



SRI RAAJA RAAJAN COLLEGE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, New Delhi & Affiliated to Anna University)

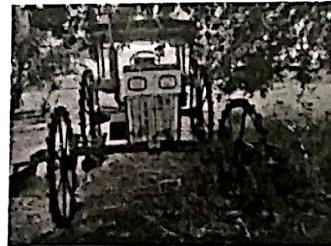
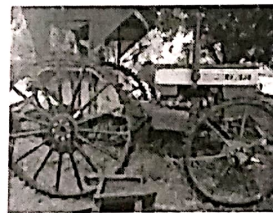
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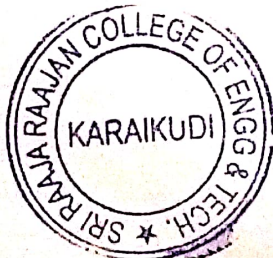
Modified Tractor for Multipurpose Agricultural Utilities

The main purpose of this project is to reduce the human efforts in farming of crops such as Paddy, Sugarcane, Maize, Brinjal, Ladies finger and So on. Thereby reduce the cost of production in farming various crops.

The design consist of narrow width and high diameter wheels. Due to its structure, it allow the tractor to travel in between the crops for pesticides spray, inorganic fertilizer sewing and cultivation work. It can cover over hundreds of labors work done area in a day. Due to its ground clearance level, it have capable to travel between the grown up crops such as paddy, Maize, Brinjal, Ladies finger. Separate cultivators are needed to design for every crop. They are under process.



Designing a modified tractor for multipurpose agricultural utilities involves incorporating various features and adaptations to enhance its functionality. Here's a conceptual design that takes into account some common requirements for versatile agricultural applications



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Power and Engine:

- Opt for a powerful engine with sufficient horsepower to handle various tasks efficiently.
- Include a fuel-efficient system to minimize operational costs.

Modular Attachments:

Design the tractor with a quick-attach system to enable easy installation and removal of attachments. Hydraulic system capable of supporting a range of implements, such as plows cultivators, harrows, seeders, and sprayers. Ensure compatibility with both front and rear attachments to accommodate various tasks.

All-Terrain Capability:

Equip the tractor with four-wheel drive (4WD) to enhance traction and maneuverability across diverse terrains. Implement adjustable suspension for better ride comfort and stability. Consider incorporating differential lock systems for improved performance on challenging surfaces.

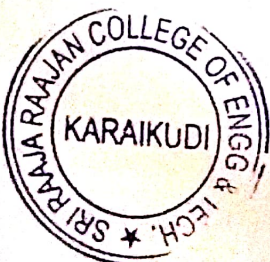
Operator Comfort and Safety:

Design a spacious and ergonomic cabin to reduce operator fatigue during long working hours. Incorporate air conditioning, heating, and ventilation systems for all-weather comfort. Include sound insulation to minimize noise levels. Install safety features such as roll-over protection structures (ROPS), seat belts, and proper lighting for increased operator safety.

Maintenance and Accessibility:

Ensure easy access to critical components for maintenance and repair purposes.

Include diagnostic systems to identify issues quickly and provide actionable information to the operator or service personnel.




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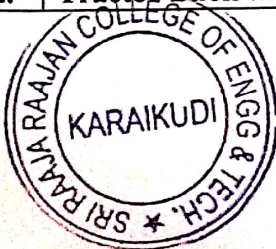
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Quotation

Modified tractor for Multipurpose Agricultural Utilities

Sl.No	Items	Price
Front Wheel Assembly Work		
1.	Swaraj 735FE Tractor	2,50,000
2.	4 Wheels including transportation cost	1,23,000
3.	Straight Front Bar including welding and Lathe work	12,000
4.	sub axial pipe	10,000
5.	2 Sub axial	8,000
6.	2 Front wheel Hub	12,000
7.	2 Treast Bearing	2000
8.	2 Hub inner Bearing	2200
9.	2 Hub outer Bearing	2800
10.	2 Oil Seal	400
11.	Moon lock for Sub Axial	50
12.	2 Arm rubber	60
13.	8" 18mm TVS bolt nut 6	1000
14.	Arm (Right side and Left side)	7000
15.	Grease 2 Kg	800
16.	Small Extension link (Front Wheel Alignment)	3500
17.	4 End for Small Extension link	2500
18.	Tractor front wheel bolt nut	1200
Power Steering Conversion		
19.	Double Door Demand Box	5500
20.	2 Dowdy pump	9000
21.	Oil Seal for belt pulley	100
22.	2 Cir clip	120
23.	2 Dowdy pump Bearing	1000
24.	Hydraulic steering controller box	15000
25.	Steering rod assembly	2500
26.	Steering disk	1500
27.	Pipe to carry oil (pump to controller)	7000
28.	Hose to carry oil (controller to cylinder)	4500
29.	BSB link in controller	1500
30.	Hydraulic cylinder	7000
Back Wheel Assembly Work		
31.	2 Pipe Work for Extension	12,000
32.	Tractor Back wheel bolt nut	1800



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Sl.No	Items	Price
	Tractor Bed Assembly Work	
33.	Hydraulic bed shaft Extension	3000
34.	Hydraulic top link	5000
35.	Hydraulic bed ball link	3500
36.	TOTAL	5,18,580



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