



Fixed Operations 2 -

Financial Calculations and Formulas

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Service

Service Department Sales And Gross (Labor Only)

Category	Sales	Gross	Gross as % of Sales	Margin
Customer Car	\$ 68,822	\$ 69,723	101.02%	2.34%
Customer Express	\$ 44,204	\$ 24,610	55.68%	17.24%
Customer Other	\$	\$		0.00%
Warranty	\$ 40,951	\$ 30,299	73.98%	15.14%
Warranty Other	\$	\$		0.00%
Invoice	\$ 67,711	\$ 56,332	83.18%	23.44%
Inv / Road Ready/PDI	\$ 17,723	\$ 15,142	85.20%	6.57%
Act. Cost Of Labor	\$	\$		0.00%
Total	\$ 256,401	\$ 190,681	74.39%	100.00%

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The Picture	
Customer Pay Gross Profit %	69.14%
Total Service Dept. G.P. %	74.39%

Parts To Labor Ratios

Category	Parts Sales	Labor Sales	P/L Ratio
Customer Car	\$ 67,723	\$ 68,828	0.73
Customer Express	\$ 28,020	\$ 44,204	0.63
Customer Other	\$	\$	0.00
Warranty	\$ 52,910	\$ 40,961	1.29
Warranty Other	\$	\$	0.00
Service	\$ 70,859	\$ 67,711	1.05
Total	\$ 214,732	\$ 229,696	0.93

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The Picture	
Customer Pay Gross Profit %	69.14%
Total Service Dept. G.P. %	74.30%
Parts / Labor Ratio (Cust. Pay Only)	0.93

Service Department Profit Centering

Financial Category	Value Amount	% of Gross	Profit
Department Office	\$ 320,283		
Variable Expense	\$	0.00%	
Shipping Expense		0.00%	
Personnel Expense	\$ 125,165	39.06%	
Semi-Fixed Expense	\$ 26,200	8.18%	
Fixed Expense	\$ 41,819	12.90%	
Unallocated Expense		0.00%	
Operator Salary		0.00%	
Total Expenses	\$ 132,795	41.31%	
Net Profit	\$ (2,114)	-0.66%	

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Customer Pay Gross Profit %	69.14%
Total Service Dept. G.P. %	34.30%
Parts / Labor Ratio (Cust. Pay Only)	0.70
Total Service Dept. Expenses	\$ 132,795

Fixed Absorption

Parts Department Total Gross	\$ 97,669	% Adj. Over Exp	78.23%
Service Department Total Gross	\$ 191,304		30.41%
Body Shop Department Total Gross			0.00%
Total Fixed Gross Profit	\$ 289,960		
Total Dealership Expense	\$ 628,741		

Overhead Expense	\$ 628,741		
Total Fixed Gross Profit	\$ 289,960		
Total Dealership Expense	\$ 628,741		
Fixed Absorption Percentage	45.96%	Guideline	60%

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The Picture	
Customer Pay Gross Profit %	69.14%
Total Service Dept. C.P. %	74.95%
Parts / Labor Ratio (Cust. Pay Only)	0.79
Total Service Dept. Expenses	\$ 192,736

NADA ACTUAL SERVICE ANALYSIS

Performance

	Labor Sales / Month		Effective Labor Rates		Hours Billed
Customer Car*	\$ 85,830	÷	132.20	=	649.2
Customer Truck*	\$ 44,204	÷	132.20	=	334.4
Customer Other*	\$ -	÷		=	0.00
Warranty	\$ 40,951	÷	103.80	=	394.5
Internal	\$ 67,711	÷	51.96	=	1303.1
New Vehicle Prep	\$ 17,773	÷	103.80	=	171.2
Total	\$ 256,469				2852.5

POTENTIAL

\$ 256,469	÷	2852.49	=	\$ 89.91	
Total labor sales for month		Total hours billed		Effective Labor Rate	
16.00	x	8	=	20	2,560.0
# Service mechanical technicians		# Hours/Day		Working Days/Month	Clock Hour Avail
2,560.0	x	\$ 89.91	=	\$ 230,171	\$ 287,713.36
Clock Hours Available		Effective Labor Rate		Labor sales potential @100%	Labor sales potential @ 125%

How proficient are your technicians ?

2,852.5	÷	2,560.00	=	111.43%
Total Hours Billed		Hours Available		Tech Proficiency

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- Hours Per RO (Recap Sheet) 2.9
- Percent of One Item R.O.'s (Recap Sheet) 32.00%
- Customer Pay Effective Labor Rate (Recap Sheet) \$ 132.20
- Warranty Labor Rate (Recap Sheet) \$ 114.09
- Total Overall Effective Labor Rate \$ 89.91
- Overall Technician Proficiency 111.43%

FACILITY POTENTIAL	
Number of Bays	29
	x
Number of Days	20
	x
Number of Hours	8.5
	x
Effective Labor Rate	\$ 89.91
	<i>equals</i>
FACILITY POTENTIAL	\$ 443,258

FACILITY UTILIZATION	
Total Labor Sales	\$ 256,469
	÷
Facility Potential	\$ 443,258
	<i>equals</i>
FACILITY UTILIZATION	57.86%

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NADA "QUICK" SERVICE ANALYSIS

\$ 256,469

Labor Sales

2,852.5

Divided by Hours Billed

\$ 89.91

= OELR

\$ 256,469

Labor Sales

\$ 190,681

-Labor Gross

\$ 65,788

=Labor Cost

\$ 65,788

Labor Cost

2,852.50

/ Hours Billed

\$ 23.06

=Real Cost

\$23.06

Real Cost

÷

26.00%

=

\$88.69

E.L.R. Needed to earn
74%

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OWNER BASE POTENTIAL

$$\text{5 Year Owner Base } 5667 \times \text{Annual Hours Purchased } 8 = \text{Market Potential / Hours } 45,336.0$$

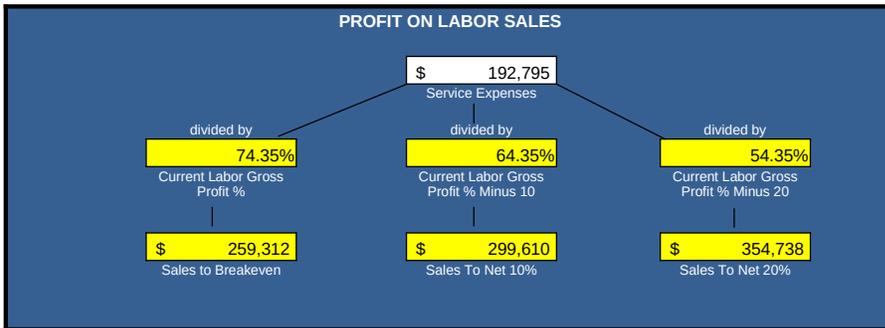
$$\text{Market Potential / Hours } 45,336.0 \times \text{Effective Labor Rate } \$ 89.91 = \text{5 Yr. O.B Sales Potential } \$ 4,076,171$$

$$\text{Avg. Mos. Labor Sales (excluding internal, PDI and NVI)} \$ 86,503 \times \text{Annualized } 12 = \text{Current Labor Sales Trend } \$ 1,038,031$$

$$\text{Labor Sales Trend } \$ 1,038,031 \div \text{5 Yr. O.B. Sales Potential } \$ 4,076,171 = \text{Ouch } 25.47\%$$

*Note: The industry average of 35% is very poor performance.

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The Picture

Customer Pay Gross Profit %	<input type="text" value="69.14%"/>	Customer Pay E.L.R.	<input type="text" value="\$ 132.20"/>
Total Service Dept. G.P.%	<input type="text" value="74.35%"/>	Total (overall) E.L.R.	<input type="text" value="\$ 89.91"/>
Parts / Labor Ratio (Cust Pay Only)	<input type="text" value="0.70"/>	Warranty Labor Rate	<input type="text" value="\$ 114.09"/>
Total Service Dept Expense	<input type="text" value="\$ 192,795"/>	Overall Tech Proficiency	<input type="text" value="111.43%"/>
Hours Per R.O (recap)	<input type="text" value="2.92"/>		
Percent Of One Item R.O.'s	<input type="text" value="32.00%"/>		

Technician Value

Calculate using daily available hours per technician

Hours	Days	Labor Rate	Sales Value
<input type="text" value="8"/>	<input type="text" value="20"/>	<input type="text" value="\$ 89.91"/>	<input type="text" value="\$ 14,386"/>

Sales Value	Gross Margin	Profit Value
<input type="text" value="\$ 14,386"/>	<input type="text" value="74.35%"/>	<input type="text" value="\$ 10,696"/>

<input type="text" value="\$ 10,696"/>	X	70%	<input type="text" value="\$ 7,487"/>
<input type="text" value="\$ 10,696"/>	X	80%	<input type="text" value="\$ 8,556"/>
<input type="text" value="\$ 10,696"/>	X	90%	<input type="text" value="\$ 9,626"/>
<input type="text" value="\$ 10,696"/>	X	100%	<input type="text" value="\$ 10,696"/>
<input type="text" value="\$ 10,696"/>	X	110%	<input type="text" value="\$ 11,765"/>
<input type="text" value="\$ 10,696"/>	X	120%	<input type="text" value="\$ 12,835"/>
<input type="text" value="\$ 10,696"/>	X	<input type="text" value="111.4%"/>	<input type="text" value="\$ 11,918"/>

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Profit Value Your # Adjusted Profit Value

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STAFFING REQUIREMENTS

A. Sales To Break Even			
Service Expenses for One Month	+	Current Gross Profit Percent	= Sales To Break Even
\$ 192,795	+	74.35%	= \$ 259,312

B. Sales To Generate 20% Net			
Service Expenses for One Month	+	Current Gross Profit Percent (Minus 20)	= Sales To Generate 20% Net
\$ 192,795	+	54.35%	= \$ 354,738

C. Technician Value								
Daily Work Hours	X	Average Proficiency Rate	X	Overall Effective Labor Rate	X	Work Days Per Month	=	Technician Value
8	X	80%	X	\$ 89.91	X	20	=	\$11,509
8	X	90%	X	\$ 89.91	X	20	=	\$12,947
8	X	100%	X	\$ 89.91	X	20	=	\$14,386
8	X	120%	X	\$ 89.91	X	20	=	\$17,263

D. Staffing To Break Even				
Sales To Break Even	+	Technician Value	=	Staffing
\$ 259,312	+	\$ 11,509 @ 80%	=	22.5
\$ 259,312	+	\$ 12,947 @ 90%	=	20.0
\$ 259,312	+	\$ 14,386 @ 100%	=	18.0
\$ 259,312	+	\$ 17,263 @ 120%	=	15.0

E. Staffing To Generate 20% Net				
Sales To Generate 20% Net	+	Technician Value	=	Staffing
\$ 354,738	+	\$ 11,509 @ 80%	=	30.8
\$ 354,738	+	\$ 12,947 @ 90%	=	27.4
\$ 354,738	+	\$ 14,386 @ 100%	=	24.7
\$ 354,738	+	\$ 17,263 @ 120%	=	20.5

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Service Advisor Performance

How To Set Advisor Sales Objectives To: Break Even, Net 10%, & Net 20%

Break Even	
1 Service Department's Monthly Expenses	\$192,795
+	
2 Divide by current labor gross profit % to break even	74.35%
=	
3 Equals New Sales Objective	\$ 259,312
+	
4 Number of Advisors	5.0
=	
5 Equals Sales Objective per Advisor	\$ 51,862
+	
6 Number of work days per month	20
=	
7 Equals daily sales objective per advisor	\$ 2,593
+	
8 Current overall effective labor rate	\$ 89.91
=	
9 Equals daily sales objective per advisor (FRH's)	28.8

Net 10 %	
1 Service Department's Monthly Expenses	\$192,795
+	
2 Divide by current labor gross profit % minus 10 to net 10%	64.35%
=	
3 Equals New Sales Objective	\$ 299,610
+	
4 Number of Advisors	5.0
=	
5 Equals Sales Objective per Advisor	\$ 59,922
+	
6 Number of work days per month	20
=	
7 Equals daily sales objective per advisor	\$ 2,996
+	
8 Current overall effective labor rate	\$ 89.91
=	
9 Equals daily sales objective per advisor (FRH's)	33.3

Net 20 %	
1 Service Department's Monthly Expenses	\$192,795
+	
2 Divide by current labor gross profit % minus 20 to net 20%	54.35%
=	
3 Equals New Sales Objective	\$ 354,738
+	
4 Number of Advisors	5.0
=	
5 Equals Sales Objective per Advisor	\$ 70,948
+	
6 Number of work days per month	20
=	
7 Equals daily sales objective per advisor	\$ 3,547
+	
8 Current overall effective labor rate	\$ 89.91
=	
9 Equals daily sales objective per advisor (FRH's)	39.5

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Exercise to See What Happens When You Increase Your Hours Per Repair Order

Number of customer R.O.'s for the month		<input type="text" value="1090"/>
	X	
Multiply by .3 hours		<input type="text" value="0.3 hours"/>
Additional customer labor hours generated	=	<input type="text" value="327.00"/>
	X	
Multiply by Customer Labor Rate		<input type="text" value="\$ 132.20"/>
Equals additional Customer Labor Sales Generated	=	<input type="text" value="\$ 43,229"/>
	X	
Multiply by customer Labor Gross Profit %		<input type="text" value="69.14%"/>
Equals additional Labor Gross Profit \$ generated	= (A)	<input type="text" value="\$ 29,880"/>
Divide Parts Sales R.O. by Labor Sales R.O. to calculate \$ parts sales per \$ of Labor Sales	=	<input type="text" value="0.70"/>
	X	
Multiply by Customer Labor Sales		<input type="text" value="\$ 43,229"/>
Equals additional Customer Parts Sales generated	=	<input type="text" value="\$ 30,233"/>
	X	
Multiply by Customer Parts Sales Gross Profit %		<input type="text" value="41.00%"/>
Equals additional Parts Gross Profit \$ Generated	= (B)	<input type="text" value="\$ 12,396"/>
Add Gross Profit from Labor (A) and Parts (B)	=	<input type="text" value="\$ 42,285"/>

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Labor Rate Calculations

1 Calculate the **Labor Rate** for the following operation.

A/C Charge and Check

	Labor Price	\$144.00		
	Units	1.2		
_____	÷	_____	=	\$0.00
Price		Units		Labor Rate

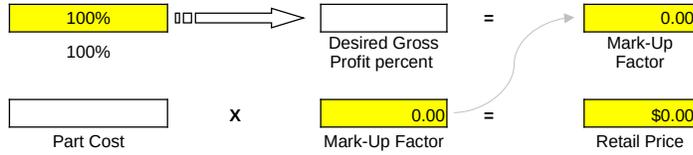
2 Calculate the **Effective Labor Rate** for the following "Repair" operations.

Labor Operations	Labor Price	÷	Labor Units	=	Labor Rate
Clean Fuel Injectors	\$ 117.60	÷	1.20	=	<input style="width: 50px;" type="text"/>
R&R Rear Hub Bearing.	\$ 96.00	÷	0.80	=	<input style="width: 50px;" type="text"/>
Replace Trans. Pan gasket	\$ 107.80	÷	1.10	=	<input style="width: 50px;" type="text"/>
R&R Headlight unit (1)	\$ 108.00	÷	0.90	=	<input style="width: 50px;" type="text"/>
Total Price	<input style="width: 80px;" type="text"/>		Total Units	<input style="width: 80px;" type="text"/>	
	↓		↓		
	_____	÷	_____	=	\$0.00
	Total Price		Total Units		Effective Labor Rate
					(For This R.O.)

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Calculating Mark-Up

- 3 Using the following formula, mark-up a part costing \$6.72 to attain a 35% gross profit (round to the nearest cent)



- 4 Calculate the "Weighted Average" price at a 40% Gross Profit for the following parts (round to the nearest cent)

Item	Cost	Annual Turnover	Total Cost
Filter #1	\$4.36 X	112 =	<input type="text"/>
Filter #2	\$4.01 X	56 =	<input type="text"/>
Filter #3	\$3.56 X	85 =	<input type="text"/>
Filter #4	\$3.86 X	202 =	<input type="text"/>
Filter #5	\$3.51 X	36 =	<input type="text"/>
Total Items		491	Total Cost $\$0.00$

$\$ -$ \div 491 = $\$ -$
 Total Cost Total Items Weighted Average Cost

$\$ -$ \times Mark-Up Factor = $\$ -$
 Weighted Average Cost Mark-Up Factor Weighted Average Price

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Cost Of A Come-Back

Lost Customers		<input type="text"/>
Average Hours per R.O.	X	<input type="text"/>
	=	<input type="text" value="0.0"/>
Effective Labor Rate	X	<input type="text" value="\$ 89.91"/>
	=	<input type="text" value="\$ -"/> (A) Service Labor Sales
<hr/>		
Service Department Gross Profit % (Excluding Sublet)	X	<input type="text" value="74.35%"/>
	=	<input type="text" value="\$ -"/> (B) Service Labor Gross
<hr/>		
Service Labor Sales (A)		<input type="text" value="\$ -"/>
Parts / Labor Ratio	X	<input type="text" value="0.73"/>
	=	<input type="text" value="\$ -"/>
Parts Dept Gross Profit % R.O.Sales	X	<input type="text"/>
	=	<input type="text" value="\$ -"/> (C) Service Parts Gross
<hr/>		
(B) Service Labor Gross		<input type="text" value="\$ -"/>
(C) Service Parts Gross	+	<input type="text" value="\$ -"/>
Lost Gross	=	<input type="text" value="\$ -"/>

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