



Fixed Operations 2 -

Financial Calculations and Formulas

Clear Lake Infiniti

Dealership

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Student

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Class #

- Service

Service Department Sales And Gross (Labor Only)

Category	Sales	Gross	Gross as % of Sales	Margin %
Customer Pay	\$ 148,723	\$ 113,923	76.65%	23.35%
Customer			0%	0.00%
Customer Other			0%	0.00%
Warranty	\$ 61,770	\$ 51,761	83.81%	22.41%
Warranty/Other			0%	0.00%
Invoice	\$ 35,125	\$ 33,649	95.80%	23.30%
Inv / Road Ready / PDI			0%	0.00%
Adj Cost Of Labor		\$ (2,388)	0%	0.00%
Total	\$ 275,607	\$ 211,063	76.54%	22.00%

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The Picture	
Customer Pay Gross Profit %	79.87%
Total Service Dept. G.P. %	80.54%

Parts To Labor Ratios

Category	Parts Dept	Labor Dept	Ratio
Customer Pay	\$ 132,151	\$ 142,712	0.93
Customer	\$	\$	0.00
Customer Other	\$	\$	0.00
Warranty	\$ 198,085	\$ 61,770	3.21
Warranty/Other	\$	\$	0.00
Warranty	\$ 82,951	\$ 66,125	1.25
Total	\$ 416,987	\$ 275,607	1.51

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The Picture	
Customer Pay Gross Profit %	79.87%
Total Service Dept. G.P. %	83.54%
Parts / Labor Ratio (Cust. Pay Only)	0.93

Service Department Profit Centering

Department Expense	Value	% of Gross Profit
Department Gross	\$ 227,983	
Variable Expense	\$ 50,775	22.27%
Selling Expense		0.00%
Personnel Expense		0.00%
Semi-Fixed Expense	\$ 3,527	1.55%
Fixed Expense	\$ 53,717	23.56%
Unallocated Expense		0.00%
Dealer's Salary		0.00%
Total Expenses	\$ 123,029	53.97%
Net Profit	\$ 56,924	24.92%

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Customer Play Gross Profit %	73.82%
Total Service Dept. G.P. %	80.54%
Parts / Labor Ratio (Cust. Play Only)	0.92
Total Service Dept. Expenses	\$ 123,029

Fixed Absorption

Parts Department Total Gross	\$ 312,000	% All Out of Exp	1.333%
Service Department Total Gross	\$ 244,203		0.97%
Body Shop Department Total Gross			0.00%
Total Fixed Gross Profit	\$ 536,203		
Total Dealership Expense	\$ 588,048		

Overhead Expense	\$ 588,048		
Total Fixed Gross Profit	\$ 536,203		
Total Dealership Expense	\$ 588,048		
Fixed Absorption Percentage	91.20%	Guideline	60%
<input type="button" value="Clear Form"/>			

The Picture	
Customer Pay Gross Profit %	79.87%
Total Service Dept. C.P. %	80.54%
Parts / Labor Ratio (Cust. Pay Only)	1.25
Total Service Dept. Expenses	\$ 122,899

NADA ACTUAL SERVICE ANALYSIS

	Labor Sales / Month	Effective Labor Rates	Hours Billed
Customer Pay	\$ 148,712	÷ 151.78 =	979.8
Customer	\$ -	÷ =	0.00
Customer Other	\$ -	÷ =	0.00
Warranty	\$ 61,770	÷ 175.00 =	353.0
Internal	\$ 65,125	÷ 175.00 =	372.1
New Vehicle Prep	\$ -	÷ =	0.00
Total	\$ 275,607		1704.9

POTENTIAL

\$ 275,607	÷	1704.90	=	\$ 161.66
Total labor sales for month		Total hours billed		Effective Labor Rate

12.00	x	8	x	23	=	2,160.0
# Service mechanical technicians		# Hours/Day		Working Days/Month		Hours Available to Sell

2,160.0	x	\$ 161.66	=	\$ 349,176	\$ 436,470.49
Hours Available to Sell		Effective Labor Rate		Labor sales potential @100%	Labor sales potential @ 125%

How proficient are your technicians ?

1,704.9	÷	2,160.00	=	78.93%
Total Hours Billed		Hours Available to Sell		Tech Proficiency

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- Hours Per RO (RO Analysis) 2.9
- Percent of One Item R.O.'s (RO Analysis) 56.00%
- Customer Pay Effective Labor Rate (DMS Reoprt) \$ 151.78
- Warranty Labor Rate (DMS Report) \$ 175.00
- Total Overall Effective Labor Rate \$ 161.66
- Overall Technician Proficiency 78.93%

FACILITY POTENTIAL	
Number of Bays	<input type="text"/>
	x
Number of Days	<input type="text"/>
	x
Number of Hours	<input type="text"/>
	x
Effective Labor Rate	\$ 161.66
	<i>equals</i>
FACILITY POTENTIAL	\$ -

FACILITY UTILIZATION	
Total Labor Sales	\$ 275,607
	÷
Facility Potential	\$ -
	<i>equals</i>
FACILITY UTILIZATION	0.00%

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Calculating Real Cost of Labor

\$ 275,607
Labor Sales

Divided by Hours Billed

0.00
= OELR

\$ 275,607
Labor Sales

-Labor Gross

\$ 275,607
-Labor Cost

\$ 275,607
Labor Cost

0.00
/ Hours Billed

\$0.00
-Real Cost

Real Cost

÷

24.00%

=

\$0.00
E.L.R. Needed to earn
76%

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OWNER BASE POTENTIAL

x =
5 Year Owner Base Annual Hours Purchased Market Potential / Hours

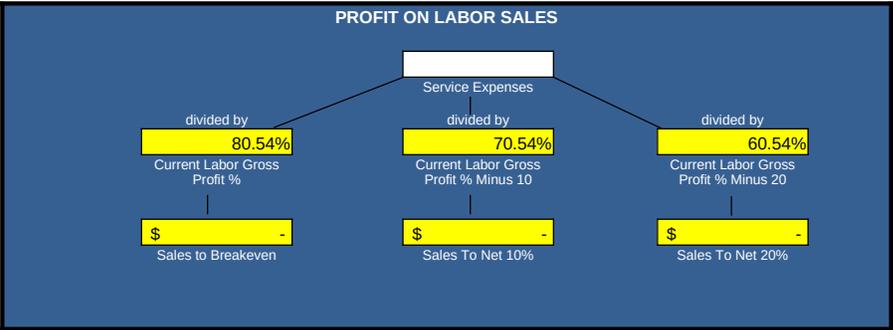
x =
Market Potential/ Hours Effective Labor Rate 5 Yr. O.B Sales Potential

x =
Avg. Mos. Labor Sales (excluding internal, PDI and NVI) Annualized Current Labor Sales Trend

÷ =
Labor Sales Trend 5 Yr. O.B. Sales Potential Ouch

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

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Customer Pay Gross Profit %	<input type="text" value="79.87%"/>	Customer Pay E.L.R.	<input type="text" value="\$ 151.78"/>
Total Service Dept. G.P.%	<input type="text" value="80.54%"/>	Total (overall) E.L.R.	<input type="text" value="\$ 161.66"/>
Parts / Labor Ratio (Cust Pay Only)	<input type="text" value="0.92"/>	Warranty Labor Rate	<input type="text" value="\$ 175.00"/>
Total Service Dept Expense	<input type="text" value="\$ 123,039"/>	Overall Tech Proficiency	<input type="text" value="78.93%"/>
Hours Per R.O (recap)	<input type="text" value="2.90"/>		
Percent Of One Item R.O.'s	<input type="text" value="56.00%"/>		

Technician Value

Calculate using daily available hours per technician

Hours	x	Days	x	Labor Rate	=	Sales Value
<input type="text"/>		<input type="text"/>		\$ 161.66		\$ -

Sales Value	x	Gross Margin	=	Profit Value
\$ -		80.54%		\$ -

\$ -	x	70%	p r o f i c i e n c y	\$ -
\$ -	x	80%		\$ -
\$ -	x	90%		\$ -
\$ -	x	100%		\$ -
\$ -	x	110%		\$ -
\$ -	x	120%		\$ -
\$ -	x	<input type="text" value="0.0%"/>		\$ -
Profit Value		Your Proficiency #		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
<input type="text" value=""/>	÷	80.54%	=	\$ <input type="text" value="-"/>

B. Sales To Generate 20% Net

Service Expenses for One Month	÷	Current Gross Profit Percent (Minus 20)	=	Sales To Generate 20% Net
\$ <input type="text" value="-"/>	÷	60.54%	=	\$ <input type="text" value="-"/>

C. Technician Value

Daily Work Hours	X	Average Proficiency Rate	X	Overall Effective Labor Rate	X	Work Days Per Month	=	Technician Value
<input type="text" value="0"/>	X	80%	X	\$ 161.66	X	<input type="text" value="0"/>	=	<input type="text" value="0"/>
<input type="text" value="0"/>	X	90%	X	\$ 161.66	X	<input type="text" value="0"/>	=	<input type="text" value="0"/>
<input type="text" value="0"/>	X	100%	X	\$ 161.66	X	<input type="text" value="0"/>	=	<input type="text" value="0"/>
<input type="text" value="0"/>	X	120%	X	\$ 161.66	X	<input type="text" value="0"/>	=	<input type="text" value="0"/>

D. Staffing To Break Even

Sales To Break Even	÷	Technician Value	=	Staffing
\$ <input type="text" value="-"/>	÷	<input type="text" value="0"/> @ 80%	=	<input type="text" value="0.0"/>
\$ <input type="text" value="-"/>	÷	<input type="text" value="0"/> @ 90%	=	<input type="text" value="0.0"/>
\$ <input type="text" value="-"/>	÷	<input type="text" value="0"/> @ 100%	=	<input type="text" value="0.0"/>
\$ <input type="text" value="-"/>	÷	<input type="text" value="0"/> @ 120%	=	<input type="text" value="0.0"/>

E. Staffing To Generate 20% Net

Sales To Generate 20% Net	÷	Technician Value	=	Staffing
\$ <input type="text" value="-"/>	÷	\$ <input type="text" value="-"/> @ 80%	=	<input type="text" value="0.0"/>
\$ <input type="text" value="-"/>	÷	\$ <input type="text" value="-"/> @ 90%	=	<input type="text" value="0.0"/>
\$ <input type="text" value="-"/>	÷	\$ <input type="text" value="-"/> @ 100%	=	<input type="text" value="0.0"/>
\$ <input type="text" value="-"/>	÷	\$ <input type="text" value="-"/> @ 120%	=	<input type="text" value="0.0"/>

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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	<input type="text"/>
÷	<input type="text" value="80.54%"/>
2 Divide by current labor gross profit % to break even	=
3 Equals New Sales Objective	<input type="text" value="\$ -"/>
÷	<input type="text"/>
4 Number of Advisors	=
5 Equals Sales Objective per Advisor	<input type="text" value="\$0.00"/>
÷	<input type="text"/>
6 Number of work days per month	=
7 Equals daily sales objective per advisor	<input type="text" value="\$0.00"/>
÷	<input type="text"/>
8 Current overall effective labor rate	<input type="text" value="\$ 161.66"/>
÷	<input type="text"/>
9 Equals daily sales objective per advisor (FRH's)	<input type="text" value="0.0"/>

Net 10 %	
1 Service Department's Monthly Expenses	<input type="text" value="\$0"/>
÷	<input type="text" value="70.54%"/>
2 Divide by current labor gross profit % minus 10 to net 10%	=
3 Equals New Sales Objective	<input type="text" value="\$ -"/>
÷	<input type="text" value="0.0"/>
4 Number of Advisors	=
5 Equals Sales Objective per Advisor	<input type="text" value="\$0.00"/>
÷	<input type="text" value="0"/>
6 Number of work days per month	=
7 Equals daily sales objective per advisor	<input type="text" value="\$0.00"/>
÷	<input type="text" value="\$ 161.66"/>
8 Current overall effective labor rate	=
9 Equals daily sales objective per advisor (FRH's)	<input type="text" value="0.0"/>

Net 20 %	
1 Service Department's Monthly Expenses	<input type="text" value="\$0"/>
÷	<input type="text" value="60.54%"/>
2 Divide by current labor gross profit % minus 20 to net 20%	=
3 Equals New Sales Objective	<input type="text" value="\$ -"/>
÷	<input type="text" value="0.0"/>
4 Number of Advisors	=
5 Equals Sales Objective per Advisor	<input type="text" value="\$0.00"/>
÷	<input type="text" value="0"/>
6 Number of work days per month	=
7 Equals daily sales objective per advisor	<input type="text" value="\$0.00"/>
÷	<input type="text" value="\$ 161.66"/>
8 Current overall effective labor rate	=
9 Equals daily sales objective per advisor (FRH's)	<input type="text" value="0.0"/>

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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	X	<input type="text"/>
Multiply by .3 hours		<input type="text" value="0.3 hours"/>
Additional customer labor hours generated	=	<input type="text" value="0.00"/>
	X	
Multiply by Customer Labor Rate		<input type="text" value="\$ 151.78"/>
Equals additional Customer Labor Sales Generated	=	<input type="text" value="\$"/>
	X	
Multiply by customer Labor Gross Profit %		<input type="text" value="79.87%"/>
Equals additional Labor Gross Profit \$ generated	= (A)	<input type="text" value="\$"/>
Divide Parts Sales R.O. by Labor Sales R.O. to calculate \$ parts sales per 1\$ of Labor Sales	=	<input type="text" value="0.92"/>
	X	
Multiply by Customer Labor Sales		<input type="text" value="\$"/>
	=	
Equals additional Customer Parts Sales generated		<input type="text" value="\$"/>
	X	
Multiply by Customer Parts Sales Gross Profit %		<input type="text"/>
Equals additional Parts Gross Profit \$ Generated	= (B)	<input type="text" value="\$"/>
Add Gross Profit from Labor (A) and Parts (B)	=	<input type="text" value="\$"/>

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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		
Price	÷	Units	=	\$0.00	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	=	
R&R Rear Hub Bearing.	\$ 96.00	÷	0.80	=	
Replace Trans. Pan gasket	\$ 107.80	÷	1.10	=	
R&R Headlight unit (1)	\$ 108.00	÷	0.90	=	
	Total Price	÷	Total Units	=	\$0.00
					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)

$$\begin{array}{rcccl}
 \boxed{100\%} & \xrightarrow{\quad} & \boxed{} & = & \boxed{0.00} \\
 100\% & & \text{Desired Gross} & & \text{Mark-Up} \\
 & & \text{Profit percent} & & \text{Factor} \\
 \\
 \boxed{} & \times & \boxed{0.00} & = & \boxed{\$0.00} \\
 \text{Part Cost} & & \text{Mark-Up Factor} & & \text{Retail Price}
 \end{array}$$

- 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		<input type="text" value="491"/>	Total Cost <input type="text" value="\$0.00"/>

$$\begin{array}{rcccl}
 \$ \boxed{} & \div & \boxed{491} & = & \$ \boxed{} \\
 \text{Total Cost} & & \text{Total Items} & & \text{Weighted} \\
 & & & & \text{Average Cost}
 \end{array}$$

$$\begin{array}{rcccl}
 \$ \boxed{} & \times & \boxed{} & = & \$ \boxed{} \\
 \text{Weighted Average} & & \text{Mark-Up} & & \text{Weighted} \\
 \text{Cost} & & \text{Factor} & & \text{Average Price}
 \end{array}$$

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Cost Of A Come-Back

Lost Customer Opportunity			<input style="width: 95%;" type="text"/>
Average Hours per R.O.	X		<input style="width: 95%;" type="text"/>
	=		<input style="width: 95%; background-color: yellow;" type="text" value="0.0"/>
Effective Labor Rate	X		<input style="width: 95%; background-color: yellow;" type="text" value="\$ 161.66"/>
Lost Labor Sales	=		<input style="width: 95%; background-color: yellow;" type="text" value="\$ -"/> (A)
Service Department Gross Profit % (Excluding Sublet)	X		<input style="width: 95%; background-color: yellow;" type="text" value="80.54%"/>
Lost Labor Gross	=		<input style="width: 95%; background-color: yellow;" type="text" value="\$ -"/> (B)
Lost Labor Sales			<input style="width: 95%; background-color: yellow;" type="text" value="\$ -"/> (A)
Parts / Labor Ratio	X		<input style="width: 95%; background-color: yellow;" type="text" value="0.92"/>
	=		<input style="width: 95%; background-color: yellow;" type="text" value="\$ -"/>
Parts Dept Gross Profit % R.O.Sales	X		<input style="width: 95%;" type="text"/>
Lost Parts Gross	=		<input style="width: 95%; background-color: yellow;" type="text" value="\$ -"/> (C)
Lost Labor Gross			<input style="width: 95%; background-color: yellow;" type="text" value="\$ -"/> (B)
Lost Parts Gross	+		<input style="width: 95%; background-color: yellow;" type="text" value="\$ -"/> (C)
Total Lost Gross	=		<input style="width: 95%; background-color: yellow;" type="text" value="\$ -"/>

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