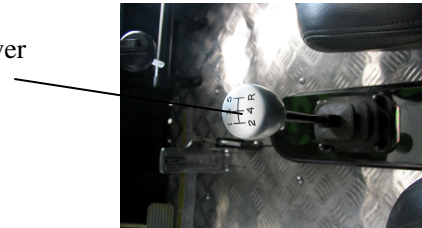


Fig 7

(9) Gear box: 5 forward shifts +1 reverse shift (Fig 8)

Gear box

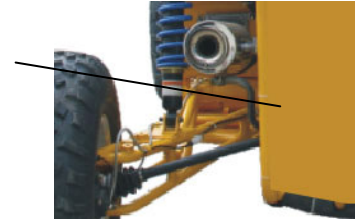


Fig 8

(10) The seat back lock lever is underneath the seat, pull up the lever to adjust the seat, when satisfied, release the lever to lock the position.; seat location adjuster is in the inner side of the seat, pull up to adjust , when satisfied, release the lever to lock. (Fig 9, Fig 10)

Seat back lock switch



Fig 9

Seat location adjuster



Fig 10

(11) Steering side rod

Front wheel alignment can be accomplished by actual use of steering side rod. (The angle of inner obliquity is 1°, normally no need to adjust) (Fig 11)

Steering side rod



Fig 11

2.3 Before riding

Please check all the following items before driving.

Items	Purpose
Steering	(1) Turning Smoothly (2) No obstacle (3) No clearance
Brake	(1) Travel length of pedal is proper (2) No slippery.
Tyre	(1) Proper pressure (3) No crack or cut.
Fuel	Keep enough fuel for intended driving distance
Light	Check all the lamps – headlights, tail lamps, stop lamps, turn lights etc.
Oil	Check if the oil is enough
Battery	Check the electrolyte lever, fill some if necessary

2.4 Basic operation guide

Driving this Go Kart is the same as driving a car.

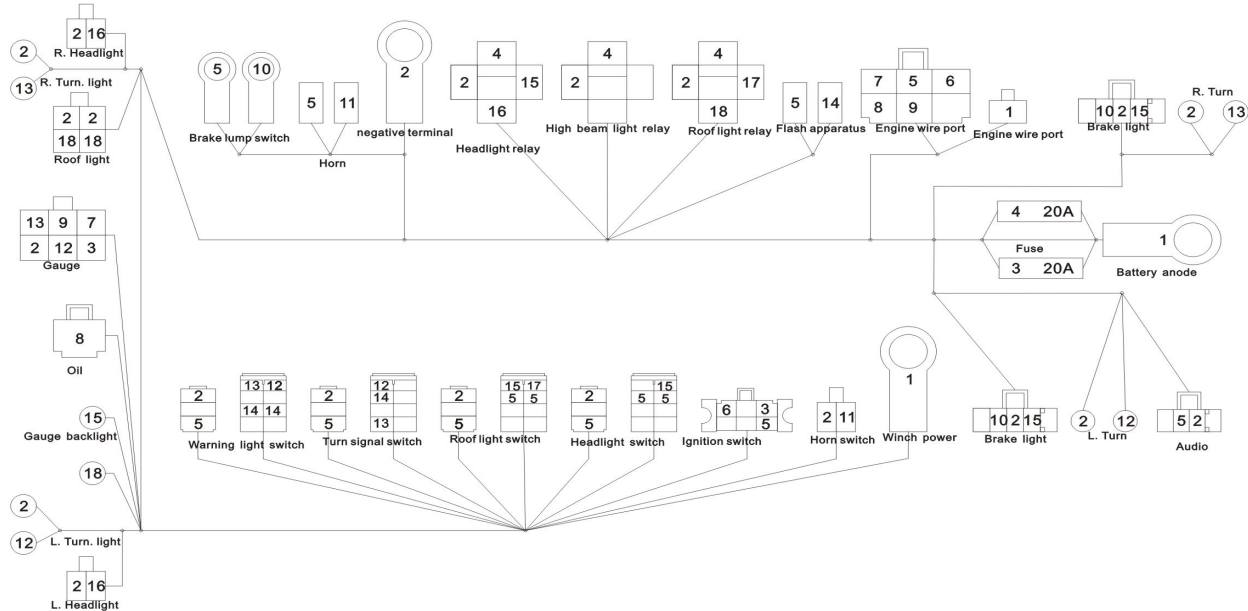
2.5 Grinding in

Proper grinding-in of a new kart is very important to prolong the life span of the vehicle and achieve its best performance. During your driving of the first 600 miles, limit the driving speed as suggested below to avoid early damage of parts due to high driving speed

Gear steps	Max. speed
1	6 miles/h
2	12 miles/h
3	21 miles/h
4	34 miles/h
5	40 miles/h

2.6 Circuit diagram:

Wire No.	Color	Starting	Ending	Wire No.	Color	Starting	Ending	Wire No.	Color	Starting	Ending	Wire No.	Color	Starting	Ending
1	Red	Battery anode	Winch	6	Yellow&Green	Ignition switch	Engine wire port	11	Light blue	Horn switch	Horn	16	Brown	Headlight relay	Headlight
2	Green	Battery anode	Winch	7	Yellow&Red	Engine wire port	Gauge	12	Medium blue	Turn signal switch	Left turn signal	17	Yellow	Roof light switch	Roof light relay
3	Red	Battery anode	Ignition switch	8	Yellow&black	Engine wire port	Gauge	13	Yellow&Red	Turn signal switch	Right turn signal	18	Yellow	Roof light relay	Roof light
4	Red	Battery anode	Relay	9	Yellow&white	Engine wire port	Gauge	14	Red&black	Flash apparatus	Turn signal switch				
5	Black	Ignition switch		10	White	Brake lamp switch	Brake lamp	15		Headlight switch	Headlight relay, brake lamp				



3. Go Kart Maintenance

3.1 Engine maintenance

- (1) #93 or above unleaded gasoline is recommended.

Note: using unleaded gasoline can extend the life of engine.

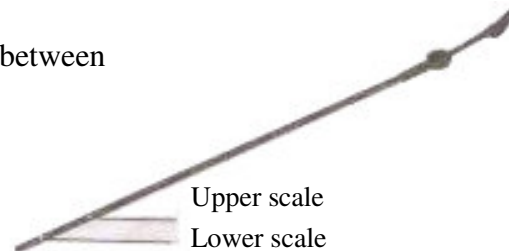
- (2) A. How to choose lubricating oil

User should choose proper type of engine oil according to the local temperature.

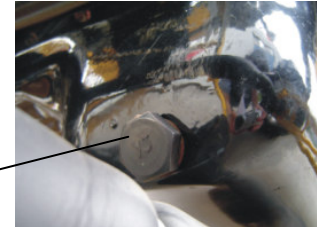
Use SF SAE15W/40 oil in environment temperature above -20 C

Use SF SAE5W/30 oil in environment temperature below -20 C

- B. Oil Level: The level of engine oil should be between upper scale and lower scale.



- C. Changing Oil: Unscrew the oil drain bolt to let out old oil ; screw down the bolt when all the old oil is let out before new oil is filled in. (Fig 13)



Oil drain bolt

Fig 13

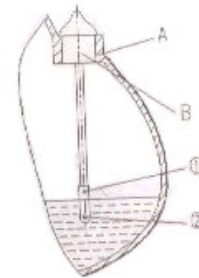
- D. Oil Filling: Oil should be filled through filling port. After oil filling, let the engine run in idle for 3-5minutes and then check the oil level; add enough if it's inadequate(Fig 14)



Oil filling port

Fig 14

- E. Gear oil 85W/90 API/GL-4 GL-5 are recommended for gearbox ; the amount required is 2 L; and the oil level should be between upper scale and lower scale.



(3) Cooling liquid

- A. Cooling system of the engine must be filled with adequate cooling liquid. The freezing point of the cooling liquid should be 9°F lower than the freezing point of the applied area.

The filling port of the radiator



- B. After 5-minute running of the engine, stop it and wait for 15 minutes before you inspect the cooling water level. If it is still not enough, add more cooling water to the limit line.

Auxiliary tank

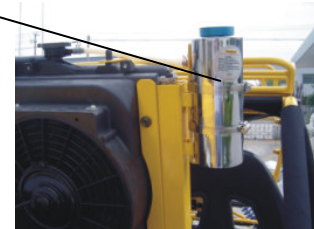


Fig 16

3.2 PERIODICAL MAINTENANCE

The maintenance intervals in the following table are based on average riding conditions. Unusual condition requires more frequent service.

Time of service Items	Initial service (First week)	Monthly	Quarterly	Yearly
Tyre pressure/wear	I	I		
Brake performance	I	I		
Tightness of fasteners	I	I		
Air cleaner	(C or R)/200miles			
Carburetor	I	A		C
Spark plug			C, A	
Engine oil		I	R	
Gear box oil		I	R	

Oil filter screen			C	
Chassis		C, I	L	
Fuel switch/Fuel tank		I		C
Battery			I	
Valve clearance of engine			A	
Control cables		I		
Cooling liquid		I		R

Note: A: To adjust; C: To clean; I: To inspect, clean or replace if necessary;
L: To lubricate; R: To replace.

The following are some instructions on periodical check:

1). Lubricating oil check (Fig 18)

Check the oil gauge. Make sure there is enough lubricating oil; the capacity is 4.5L. (Engine 2.5L, Transmission: 2L).

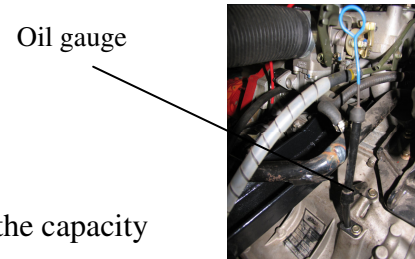


Fig 18

2.) Fuel tank check

Check for enough fuel in the fuel tank. The fuel tank capacity is 20L.RQ93 unleaded gasoline is recommended. Do not fill too much fuel, or the fuel may overflow and cause a fire.

3.) Tire pressure check

Check if the tire pressure is normal. The recommended tire pressure is 200kpa; Check if there are any metal fragments or nails stuck in the tire; if so, remove them immediately. Check if there is any crack or severe tear on the tire, replace the tire if necessary.

4.) Battery check

The normal voltage should be above 12.8V; Keep the terminals clean and the connections tight. ; If the voltage is below the normal condition, remove the battery to recharge

5.) Chassis check

After cleaning the chassis, inspect the body, front and rear suspensions, rocker arm, rear axle and

fasteners and check if there is any weld failure, crack or loose connections.

6.) Brake system check

The brake pedal must have proper length of travel. Length of travel is the distance from brake pedal's idle position to its working position, and it is about 15-25mm.

Periodically inspect the thickness of the brake disc. It should be replaced in case of any wear of over 1mm.

Periodically inspect the level of the brake fluid in the oil cup. When the brake fluid is below the required level, fill new DOT4 brake fluid.

Always keep the brake discs and the brake pads clean.

Brake master cylinder Clutch master cylinder

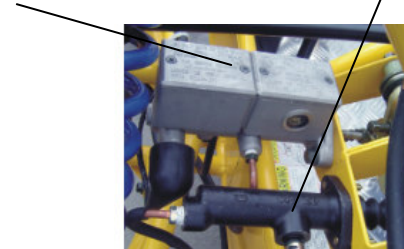


Fig 19

Brake cylinder Sphero joint



Fig 20

7) Maintenance guide

Repair should be done by professional service center, unless the owner possesses repair expertise and a complete set of repairing tools. Stop the engine before repairing the kart.

WARNING: If your kart has experienced a collision or overturn, please carefully inspect each part of the kart, such as the frame, suspension and steering device; Driving damaged kart is forbidden as it will endanger yourself.

3.3 Required torque for tightening the bolts and nuts:

number	Item	Required torque	
		N. M	Kgf m
1	Front swing arm bolt	50~60	5~6
2	Rear swing arm bolt	95~105	9.5~10.5
3	Rear swing arm nut	95~105	9.5~10.5
4	Nuts at front and rear hub	65~75	6.5~7.5
5	Nuts at front and rear rim	65~75	6.5~7.5

4. Trouble Shooting

(1) Engine does not start, or suddenly stops during driving, first inspect electrical circuit status , then check for enough fuel in the fuel tank, and then perform following inspections.

Troubles	Causes	Solutions
Engine suddenly stops.	(1) Spark short circuit. (2) Carbon accumulation on spark plug. (3) Ignition coil is damaged. (4) Piston seized in the cylinder.	(1) Clean or replace (2) Remove accumulated carbon (3) Replace. (4) Repair
Engine runs more and more slowly, until finally stops running.	(1) Fuel dust clogs. (2) Cylinder head blows or gasket is damaged.	(1) Clean (2) Tighten or replace

(.2) Engine difficult to start

Troubles	Causes	Solutions
Fuel fail to flow into the carburetor.	(1) Fuel screen clogged (2) Fuel pipeline clogged. (3) Fuel in the fuel tank exhausted. (4) Fuel valve clogged.	(1) Clean and wash (2) Clean and purge. (3) Refuel. (4) Clean and purge
Inspection finds the spark is weak.	(1) Spark plug damaged. (2) The clearance adjustment of the spark plug is improper. (3) CDI components have defects. (4) The ignition coil is damaged.	(1) Replace. (2) Adjust. (3) Replace (4) Replace
Spark plug fails to create spark.	(1) Spark plug is damaged. (2) Spark plug is dirty or wet or shorted out. (3) The clearance adjustment of the spark plug is improper.	(1) Replace. (2) Clean (3) Adjust.

	<p>(4) CDI components have defects.</p> <p>(5) The ignition switch is damaged.</p> <p>(6) The ignition switch has bad contact.</p> <p>(7) Electrical wire is damaged.</p>	<p>(4) Replace</p> <p>(5) Replace</p> <p>(6) Replace</p> <p>(7) Repair or replace.</p>
<p>The cylinder compression pressure is too low.</p>	<p>(1) Too much wear on the cylinder or piston ring.</p> <p>(2) Piston ring gets stuck</p> <p>(3) Cylinder head gasket is damaged.</p> <p>(4) Spark plug is loose.</p>	<p>(1) Repair or replace.</p> <p>(2) Repair</p> <p>(3) Replace</p> <p>(4) Properly tighten</p>

(3) Abnormal sound from Engine

Troubles	Causes	Solutions
It is noisier as the rpm increases.	(1) Too much clearance between piston and cylinder. (2) Piston ring is too loose. (3) Too much wear at the crank bearing	(1) Repair the cylinder or replace it. (2) Replace (3) Replace

(4) Braking is bad

Trouble	Causes	Solutions
Braking is not effective	(1) Excessive wear at the brake pads. (2) Brake pads are dirty. (3) Brake disc wears or stained with oil. (4) Too much idle travel (5) There is air in the hydraulic braking oil hose.	(1) Replace (2) Clean. (3) Clean or replace (4) Adjust (5) Eliminate air

(5) Fuel consumption is too much

Troubles	Causes	Solving methods
Fuel consuming too much	<ul style="list-style-type: none">(1) Carburetor adjustment is not proper(2) Fuel pipeline leakage(3) Carburetor float dose not work(4) Brakes drag(5) Tyre pressure is not enough(6) Engine works improperly(7) Too much dirt in the air cleaner and cause it clogging and too thick mixed air	<ul style="list-style-type: none">(1) Adjust the carburetor(2) Find the repair the leakage(3) Repair or replace(4) Adjust until brakes move smoothly.(5) Inflate the tire to its prescribed pressure(6) Inspect the engine(7) Maintain the air cleaner, and clear the dirt and dust, or replace the filter

5. VIN

Product identification number:

Please take down the frame number and engine number for reference. The frame number is stamped on right frame at the back of the kart.