

# Fabrication of Go-Kart with Low Cost by Mainting Good Aesthetic

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**Abstract-** Various racing competitions are running all over the world. In India such competitions are also held to motivate engineering student for improving their quality as well as making improvement in technology. From various racing competitions such as Formula1, BAJA, and Go-kart etc. Go-Kart is most popular because of simplicity of Rule and professional as well as non-professional can also make this car. Go-Kart represents Formula 1 in case of speed but it is less costly. In Go-Kart suspension system is eliminated so its ground clearance is less. Go-Kart is open wheel car with moderate comfort to driver. India is also supporting these competitions largely because of its increasing popularity. As popularity increases new competitors also introduce themselves in competition and these competitors have to face various problems in competition as well as in beginning of competition. One of the problems they face is costing. Go-Kart is cost effective racing but increasing competition, less cost and better result is equal to good quality car as per Indian economical system. While maintaining Cost effectiveness one criteria emerge is making car in good aesthetic so it helpful for our self to get in market. This research paper is focused for cost and aesthetics of Go-Kart for beginner.

## I. INTRODUCTION

Go-Karts are made and sold as recreational racer. They are simple, easy to make which can run on smooth and rough (not highly) with desirable speed. Even in the most primitive forms Go-Kart is adapted in transportation technology in developing countries to economic growth and poverty alleviation. Go-Kart offers simple and inexpensive technological need required in transportation. Most useful nature of Go-Kart is considered as purpose of racing. Weight, power, controlling, stability etc. are most important criteria. The purpose of Go-Kart racing is to make a car which satisfies above mentioned parameter while maintaining cost for engineering-management combination and good aesthetic for artistic purpose, because one product can fit into the customer satisfaction box when it has good aesthetic and better functioning. Go-Kart has increasing market size year by year so it is necessary for all Go-Kart team to introduce our self not only in competition but also in market which look like to serve for your passion. This research paper is for beginner and it help them to achieve both parameters with

very sophisticated manners. As beginner our team have face same problem and overcome this by effective method.

## II. PURPOSE OF PAPER

The purpose of paper is as follows

1. To make Go-Kart with Low cost.
2. To make Go-Kart with good aesthetic.
3. Introduce beginner the balance condition between low cost and good aesthetic.
4. Introducing beginner for making itself to fit for it in market.

## III. PARTS OF GO-KART

Parts of Go-Kart are as follows

1. Chassis
2. Engine and Transmission System
3. Breaking system
4. Steering system
5. Aerodynamics system
6. Wiring

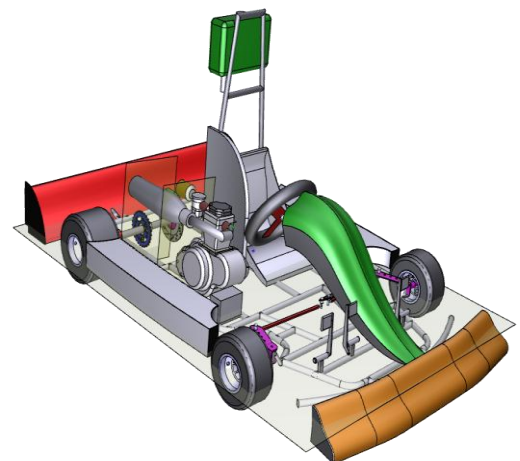


Fig. 1. 3D Go-Kart Model

#### IV. COSTING DETAIL

TABLE I. Costing Report

Sr No	Expenditure parameter	Quantity	Price (Rupees)
<b>A. Chassis</b>			
1.	Hollow Pipe	1)1 inch and 2mm thick 2) 1inch and 1.5 mm thick	4394/- 467.55/-
2.	Welding ( Gas Welding)	Complete Chassis	400/-
<b>B. Steering System</b>			
1.	Steering Wheel & Steering column	Complete 1 Set	500/-
2.	Press Fit Bearing	4 (Each 200/-)	800/-
3.	M.S Plate	1	110/-
4.	Gas Weld	-	70/-
5.	Clam Bend	2	80/-
6.	Stub Axel	2( Each 150/-)	300/-
7.	I Bolt	4(Each 280/-)	1120/-
8.	King Pin	2(Each 40/-)	80/-
<b>C. Tier</b>			
1.	Tier	4( One Set)	12000/-
2.	Rare Hub	2(Each 1100/-)	2200/-
3.	Lock and Nut Bolt	4(Each 10/-)	40/-
<b>D. Engine and Transmission System</b>			
1.	Rare Shaft	1=32 Diameter	1428.5/-
2.	Engine	1	10000/-
3.	Air Filter	1	100/-
4.	Muffler	1	1000/-
5.	O-ring	1	15/-
6.	Machining Key Slot	3	500/-
7.	Engine Brazing	-	30/-
8.	Pulley	1=6 inch 1=5 inch	570/- 320/-
9.	Key	10	200/-
10.	Pedal Stub Bearing	2(Each 480/-)	860/-
<b>E. Braking System</b>			
1.	ABC Pedal Breaks	3	250/-
2.	Caliper	1	1355/-
3.	Caliper Disc	1	1092/-
4.	TMC (150 cc Pulsar)	1	1000/-
5.	Brake Pad	1 Set	280/-
6.	ABC Inner wire and Casing	5	500/-
7.	ABC Lock	15	50/-
8.	Spring	7	70/-
<b>F. Electrical</b>			
1.	Battery	1	1850/-

2.	Engine Wiring & Expert	-	3200/- + 200/-
3.	Red Wiring Cable	-	30/-
4.	Plug Wire	1	40/-
5.	Relay	1	280/-
6.	Extension Wire	-	45/-
7.	Wire Casing	-	40/-
8.	Fuse 20	-	20/-
9.	Simple Fuse	-	25/-
10.	Kill Switch	3	320/-
11.	Brake LED	-	180/-
12.	Head Lamp	2	250/-
<b>G. Fuel</b>			
1.	Fuel Tank	1	420/-
2.	Nozzle	1	20/-
3.	Remaining Assembly	-	150/-
<b>H. Other Specification</b>			
1.	Damper Material Sheet	1	1500/-
2.	Seat With Cousion	1	550/-
3.	Backlight Sheet	1	100/-
4.	Clamp	Bulk	32/-
5.	Rubber Washer	Bulk	10/-
6.	Rivets	Bulk	175/-
7.	Cable Tie	Bulk	50/-
8.	Screw Bolt	Bulk	32.50/-
9.	Fastener	Bulk	1600/-
10.	Scrap Material	-	2000/-
11.	Purchased Scrap Material	-	700/-
12.	Bumper	-	1500/-
13.	Other	-	1508.45/-
<b>TOTAL</b>			<b>59020.00/-</b>

#### V. AESTHETIC

There are various parts which can affect aesthetic of Go-Kart

##### A. Chassis

In chassis only welding can affect aesthetic so welding should do carefully.

##### B. Engine and Transmission System

In this first we have to take care that engine is rigidly attached to chassis or not. We can also improve aesthetic of car by providing well designed aerodynamic shape compartment to Engine and Transmission System.

##### C. Wiring

Wiring should be under coverage providing at the bottom of chassis which gives comfort to rider and car look like beauty. This also makes clean effect while looking at car.

#### D. Aerodynamics

In aerodynamics we can provide well shelter coverage to body of Go-Kart so that it looks like more attractive.

#### VI. CONCLUSION

In that way our team has achieved manufacturing cost up to 59020/- which is nearly less price as per Indian market because Indian market companies provide Go-Kart at start price of 1 Lakh rupees. Our team also maintains its aesthetic so that we can introduce our self in Indian market. While making the Go-Kart team, has never compromise with safety of driver.

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