



Financial Calculations and Formulas

Service Department Sales And Gross (Labor Only)

Category	Sales	Gross	Gross as % of Sales	%Sales Contribution
Customer Car	\$ 36,237	\$ 27,722	76.50%	42.11%
Customer Express	\$ 1,590	\$ 1,211	76.16%	1.85%
Customer Other			0%	0.00%
Warranty	\$ 14,044	\$ 11,794	83.98%	16.32%
Warranty Other			0%	0.00%
Internal	\$ 34,191	\$ 23,719	69.37%	39.73%
NVI / Road Ready/ PDI			0%	0.00%
Adj. Cost Of Labor		\$ (8,554)	0%	0.00%
Total	\$ 86,062	\$ 55,892	64.94%	100.00%

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Customer Pay Gross Profit %

76.49%

Total Service Dept. G.P. %

64.94%

Parts To Labor Ratios

Category	Parts Sales	Labor Sales	P/L Ratio
Customer Car	\$ 41,186	\$ 36,237	1.14
Customer Express	\$ 1,934	\$ 1,590	1.22
Customer Other		\$ -	0.00
Warranty	\$ 23,693	\$ 14,044	1.69
Warranty Other		\$ -	0.00
Internal	\$ 15,098	\$ 34,191	0.44
Total	\$ 81,911	\$ 86,062	0.95

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Customer Pay Gross Profit %	76.49%
Total Service Dept. G.P. %	64.94%
Parts / Labor Ratio (Cust. Pay Only)	1.14

Service Department Profit Centering

Expense Category	Dollar Amount	% of Gross	Profile
Department Gross	\$ 55,892		
Variable Expense		0.00%	
Selling Expense		0.00%	
Personnel Expense	\$ 45,961	82.23%	
Semi-Fixed Expense	\$ 28,141	50.35%	
Fixed Expense	\$ 8,468	15.15%	
Unallocated Expense		0.00%	
Dealer's Salary		0.00%	
Total Expenses	\$ 82,570	147.73%	
Net Profit	\$ (26,678)	-47.73%	

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Customer Pay Gross Profit %	76.49%
Total Service Dept. G.P. %	64.94%
Parts / Labor Ratio (Cust. Pay Only)	1.14
Total Service Dept. Expenses	\$ 82,570

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Fixed Absorption

		% Adj Ovhd Exp
Parts Department Total Gross	\$ 30,368	10.20%
Service Department Total Gross	\$ 55,892	18.77%
Body Shop Department Total Gross	\$ -	0.00%
Total Fixed Gross Profit	\$ 86,260	
Total Dealership Expense	\$ 297,773	

Overhead Expense	\$ 297,773
Total Fixed Gross Profit	\$ 86,260
Total Dealership Expense	\$ 297,773
Fixed Absorption Percentage	28.97%

Guideline 60%

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Customer Pay Gross Profit %	76.49%
Total Service Dept. G.P. %	64.94%

Parts / Labor Ratio (Cust. Pay Only) 1.14

Total Service Dept. Expenses \$ 82,570

NADA ACTUAL SERVICE ANALYSIS

Performance

	<i>Labor Sales / Month</i>		<i>Effective Labor Rates</i>	
Customer Car*	\$ 36,237	÷	120.00	=
Customer Express*	\$ 1,590	÷	120.00	=
Customer Other*	\$ -	÷		=
Warranty	\$ 14,044	÷	105.00	=
Internal	\$ 34,191	÷	120.00	=
New Vehicle Prep	\$ -	÷		=
Total	\$ 86,062			

POTENTIAL

$$\frac{\$ 86,062}{\text{Total labor sales for month}} \div \frac{733.90}{\text{Total hours billed}} =$$

$$\frac{10.00}{\text{\# Service mechanical technicians}} \times \frac{9}{\text{\# Hours/Day}} \times$$

$$\frac{2,160.0}{\text{Clock Hours Available}} \times \frac{\$ 117.27}{\text{Effective Labor Rate}} =$$

How proficient are your technicians ?

$$\frac{733.9}{\text{Total Hours Billed}} \div \frac{2,160.00}{\text{Hours Available}} =$$

Hours Per RO (RO Analysis) 3.3

Percent of One Item R.O.'s (RO Analysis) 0.00%

Customer Pay Effective Labor Rate (DMS Reoprt) \$ 120.00

Warranty Labor Rate (DMS Report) \$ 105.00

Total Overall Effective Labor Rate \$ 117.27

Overall Technician Proficiency 33.98%

Hours Billed	
302.0	
13.3	
0.00	
133.8	
284.9	
0.00	
733.9	

\$ 117.27

Effective Labor Rate

=

Working Days/Month

Clock Hour Aval

\$ 253,295

Labor sales potential @100%

\$ 316,618.95

Labor sales potential @ 125%

33.98%

Tech Proficiency

FACILITY POTENTIAL

Number of Bays		18
	x	
Number of Days		20
	x	
Number of Hours		11.5
	x	
Effective Labor Rate	\$	117.27
	<i>equals</i>	
FACILITY POTENTIAL	\$	485,482

FACILITY UTILIZATION

Total Labor Sales	\$	86,062
	÷	
Facility Potential	\$	485,482
	<i>equals</i>	
FACILITY UTILIZATION		17.73%

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NADA "QUICK" SERVICE ANALYSIS

\$ 86,062

Labor Sales

733.9

Divided by Hours Billed

\$ 117.27

= OELR

\$ 30,170

Labor Cost

733.90

/ Hours Billed

\$ 41.11

=Real Cost

\$41.11

Real Cost

÷

24.00%

=

\$	86,062
Labor Sales	
\$	55,892
-Labor Gross	
\$	30,170
=Labor Cost	

\$171.29
E.L.R. Needed to earn

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OWNER BASE POTENTIAL

$$\begin{array}{rcccl} \boxed{4572} & \times & \boxed{8} & = & \boxed{36,576.0} \\ \text{5 Year Owner Base} & & \text{Annual Hours Purchased} & & \text{Market Potential / Hours} \end{array}$$

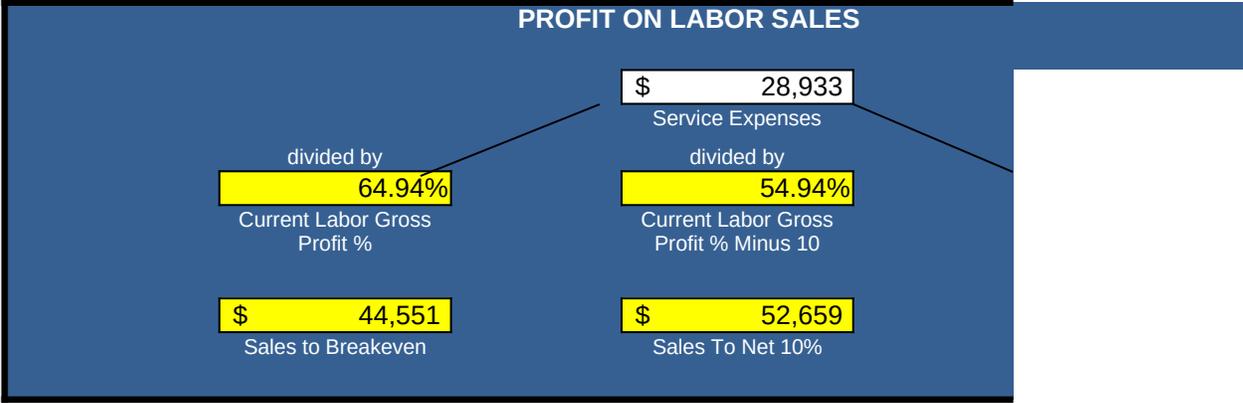
$$\begin{array}{rcccl} \boxed{36,576.0} & \times & \boxed{\$ 117.27} & = & \boxed{\$ 4,289,145} \\ \text{Market Potential/ Hours} & & \text{Effective Labor Rate} & & \text{5 Yr. O.B Sales Potential} \end{array}$$

$$\begin{array}{rcccl} \boxed{\$ 86,062} & \times & \boxed{12} & = & \boxed{\$ 1,032,744} \\ \text{Avg. Mos. Labor Sales} & & \text{Annualized} & & \text{Current Labor Sales Trend} \end{array}$$

$$\begin{array}{rcccl} \boxed{\$ 1,032,744} & \div & \boxed{\$ 4,289,145} & = & \boxed{24.08\%} \\ \text{Labor Sales Trend} & & \text{5 Yr. O.B. Sales Potential} & & \text{Ouch} \end{array}$$

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

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Customer Pay Gross Profit %	<div style="border: 1px solid black; padding: 2px; background-color: yellow;">76.49%</div>	Customer Pay
Total Service Dept. G.P.%	<div style="border: 1px solid black; padding: 2px; background-color: yellow;">64.94%</div>	Total (overall)
Parts / Labor Ratio (Cust Pay Only)	<div style="border: 1px solid black; padding: 2px; background-color: yellow;">1.14</div>	Warranty Labo
Total Service Dept Expense	<div style="border: 1px solid black; padding: 2px; background-color: yellow;">\$ 82,570</div>	Overall Tech Pi
Hours Per R.O (recap)	<div style="border: 1px solid black; padding: 2px; background-color: yellow;">3.30</div>	
Percent Of One Item R.O.'s	<div style="border: 1px solid black; padding: 2px; background-color: yellow;">0.00%</div>	

divided by
44.94%
Current Labor Gross
Profit % Minus 20
\$ 64,376
Sales To Net 20%

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- E.L.R. \$ 120.00
- E.L.R. \$ 117.27
- ir Rate \$ 105.00
- roficiency 33.98%

Technician value

Calculate using daily available hours per technician

Hours			Days
9	x	24	x

Sales Value		Gross Margin	
\$ 25,330	x	64.94%	=

\$ 16,450	x	70%	p r o f i c i e n c y	\$ 11,515	
\$ 16,450	x	80%		\$ 13,160	
\$ 16,450	x	90%		\$ 14,805	
\$ 16,450	x	100%		\$ 16,450	
\$ 16,450	x	110%		\$ 18,095	
\$ 16,450	x	120%		\$ 19,740	
\$ 16,450	x	0.0%		=	\$ -
Profit Value		Your #			Adjusted Profit Value

Labor Rate = Sales Value

\$ 117.27 = \$ 25,330

Profit Value

\$ 16,450

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STAFFING REQUIREMENTS

A. Sales To Break Even

Service Expenses for One Month	,	Current Gross Profit Percent	=
\$ 82,570	,	64.94%	=

B. Sales To Generate 20% Net

Service Expenses for One Month	,	Current Gross Profit Percent (Minus 20)	=
\$ 82,570	,	44.94%	=

C. Technician Value

Daily Work Hours	X	Average Proficiency Rate	X	Overall Effective Labor Rate	X
9		80%		\$ 117.27	
9		90%		\$ 117.27	
9		100%		\$ 117.27	
9		120%		\$ 117.27	

D. Staffing To Break Even

Sales To Break Even	,	Technician Value
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\$	127,141	,	20,264	@ 80%
\$	127,141	,	22,797	@ 90%
\$	127,141	,	25,330	@ 100%
\$	127,141	,	30,395	@ 120%

E. Staffing To Generate 20% Net

Sales To Generate 20% Net	Technician Value
\$ 183,718	\$ 20,264 @ 80%
\$ 183,718	\$ 22,797 @ 90%
\$ 183,718	\$ 25,330 @ 100%
\$ 183,718	\$ 30,395 @ 120%

Sales To Break
Even

\$ 127,141

Sales To
Generate
20% Net

\$ 183,718

Work Days Per Month	=	Technician Value
24		\$20,264
24		\$22,797
24		\$25,330
24		\$30,395

= Staffing

=

=

=

=

= Staffing

=

=

=

=

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How To Set Advisor Sales Objectives To: Break Even, N

Break Even

1 Service Department's Monthly Expenses		\$82,570
2 Divide by current labor gross profit % to break even	÷	64.94%
3 Equals New Sales Objective	=	\$ 127,141
4 Number of Advisors	÷	3.0
5 Equals Sales Objective per Advisor	=	\$ 42,380
6 Number of work days per month	÷	22
7 Equals daily sales objective per advisor	=	\$ 1,926
8 Current overall effective labor rate	÷	\$ 117.27
9 Equals daily sales objective per advisor (FRH's)	=	16.4

SERVICE ADVISOR PERFORMANCE

Net 10%, & Net 20%

Net 10 %

1 Service Department's Monthly Expenses		\$82,570
	,	
2 Divide by current labor gross profit % minus 10 to net 10%		54.94%
	=	
3 Equals New Sales Objective		\$ 150,281
	,	
4 Number of Advisors		3.0
	=	
5 Equals Sales Objective per Advisor		\$ 50,094
	,	
6 Number of work days per month		22
	=	
7 Equals daily sales objective per advisor		\$ 2,277
	,	
8 Current overall effective labor rate		\$ 117.27
	=	
9 Equals daily sales objective per advisor (FRH's)		19.4

Net 20 %

1 Service Department's Monthly Expenses	\$82,570
2 Divide by current labor gross profit % minus 20 to net 20%	44.94%
3 Equals New Sales Objective	\$ 183,718
4 Number of Advisors	3.0
5 Equals Sales Objective per Advisor	\$ 61,239
6 Number of work days per month	22
7 Equals daily sales objective per advisor	\$ 2,784
8 Current overall effective labor rate	\$ 117.27
9 Equals daily sales objective per advisor (FRH's)	23.7

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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		512
Multiply by .3 hours	X	0.3 hours
Additional customer labor hours generated	=	153.60
Multiply by Customer Labor Rate	X	\$ 120.00
Equals additional Customer Labor Sales Generated	=	\$ 18,432
Multiply by customer Labor Gross Profit %	X	76.49%
Equals additional Labor Gross Profit \$ generated	= (A)	\$ 14,098
Divide Parts Sales R.O. by Labor Sales R.O. to calculate \$ parts sales per 1\$ of Labor Sales	=	1.14
Multiply by Customer Labor Sales	X	\$ 18,432
Equals additional Customer Parts Sales generated	=	\$ 21,011

Multiply by Customer Parts Sales Gross Profit %	X	10.20%
Equals additional Parts Gross Profit \$ Generated	= (B)	\$ 2,143
Add Gross Profit from Labor (A) and Parts (B)	=	\$ 16,241

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Labor Rate Calcul

1 Calculate the Labor Rate for the following operation.

A/C Charge and Check

	Labor Price	\$144.00
	Units	1.2
Price	Units	=
\$140.00	1.0	

2 Calculate the Effective Labor Rate for the following "R

Labor Operations	Labor Price	
Clean Fuel Injectors	\$ 117.60	,
R&R Rear Hub Bearing.	\$ 96.00	,
Replace Trans. Pan gasket	\$ 107.80	,
R&R Headlight unit (1)	\$ 108.00	,
Total Price	\$ 429.40	Total Units
	\$ 429.40	,
	Total Price	

actions

\$140.00
Labor Rate

repair" operations.

Labor Units	=	Labor Rate
1.20	=	\$ 98.00
0.80	=	\$ 120.00
1.10	=	\$ 98.00
0.90	=	\$ 120.00
4.0		
4.0	=	\$ 107.35
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 a gross profit (round to the nearest cent)

$$\begin{array}{rcccl}
 \boxed{100\%} & \rightarrow & \boxed{35\%} & = & \\
 100\% & & \text{Desired Gross} & & \\
 & & \text{Profit percent} & & \\
 \\
 \boxed{\$6.72} & \times & \boxed{1.54} & = & \\
 \text{Part Cost} & & \text{Mark-Up Factor} & &
 \end{array}$$

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

Item	Cost		Annual Turnover	
Filter #1	\$4.36	X	112	=
Filter #2	\$4.01	X	56	=
Filter #3	\$3.56	X	85	=
Filter #4	\$3.86	X	202	=
Filter #5	\$3.51	X	36	=
			Total Items	491 Total Cost

$$\boxed{\$ 1,921.56} \div \boxed{491} = \boxed{\$ 3.91}$$

Total Cost Total Items Average Cost

$$\boxed{\$ 3.91} \times \boxed{1.54} = \boxed{\$ 6.03}$$

Cost Factor Average Price

to attain a 35%

1.54

Mark-Up
Factor

\$10.34

Retail Price

or the following

Total Cost

\$488.32

\$224.56

\$302.60

\$779.72

\$126.36

\$1,921.56

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COST OF A COME-BACK

Lost Customers		<input type="text" value="1.5"/>
Average Hours per R.O.	X	<input type="text" value="3.3"/>
	=	<input type="text" value="5.0"/>
Effective Labor Rate	X	<input type="text" value="\$ 117.27"/>
	=	<input type="text" value="\$ 580"/> (A) Service Labor Sales
<hr/>		
Service Department Gross Profit % (Excluding Sublet)	X	<input type="text" value="64.94%"/>
	=	<input type="text" value="\$ 377"/> (B) Service Labor Gross
<hr/>		
Service Labor Sales (A)		<input type="text" value="\$ 580"/>
Parts / Labor Ratio	X	<input type="text" value="1.14"/>
	=	<input type="text" value="\$ 660"/>
Parts Dept Gross Profit % R.O.Sales	X	<input type="text" value="64.94%"/>
	=	<input type="text" value="\$ 428"/> (C) Service Parts Gross
<hr/>		
(B) Service Labor Gross		<input type="text" value="\$ 377"/>
(C) Service Parts Gross	+	<input type="text" value="\$ 428"/>
Lost Gross	=	<input type="text" value="\$ 805"/>

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