

# AUTOMOBILE REPAIRING AND SERVICE CENTRE



## 1.0 INTRODUCTION

Due to wear and tear, friction, the life of automobiles decreases. Hence, the automobiles need frequent service in all respects in order to keep them in good working condition. The unit can be set up in rural areas, nearby towns on any roads to cater the service of vehicles.

Automobile repairing and servicing is a most commonly known activity in almost all urban areas where all types of motor vehicles like cars, buses, lorries, jeeps, etc are periodically sent for repairing and servicing. Improper maintenance of vehicles, present conditions of roads, irresponsible driving, using cheaper spare parts, etc are the main reasons for break-down of the vehicles. Service station is the most essential unit to vehicle users. This unit can be established in urban, semi-urban and village areas to meet the local requirement. Candidates having good experience or qualified persons can start this unit with low investment.

This project profile is for setting up of an Automobile Repairing and Servicing Unit based on 300 working days per annum and 8 working hours per day. The installed capacity of the unit per annum is as follows;

Minor Repairing	-	24 Nos.
Complete Truck Body	-	900 Nos.
Painting	-	60 Nos.

## 2.0 MARKET POTENTIAL

There is good demand for automobile service centre due to increase in the number of vehicles day to day. Regular

maintenance and servicing of vehicles is required for safe driving and durability of the vehicles. In view of the significant inter-town/city flow of traffic, there is scope for many units to come up along various national and state highways. Another avenue for new units is in the field of painting of vehicles. There are a few organized painting shops and those units carry out painting with obsolete techniques. Based on the above, it would be seen that there are good prospects for new automobile repairing and servicing units.

## 3.0 PROCESS DETAILS:

It is a service oriented unit, so different services like engine overhauling, general repairing, gear box repairing, suspension work, changing of break wires & other spare parts, etc are taken up for the vehicles. Cleaning and painting is also undertaken for the vehicles.

The process of servicing a motor car will be as below. As soon as the car is brought to the workshop;

- The vehicle is given a serial no and the job card of the vehicle is prepared describing the various faults and complaints.
- The car is inspected and categorized according to the work to be done on the vehicle.
- Carrying out the repairing, replacement, cleaning jobs, denting or painting work.
- Delivery of the vehicle and billing.
- Other services & facilities.

**4.0. COST OF THE PROJECT**

The estimated project cost is given below:

(Rs. in lacs)

Particulars	Amount (Rs)
<b>Land &amp; site development</b>	<b>Own Land/ On Lease</b>
<b>Building &amp; civil works</b>	<b>3.30</b>
<b>Plant &amp; Machinery</b>	<b>3.80</b>
<b>Misc. Fixed assets</b>	<b>1.16</b>
<b>Preliminary &amp; pre-operative expenses</b>	<b>0.75</b>
<b>Contingencies &amp; escalation @ 3%</b>	<b>0.25</b>
<b>Working capital</b>	<b>0.36</b>
<b>TOTAL</b>	<b>9.61</b>

**4.1 Land & Site Development:** Nil. Total Land Area: 3,000 Sq. Ft.; Covered Area: 1,000 Sq. Ft.

**4.2 Building & Civil Works:** Details of building & civil works are given below.

Particulars	Area (Sqft)	Rate (Rs)	Amount (Rs)
Work Shed cum Office	1000	275	275000
<b>Sub total</b>			<b>275000</b>
Add: Electrification, water supply and sanitation @20%			55000
<b>TOTAL</b>			<b>330000</b>
<b>Say (Rs. in lacs)</b>			<b>3.30</b>

**4.3 Plant & Machinery:** Details of plant & machinery are given below.

Particulars	Qty	Amount (Rs)
Air Compressor including Sprayer	1	320000
Hydraulic Jack	1	
Car Washing Equipment	1	
Spray Painting Set	1	
Electric Bench Grinder	2	
Electric Drilling Machine	2	
Chain Pulley Block	2	
Gas Welding Set	2	
Oil Spray Gun	5	
Miscellaneous Tools and Equipment	LS	25000
<b>Sub total</b>		<b>345000</b>
Add: Installation, transportation, etc @ 10%		34500
<b>TOTAL</b>		<b>379500</b>
<b>Say (Rs. in lacs)</b>		<b>3.80</b>

**4.4 Misc. Fixed assets:** Details of miscellaneous fixed assets are given below.

Particulars	Qty	Rate (Rs)	Amount (Rs)
Fixtures and Fittings	LS	--	40000
Furnitures	LS	--	15000
Miscellaneous items	LS	--	50000
<b>Sub total</b>			<b>105000</b>
Add: Installation, transportation, etc @ 10%			10500
<b>TOTAL</b>			<b>115500</b>
<b>Say (Rs. in lacs)</b>			<b>1.16</b>

**4.5 Contingencies & escalation:** Contingencies & escalation has been assumed at 3% of the cost of land & site development, building & civil works, plant & machinery and miscellaneous fixed assets.

**4.6 Preliminary & pre-operative expenses:** Details of preliminary & pre-operative expenses are given below.

		(Rs. In lacs)
Particulars		Amount (Rs)
Travelling expenses		10000
Professional & other fees		19000
Interest during implementation		30690
Miscellaneous expenses		15000
<b>TOTAL</b>		<b>74690</b>
<b>Say (Rs. in lacs)</b>		<b>0.75</b>

**4.7 Working capital:** Details of working capital are given below.

		(Rs. in lacs)		
	Period (Days)	Total Current Assets		
		Year 1	Year 2	Year 3
Raw materials	15	0.06	0.07	0.08
Power & Utility	30	0.05	0.05	0.06
Salary	30	0.43	0.44	0.44
Finished Goods	0	0.00	0.00	0.00
Receivables	15	0.36	0.41	0.47
<b>Total</b>		<b>0.90</b>	<b>0.98</b>	<b>1.06</b>
<b>Working capital margin in Year 1 (40%)</b>	<b>0.36</b>			

## 5.0 MEANS OF FINANCE

The means of finance for the project is estimated as below.

		(Rs. in lacs)	
Particulars	Percent	Amount	
<b><u>EQUITY</u></b>			
A. Equity from Promoters	40%	3.84	
B. Subsidy from Central/State Govt.	-		
<b><u>DEBT</u></b>			
Term Loan from Banks/Financial Institutions	60%	5.77	
<b>TOTAL</b>	<b>100%</b>	<b>9.61</b>	

## 6.0 PROFITABILITY STATEMENT

(Rs. in lacs)

Particulars	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7
<b><u>A. INCOME</u></b>							
Production capacity (Nos./annum)	984	984	984	984	984	984	984
Capacity utilisation	60%	70%	80%	80%	80%	80%	80%
Production/annum at capacity utilisation	<b>590</b>	<b>689</b>	<b>787</b>	<b>787</b>	<b>787</b>	<b>787</b>	<b>787</b>
Total income/annum	<b>8.64</b>	<b>10.08</b>	<b>11.52</b>	<b>11.52</b>	<b>11.52</b>	<b>11.52</b>	<b>11.52</b>
<b><u>B. OPERATING EXPENSES</u></b>							
Raw materials	1.54	1.79	2.05	2.05	2.05	2.05	2.05
Power & Utility	0.55	0.64	0.73	0.73	0.73	0.73	0.73
Salary	5.28	5.31	5.33	5.36	5.39	5.41	5.44
Repair & Maintenance	0.13	0.13	0.13	0.13	0.14	0.14	0.14
Other Expenses	0.09	0.10	0.12	0.12	0.12	0.12	0.12

<b>Total Operating Expenses</b>	<b>7.58</b>	<b>7.97</b>	<b>8.36</b>	<b>8.39</b>	<b>8.42</b>	<b>8.45</b>	<b>8.48</b>
<b>Operating profit</b>	<b>1.06</b>	<b>2.11</b>	<b>3.16</b>	<b>3.13</b>	<b>3.10</b>	<b>3.07</b>	<b>3.04</b>
<b>C. FINANCIAL EXPENSES</b>							
Depreciation	0.38	0.38	0.38	0.38	0.38	0.38	0.38
Interest on Term Loan	0.46	0.43	0.35	0.27	0.20	0.12	0.04
Interest on Working Capital Loan	0.04	0.05	0.05	0.05	0.05	0.05	0.05
<b>Net Profit</b>	<b>0.17</b>	<b>1.25</b>	<b>2.38</b>	<b>2.42</b>	<b>2.47</b>	<b>2.52</b>	<b>2.56</b>
Net cash accruals	<b>0.56</b>	<b>1.64</b>	<b>2.76</b>	<b>2.81</b>	<b>2.85</b>	<b>2.90</b>	<b>2.95</b>
Principal Repayment	0.00	0.96	0.96	0.96	0.96	0.96	0.96

**6.1 Production capacity and Sales Realisation:** Total services of repairing and servicing at 100% capacity utilization is estimated as below.

Minor Repairing	900 Nos.
Major Repairing	24 Nos.
Painting	60 Nos.
<b>Total production per annum at 100% capacity (Nos)</b>	<b>984 Nos.</b>

Particulars	Qty	Price per Unit (Rs.)	Amount (Rs.)
Minor Repairing	900 Nos.	400	360000
Major Repairing	24 Nos.	15000	360000
Painting	60 Nos.	12000	720000
<b>Total Sale Turnover at 100% capacity (Rs)</b>			<b>1440000</b>

**6.2 Raw materials:** Total expenses on raw materials at 100% capacity utilization are estimated as below.

Particulars	Qty Reqd	Price per Unit (Rs.)	Amount (Rs.)
Carbate (In Kg)	120 Kg	60	7200
Gas Rod (In Kg)	120 Kg	80	9600
Brass Rod (In Kg)	120 Kg	120	14400
Painting Materials	LS	Rs. 7500 for every nos. Of painting	45000
Lubricants/Fuel for Cleaning	LS	--	120000
Other Consumables like Gas Cylinder, Chemicals etc	LS	--	60000
<b>Expenses on raw material at 100% capacity (Rs)</b>			<b>256200</b>

**6.3 Power & Utility:** Total expenses on power & utility at 100% capacity utilization is estimated as below.

Particulars	Quantity	Power (Kw)	Total (Kw)
Plant & machinery (Total HP of 10)	—	7.46	7.46
General Lighting	20	0.10	2.00
Total power requirement/ day (Kw)			9.46
No. of hrs/day	8		
Nos. of days/annum	300		
Annual power requirement (kwh)	22704		
Rate per unit (Rs)	3.50		

Expenses on power (Rs)	79464
<b>Estimate of Utility</b>	
Expenses on other Utility (Rs)	12000
<b>Expenses on power &amp; Utility at 100% capacity (Rs)</b>	<b>91464</b>

**6.4 Salary:** Total expenses on salary in the 1<sup>st</sup> year are estimated as given below. It is assumed that salary expenses will increase @ 0.5% every subsequent year.

Particulars of Employees	Numbers	Salary/ Month (Rs)	Cost/annum (Rs)
Manager	1	10000	120000
Accountant cum Store Keeper	1	6000	72000
Skilled workers	2	5000	120000
Semi-skilled workers	3	4000	144000
Unskilled workers	2	3000	72000
<b>Expenses on salary in the 1st year (Rs)</b>			<b>528000</b>

**6.5 Repair & Maintenance:** Total expenses on repair & maintenance in the 1<sup>st</sup> year is estimated as given below. It is assumed that expenses on repair & maintenance will increase @ 2% every subsequent year.

(Rs. in lacs)			
Particulars	Cost (Rs)	Rate	Amount (Rs)
Building & civil works	3.30	1.00%	0.03
Plant & Machinery	3.8	2.00%	0.08
Misc. Fixed assets	1.16	1.50%	0.02
<b>Expenses on repair &amp; maintenance in year 1</b>			<b>0.13</b>

**6.6 Other Expenses:** Other expenses have been assumed at 1% of sales realisation.

**6.7 Depreciation:** Depreciation has been calculated by straight line method. The details of calculation are given below.

(Rs in lacs)			
Description	Cost (Rs)	Rate	Amount/annum (Rs)
Building & civil works	3.30	3.34%	0.11
Plant & Machinery	3.80	5.28%	0.20
Misc. Fixed assets	1.16	6.33%	0.07
<b>TOTAL</b>			<b>0.38</b>

**6.8 Interest on term loan & principal repayment:** Interest rate has been assumed at 8%. Duration of Loan repayment has been considered for a period of 7 years including moratorium period of 1 year with equal monthly instalments. The details of calculation are given below.

(Rs in lacs)								
Month	Year	1	2	3	4	5	6	7
Month 1	Opening balance	5.77	5.77	4.80	3.84	2.88	1.92	0.96
	Repayment	0.00	0.08	0.08	0.08	0.08	0.08	0.08
	Interest (8%)	0.04	0.04	0.03	0.03	0.02	0.01	0.01
	<b>Closing balance</b>	<b>5.77</b>	<b>5.69</b>	<b>4.72</b>	<b>3.76</b>	<b>2.80</b>	<b>1.84</b>	<b>0.88</b>
Month 2	Opening balance	5.77	5.69	4.72	3.76	2.80	1.84	0.88
	Repayment	0.00	0.08	0.08	0.08	0.08	0.08	0.08
	Interest	0.04	0.04	0.03	0.03	0.02	0.01	0.01
	<b>Closing balance</b>	<b>5.77</b>	<b>5.60</b>	<b>4.64</b>	<b>3.68</b>	<b>2.72</b>	<b>1.76</b>	<b>0.80</b>
Month 3	Opening balance	5.77	5.60	4.64	3.68	2.72	1.76	0.80
	Repayment	0.00	0.08	0.08	0.08	0.08	0.08	0.08
	Interest	0.04	0.04	0.03	0.02	0.02	0.01	0.01

	<b>Closing balance</b>	<b>5.77</b>	<b>5.52</b>	<b>4.56</b>	<b>3.60</b>	<b>2.64</b>	<b>1.68</b>	<b>0.72</b>
Month 4	Opening balance	5.77	5.52	4.56	3.60	2.64	1.68	0.72
	Repayment	0.00	0.08	0.08	0.08	0.08	0.08	0.08
	Interest	0.04	0.04	0.03	0.02	0.02	0.01	0.00
	<b>Closing balance</b>	<b>5.77</b>	<b>5.44</b>	<b>4.48</b>	<b>3.52</b>	<b>2.56</b>	<b>1.60</b>	<b>0.64</b>
Month 5	Opening balance	5.77	5.44	4.48	3.52	2.56	1.60	0.64
	Repayment	0.00	0.08	0.08	0.08	0.08	0.08	0.08
	Interest	0.04	0.04	0.03	0.02	0.02	0.01	0.00
	<b>Closing balance</b>	<b>5.77</b>	<b>5.36</b>	<b>4.40</b>	<b>3.44</b>	<b>2.48</b>	<b>1.52</b>	<b>0.56</b>
Month 6	Opening balance	5.77	5.36	4.40	3.44	2.48	1.52	0.56
	Repayment	0.00	0.08	0.08	0.08	0.08	0.08	0.08
	Interest	0.04	0.04	0.03	0.02	0.02	0.01	0.00
	<b>Closing balance</b>	<b>5.77</b>	<b>5.28</b>	<b>4.32</b>	<b>3.36</b>	<b>2.40</b>	<b>1.44</b>	<b>0.48</b>
Month 7	Opening balance	5.77	5.28	4.32	3.36	2.40	1.44	0.48
	Repayment	0.00	0.08	0.08	0.08	0.08	0.08	0.08
	Interest	0.04	0.04	0.03	0.02	0.02	0.01	0.00
	<b>Closing balance</b>	<b>5.77</b>	<b>5.20</b>	<b>4.24</b>	<b>3.28</b>	<b>2.32</b>	<b>1.36</b>	<b>0.40</b>
Month 8	Opening balance	5.77	5.20	4.24	3.28	2.32	1.36	0.40
	Repayment	0.00	0.08	0.08	0.08	0.08	0.08	0.08
	Interest	0.04	0.03	0.03	0.02	0.02	0.01	0.00
	<b>Closing balance</b>	<b>5.77</b>	<b>5.12</b>	<b>4.16</b>	<b>3.20</b>	<b>2.24</b>	<b>1.28</b>	<b>0.32</b>
Month 9	Opening balance	5.77	5.12	4.16	3.20	2.24	1.28	0.32
	Repayment	0.00	0.08	0.08	0.08	0.08	0.08	0.08
	Interest	0.04	0.03	0.03	0.02	0.01	0.01	0.00
	<b>Closing balance</b>	<b>5.77</b>	<b>5.04</b>	<b>4.08</b>	<b>3.12</b>	<b>2.16</b>	<b>1.20</b>	<b>0.24</b>
Month 10	Opening balance	5.77	5.04	4.08	3.12	2.16	1.20	0.24
	Repayment	0.00	0.08	0.08	0.08	0.08	0.08	0.08
	Interest	0.04	0.03	0.03	0.02	0.01	0.01	0.00
	<b>Closing balance</b>	<b>5.77</b>	<b>4.96</b>	<b>4.00</b>	<b>3.04</b>	<b>2.08</b>	<b>1.12</b>	<b>0.16</b>
Month 11	Opening balance	5.77	4.96	4.00	3.04	2.08	1.12	0.16
	Repayment	0.00	0.08	0.08	0.08	0.08	0.08	0.08
	Interest	0.04	0.03	0.03	0.02	0.01	0.01	0.00
	<b>Closing balance</b>	<b>5.77</b>	<b>4.88</b>	<b>3.92</b>	<b>2.96</b>	<b>2.00</b>	<b>1.04</b>	<b>0.08</b>
Month 12	Opening balance	5.77	4.88	3.92	2.96	2.00	1.04	0.08
	Repayment	0.00	0.08	0.08	0.08	0.08	0.08	0.08
	Interest	0.04	0.03	0.03	0.02	0.01	0.01	0.00
	<b>Closing balance</b>	<b>5.77</b>	<b>4.80</b>	<b>3.84</b>	<b>2.88</b>	<b>1.92</b>	<b>0.96</b>	<b>0.00</b>
<b>Principal Repayment</b>		<b>0.00</b>	<b>0.96</b>	<b>0.96</b>	<b>0.96</b>	<b>0.96</b>	<b>0.96</b>	<b>0.96</b>
<b>Interest</b>		<b>0.46</b>	<b>0.43</b>	<b>0.35</b>	<b>0.27</b>	<b>0.20</b>	<b>0.12</b>	<b>0.04</b>

## 7.0 DEBT SERVICE COVERAGE RATIO (DSCR)

(Rs. in lacs)

Year	1	2	3	4	5	6	7
Profit After Tax (Net Profit)	0.17	1.25	2.38	2.42	2.47	2.52	2.56
Depreciation	0.38	0.38	0.38	0.38	0.38	0.38	0.38
Interest	0.46	0.43	0.35	0.27	0.20	0.12	0.04
<b>Total</b>	<b>1.02</b>	<b>2.06</b>	<b>3.11</b>	<b>3.08</b>	<b>3.05</b>	<b>3.02</b>	<b>2.99</b>
Interest	0.46	0.43	0.35	0.27	0.20	0.12	0.04
Loan repayment	0.00	0.96	0.96	0.96	0.96	0.96	0.96
<b>Total</b>	<b>0.46</b>	<b>1.39</b>	<b>1.31</b>	<b>1.23</b>	<b>1.16</b>	<b>1.08</b>	<b>1.00</b>
<b>DSCR</b>	<b>2.21</b>	<b>1.49</b>	<b>2.37</b>	<b>2.50</b>	<b>2.64</b>	<b>2.80</b>	<b>2.98</b>

Average DSCR = 2.40

**8.0 BREAK EVEN POINT (BEP)**

(Rs. in lacs)

Year	1	2	3
<b>A. Net sales</b>	<b>8.64</b>	<b>10.08</b>	<b>11.52</b>
<b>B. Variable cost</b>			
Raw materials	1.54	1.79	2.05
Power & Utility	0.55	0.64	0.73
Other expenses	0.09	0.10	0.12
Interest on Working Capital Loan	0.04	0.05	0.05
<b>Total variable cost</b>	<b>2.22</b>	<b>2.58</b>	<b>2.95</b>
<b>C. Contribution (A-B)</b>	<b>6.42</b>	<b>7.50</b>	<b>8.57</b>
<b>D. Fixed &amp; Semi-fixed Costs</b>			
Salary	5.28	5.31	5.33
Repair & maintenance	0.13	0.13	0.13
Interest on Term Loan	0.46	0.43	0.35
Depreciation	0.38	0.38	0.38
<b>Total fixed cost</b>	<b>6.25</b>	<b>6.25</b>	<b>6.20</b>
<b>E. BREAK EVEN POINT</b>	<b>97.31%</b>	<b>83.28%</b>	<b>72.29%</b>
<b>F. BEP at operating capacity</b>	<b>58.38%</b>	<b>58.30%</b>	<b>57.83%</b>
<b>G. Cash BEP</b>	<b>54.80%</b>	<b>54.71%</b>	<b>54.25%</b>

**9.0 INTERNAL RATE OF RETURN (IRR)**

(Rs. in lacs)

Year	0	1	2	3	4	5	6	7
<b>CASH OUTFLOW</b>								
Capital Expenditure	8.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Working Capital	0.00	0.90	0.08	0.08	0.00	0.00	0.00	0.00
<b>Total (A)</b>	<b>8.50</b>	<b>0.90</b>	<b>0.08</b>	<b>0.08</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>CASH INFLOW</b>								
Profit After Tax		0.17	1.25	2.38	2.42	2.47	2.52	2.56
Add: Depreciation		0.38	0.38	0.38	0.38	0.38	0.38	0.38
Add: Interest		0.46	0.43	0.35	0.27	0.20	0.12	0.04
Add: Salvage Value								
<b>Total (B)</b>	<b>0.00</b>	<b>1.02</b>	<b>2.06</b>	<b>3.11</b>	<b>3.08</b>	<b>3.05</b>	<b>3.02</b>	<b>2.99</b>
<b>NET FLOW (B-A)</b>	<b>-8.50</b>	<b>0.12</b>	<b>1.98</b>	<b>3.03</b>	<b>3.08</b>	<b>3.05</b>	<b>3.02</b>	<b>2.99</b>

IRR = 23%

Sl. No.	Name of the Machinery Suppliers	Communication Address
1.	M/s Sugga Engineering Works	8/39, South Industrial Area, Kirti Nagar, New Delhi, Pin-110015.
2.	M/s Perfect Machine Tools Co. (P) Ltd.	Bell Building, Sri P.M.Road, Mumbai, Pin-400 001
3.	M/s Bharat Jyotee Mechanicals	B-18, Focal Point, Ludhiana Pin- 141 010, Punjab