MULTIPURPOSE DIESEL BIKE

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ABSTRACT

In today's global world, The Farmers are leading issue in India. `How we can help the farmers and overcome his/her work?' it is the big question standing in front of world. So related to that, we have designed, construct and tested a "MULTIPURPOSE DIESEL BIKE" from agricultural diesel spraying machine. This bike giving awesome experience of riding, it is also use for water pump as well as Use for running the spraying unit also.This bike is light in weight, maintenance cost is less. The efficiency/average of bike is 108 km/lit. With some additional modification and cost we can increase the efficiency of this bike more than that. The low cost and broad capabilities of this bike provide valuable help to our farmers of India.

Keyword :- *Diesel Bike, Agriculture, India, Farmer.*

1. INTRODUCTION

On initial consideration, the use of diesel engines in motorcycles would not appear to be an ideal application for this type of power unit. Due to space and size limitations, typical motorcycle power units are relatively compact, light and with high specific power outputs, whereas in the past the use of diesel engines has been generally been confined to relatively large and heavy commercial applications, off-road equipment, railroad use and a variety of stationary applications where size, weight and specific power outputs are not primary considerations.

1.1 OBJECTIVE

[1] To develop a working model of diesel bike as innovative purpose (Multipurpose).

[2] To demonstrate the major components of diesel machine of spraying.

[3] To prepare a user manual of the system for innovation.

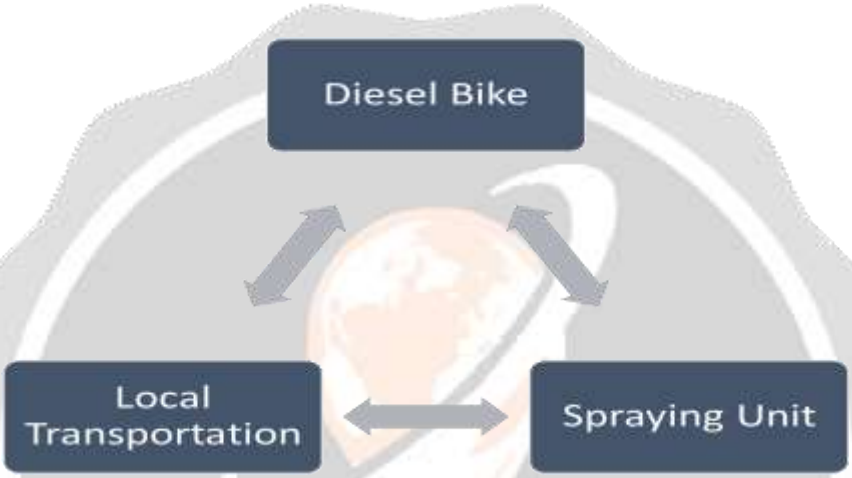
[4] It required less time as compared to other machine.

1.2 SCOPE

By considering the concept the design & fabrication of multipurpose diesel bike will carry out different operation ,so it help the farmer to overcome his/her work in agriculture sector anytime .

2. BLOCK DIAGRAM OF DIESEL BIKE

The body of Bike is made of completely metal as is can be sustain high load on it. This body is either use for the construction of bikes in automobile sector in large scale. The Diesel machine, lights, Trans-mission unit, suspension, handle, Tyres, Seat, Fuel tank etc. are mounted with the help of Nut and bolts. The Specific amount of weight were added at the central portion of the chassis for better balancing condition of bike. The purpose of this is to balance the bike perfectly at high speed.



Block diagram

2.1 COST

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Table 1:- Cost Sheet

SR.NO	MATERIAL SELECTED AND USE FOR PROJECT	COST
1.	Diesel Machine	8000/-
2.	Chassis And Stand	1800/-
3.	Tyre And Wheels	900/-
4.	Chain Sprocket And Shaft	700/-
5.	Colour Spray	1380/-
6.	Suspension (Rear)	300/-
7.	Fuel Tank And Handel	520/-

8.	Silencer Pipe And Elbow	130/-
9.	Wheel Bearing	120/-
10.	Transmission Shaft Bearings	350/-
11.	Clutch And Acclerator Wire	170/-
12.	Tank And Machine Rubber Bushes	40/-
13.	Chain Lock	5/-
14.	Centrifugal Clutch	520/-
15.	Clutch Liver And Fork	90/-
16.	Seat And Seat Cover	120/-
17.	Axle Bush	40/-
18.	Tail-Lamp And Front LED	350/-
19.	Air Filter	349/-
20.	Nut-Bolts(Different Dimensions)	600/-
21.	Metal Strip And Plates	150/-
22.	Radium	480/-
23.	Handel Grip Cover	70/-
24.	Foot Stand	80/-
25.	M-Seal And Bond-Tight	40/-
TOTAL		**16934/-**

The Total Cost of Project Is Roundup to RS 17000/-…

2.2 COMPONENT LIST

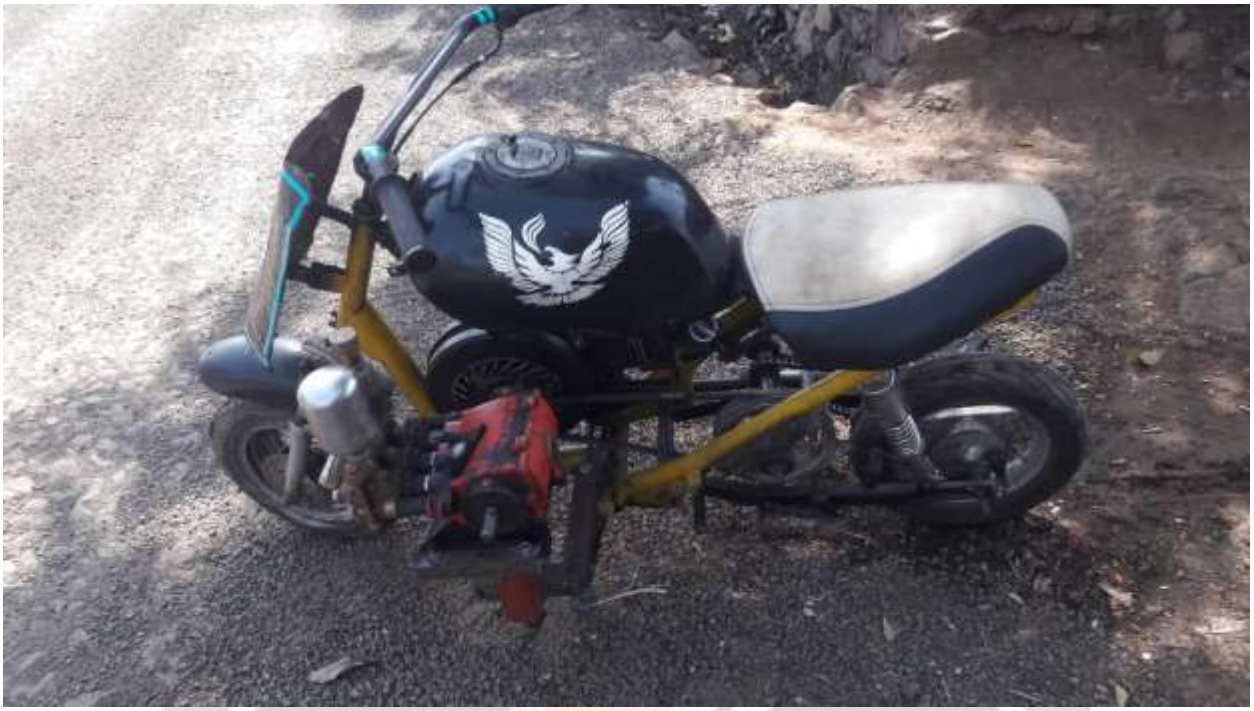
The following Components we use in our project.

Table -2: Component List

SR NO.	Material Selected And Use For Project	Description(Size/Dimension)	Quantity
1.	Diesel Machine	520 x 335 x 425	1
2.	Chassis And Stand	-	1
3.	Tyre And Wheels	10.7 cm	2
4.	Chain Sprocket And Shaft	12 cm	2
5.	Colour Spray	-	8

6.	Suspension (Rear)	16 cm	2
7.	Fuel Tank And Handel	16 x 12 x 12 cm	1
8.	Silencer Pipe And Elbow	-	1
9.	Wheel Bearing	-	4
10.	Transmission Shaft Bearings	-	2
11.	Clutch And Accelerator Wire	-	1
12.	Tank And Machine Rubber Bushes	Wire strip rubber Bush	12
13.	Chain Lock	-	1
14.	Centrifugal Clutch	-	1
15.	Clutch Liver And Fork	-	2
16.	Seat And Seat Cover	-	1
17.	Axle Bush	-	2
18.	Speedometer And Cable	-	1
19.	Air Filter	-	1
20.	Nut-Bolts(Different Dimensions)	-	-
21.	Metal Strip And Plates	-	3
22.	Radium	-	-
23.	Handel Grip Cover	-	2
24.	Foot Stand	-	2

3. WORKING MODEL



3.1 PROCESS OF WORKING

The basic working Principle of this machine is based on the 'Diesel Cycle'. The fuel diesel is come from tank to low pressure pump in the engine 'from this pump fuel will enter into the fuel filter, it will filtered the fuel and absorb the foreign components and passes pure filter fuel to the injection pump and inject the pump. The residual diesel will return through the return line to the filter and use again. So in this machine a pully is coming from output shaft then this pully and spraying unit pully is attached with each other with the help of V belt. After that spraying unit will start.

3.2 ADVANTAGES

The demonstration model is very simple in which all the equipment's are mounted on a simple frame with very less complexities and the connections are provided which can be easily identified and easily understood, whose controls are quiet user-friendly. Besides all of these, following are the benefits of Experimental development of Diesel Bike:

[1] Educational oriented purpose (Easy to learn for students).

[2] To study Technical Specifications of Diesel Engine.

[3] It contains a compact unit.

[4] Low maintenance cost.

3.3 APPLICATION

[1] Use in Agricultural Sector for Spraying purpose .

[2] Commercial use for riding.

4. CONCLUSIONS

The motive behind developing this multipurpose diesel bike is to create mechanizations which will help to minimize human effort of farming.

It is suitable for the spraying at minimum costs for the farmers so that he can afford it, of the many product available.

It is most important to select the most efficient and easy type for your particular needs, whether if it is for applying insecticide fungicides, weed killer, liquid fertilizers or wettings agents. For example, greaps trees ,oniun sprayers is made especially for the applications of liquids material to the farms area.

The sprayer is are metered to allow quick mixing and the coarse sprays, so it does not takes as long to apply weeds killers, insecticides etc. Also, there is also not as much chances of drifting of the liquids into nearby flowers and shrub bed. The old saying You get for what you pay for does apply to the sprayer.

Efficiency and accuracy vary very much considerably, especially with the types that attaches to engine hose. Sprayer that are used for weeds killing or for applying any types of soil sterility should not be utilized for any other purposes. In fact, you will find it a very good practices to set sprayer to side just for the farms areas. Use separate one for sparying and fluding . It's a good practice to clean out your sprayers immediately after you used it for any type of the spraying.

5. REFERENCES

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