



FINANCIAL CALCULATIONS AND FORMULAS

FRONTIER TOYOTA

Dealership

SOUHAYL ERRAMA

Student

418

Class #

Service Department Sales And Gr

Category	Sales
Customer Pay	\$ 509,404
Customer	
Customer Other	
Warranty	\$ 85,474
Warranty Other	
Internal	\$ 109,625
NVI / Road Ready/ PDI	
Adj. Cost Of Labor	
Total	\$ 704,503

The Picture

Customer Pay Gross Profit %

Total Service Dept. G.P. %

oss (Labor Only)

Gross	Gross as % of Sales	%Sales Contribution
\$ 357,088	70.10%	72.31%
	0%	0.00%
	0%	0.00%
\$ 105,833	123.82%	12.13%
	0%	0.00%
\$ 100,232	91.43%	15.56%
	0%	0.00%
	0%	0.00%
\$ 563,153	79.94%	100.00%

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70.10%
79.94%

Parts To Labor Ratios

Category	Parts Sales	Labor Sales	P/L Ratio
Customer Pay	\$ 244,559	\$ 509,404	0.48
Customer		\$ -	0.00
Customer Other		\$ -	0.00
Warranty	\$ 33,225	\$ 85,474	0.39
Warranty Other		\$ -	0.00
Internal	\$ 53,659	\$ 109,625	0.49
Total	\$ 331,443	\$ 704,503	0.47

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Customer Pay Gross Profit %	70.10%
Total Service Dept. G.P. %	79.94%
Parts / Labor Ratio (Cust. Pay Only)	0.48

Service Department Profit Centering

Expense Category	Dollar Amount	% of Gross	Profile
Department Gross	\$ 563,153		
Variable Expense		0.00%	
Selling Expense	\$ 97,597	17.33%	
Personnel Expense	\$ -	0.00%	
Semi-Fixed Expense	\$ 180,185	32.00%	
Fixed Expense	\$ 289,775	51.46%	
Unallocated Expense		0.00%	
Dealer's Salary		0.00%	
Total Expenses	\$ 567,557	100.78%	
Net Profit	\$ (4,404)	-0.78%	

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Customer Pay Gross Profit %	70.10%
Total Service Dept. G.P. %	79.94%
Parts / Labor Ratio (Cust. Pay Only)	0.48
Total Service Dept. Expenses	\$ 567,557

Fixed Absorption

		% Adj Ovt
Parts Department Total Gross	\$ 219,398	10.79%
Service Department Total Gross	\$ 594,789	29.25%
Body Shop Department Total Gross	\$ -	0.00%
	\$ 151,166	
Total Fixed Gross Profit	\$ 965,353	
Total Dealership Expense	\$ 2,033,762	

Overhead Expense \$ 2,033,762

Total Fixed Gross Profit \$ 965,353

Total Dealership Expense \$ 2,033,762

Fixed Absorption Percentage 47.47%

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Guideline

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Customer Pay Gross Profit % 70.10%

Total Service Dept. G.P. % 79.94%

Parts / Labor Ratio (Cust. Pay Only) 0.48

Total Service Dept. Expenses \$ 567,557

rd Exp

60%

SERVICE INVENTORY ANALYSIS

	<i>Labor Sales / Month</i>		<i>Effective Labor Rates</i>	
Customer Pay	\$ 509,404	÷	128.09	=
Customer	\$ -	÷		=
Customer Other	\$ -	÷		=
Warranty	\$ 85,474	÷	170.20	=
Internal	\$ 109,625	÷	152.31	=
New Vehicle Prep	\$ -	÷		=
Total	\$ 704,503			

POTENTIAL

$$\frac{\$ 704,503}{\text{Total labor sales for month}} \div \frac{5198.87}{\text{Total hours billed}} =$$

$$\frac{27.00}{\text{\# Service mechanical technicians}} \times \frac{8}{\text{\# Hours/Day}} \times$$

$$\frac{5,184.0}{\text{Hours Available to Sell}} \times \frac{\$ 135.51}{\text{Effective Labor Rate}} =$$

How proficient are your technicians ?

$$\frac{5,198.9}{\text{Total Hours Billed}} \div \frac{5,184.00}{\text{Hours Available to Sell}} =$$

Hours Per RO (RO Analysis) 3.4

Percent of One Item R.O.'s (RO Analysis) 44.00%

Customer Pay Effective Labor Rate (DMS Report) \$ 135.51

Warranty Labor Rate (DMS Report) \$ 170.20

Total Overall Effective Labor Rate \$ 135.51

Overall Technician Proficiency 100.29%

Hours Billed	
3976.9	
0.00	
0.00	
502.2	
719.7	
0.00	
5198.9	

\$ 135.51

Effective Labor Rate

=

Working Days/Month

Hours Available to Sell

\$ 702,488

Labor sales potential @100%

\$ 878,110.10

Labor sales potential @ 125%

100.29%

Tech Proficiency

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FACILITY POTENTIAL

Number of Bays		34
	x	
Number of Days		27
	x	
Number of Hours		11
	x	
Effective Labor Rate	\$	135.51
	<i>equals</i>	
FACILITY POTENTIAL	\$	1,368,388

FACILITY UTILIZATION

Total Labor Sales	\$	704,503
	÷	
Facility Potential	\$	1,368,388
	<i>equals</i>	
FACILITY UTILIZATION		51.48%

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Calculating Real Cost of Labor

\$ 704,503

Labor Sales

5,198.9

Divided by Hours Billed

\$ 135.51

= OELR

\$ 141,350

Labor Cost

5,198.87

/ Hours Billed

\$ 27.19

=Real Cost

\$27.19

Real Cost

÷

20.00%

=

\$ 704,503
Labor Sales

\$ 563,153
-Labor Gross

\$ 141,350
-Labor Cost

\$135.94
E.L.R. Needed to earn

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OWNER BASE POTENTIAL

$$\begin{array}{l} \boxed{1532} \quad \times \quad \boxed{8} \quad = \quad \boxed{12,256.0} \\ \text{5 Year Owner Base} \quad \quad \quad \text{Annual Hours Purchased} \quad \quad \quad \text{Market Potential / Hours} \end{array}$$

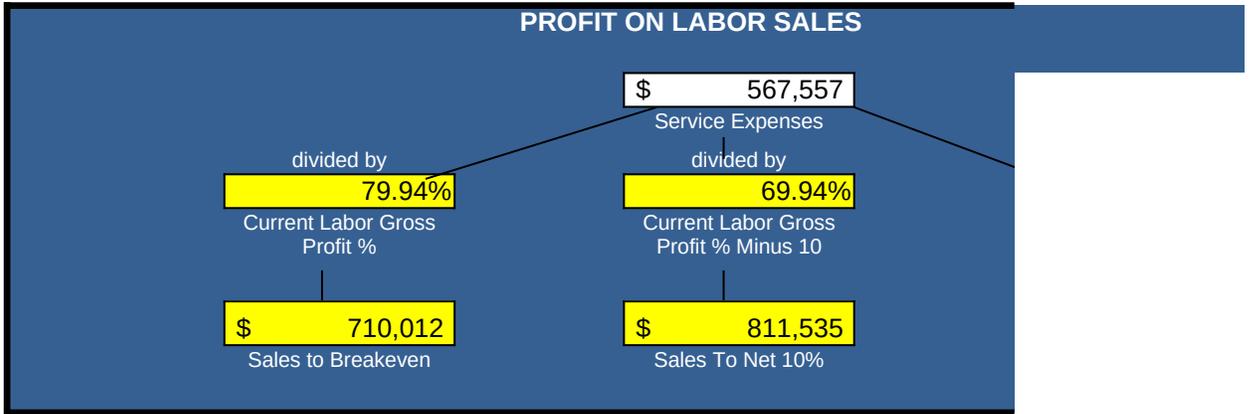
$$\begin{array}{l} \boxed{12,256.0} \quad \times \quad \boxed{\$ 135.51} \quad = \quad \boxed{\$ 1,660,821} \\ \text{Market Potential/ Hours} \quad \quad \quad \text{Effective Labor Rate} \quad \quad \quad \text{5 Yr. O.B Sales Potential} \end{array}$$

$$\begin{array}{l} \boxed{\$ 636,932} \quad \times \quad \boxed{12} \quad = \quad \boxed{\$ 7,643,184} \\ \text{Avg. Mos. Labor Sales} \quad \quad \quad \text{Annualized} \quad \quad \quad \text{Current Labor Sales Trend} \end{array}$$

$$\begin{array}{l} \boxed{\$ 7,643,184} \quad \div \quad \boxed{\$ 1,660,821} \quad = \quad \boxed{460.21\%} \\ \text{Labor Sales Trend} \quad \quad \quad \text{5 Yr. O.B. Sales Potential} \quad \quad \quad \text{Owner Base Retention} \end{array}$$

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

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The Picture

Customer Pay Gross Profit %	70.10%	Customer Pa
Total Service Dept. G.P.%	79.94%	Total (overal
Parts / Labor Ratio (Cust Pay Only)	0.48	Warranty La
Total Service Dept Expense	\$ 567,557	Overall Tech
Hours Per R.O (recap)	3.41	
Percent Of One Item R.O.'s	44.00%	

divided by

59.94%

Current Labor Gross
Profit % Minus 20

\$ 946,935

Sales To Net 20%

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ay E.L.R. \$ 135.51

II) E.L.R. \$ 135.51

bor Rate \$ 170.20

1 Proficiency 100.29%

|

Technician value

Calculate using daily available hours per technician

Hours	x	Days	x
8		24	

Sales Value	x	Gross Margin	=
\$ 26,018		79.94%	

\$ 20,798	x	70%	=	\$ 14,559
\$ 20,798	x	80%		\$ 16,638
\$ 20,798	x	90%		\$ 18,718
\$ 20,798	x	100%		\$ 20,798
\$ 20,798	x	110%		\$ 22,878
\$ 20,798	x	120%		\$ 24,957
\$ 20,798	x	100.3%	=	\$ 20,858
Profit Value		Your Proficiency #		Adjusted Profit Value



Labor Rate = Sales Value
\$ 135.51 = \$ 26,018

Profit Value
\$ 20,798

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STAFFING REQUIREMENTS

A. Sales To Break Even

Service Expenses for One Month	,	Current Gross Profit Percent	=
\$ 567,557	,	79.94%	=

B. Sales To Generate 20% Net

Service Expenses for One Month	,	Current Gross Profit Percent (Minus 20)	=
\$ 567,557	,	59.94%	=

C. Technician Value

Daily Work Hours	X	Average Proficiency Rate	X	Overall Effective Labor Rate	X
8		80%		\$ 135.51	
8		90%		\$ 135.51	
8		100%		\$ 135.51	
8		120%		\$ 135.51	

D. Staffing To Break Even

Sales To Break Even	,	Technician Value
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\$ 710,012	20,814 @ 80%
\$ 710,012	23,416 @ 90%
\$ 710,012	26,018 @ 100%
\$ 710,012	31,222 @ 120%

E. Staffing To Generate 20% Net

Sales To Generate 20% Net	Technician Value
\$ 946,935	\$ 20,814 @ 80%
\$ 946,935	\$ 23,416 @ 90%
\$ 946,935	\$ 26,018 @ 100%
\$ 946,935	\$ 31,222 @ 120%

Sales To Break
Even

\$ 710,012

Sales To
Generate
20% Net

\$ 946,935

Work Days
Per Month

=

Technician Value

24

\$20,814

24

\$23,416

24

\$26,018

24

\$31,222

=

Staffing

=

=

=

=

= Staffing

=

=

=

=

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

Break Even

1 Service Department's Monthly Expenses		\$567,557
2 Divide by current labor gross profit % to break even	÷	79.94%
	=	
3 Equals New Sales Objective		\$ 710,012
4 Number of Advisors	÷	7.0
	=	
5 Equals Sales Objective per Advisor		\$ 101,430
6 Number of work days per month	÷	24
	=	
7 Equals daily sales objective per advisor		\$ 4,226
8 Current overall effective labor rate	÷	\$ 135.51
	=	
9 Equals daily sales objective per advisor (FRH's)		31.2

SERVICE ADVISOR PERFORMANCE

Net 10%, & Net 20%

Net 10 %

1 Service Department's Monthly Expenses		\$567,557
2 Divide by current labor gross profit % minus 10 to net 10%	=	69.94%
3 Equals New Sales Objective	=	\$ 811,535
4 Number of Advisors	=	7.0
5 Equals Sales Objective per Advisor	=	\$ 115,934
6 Number of work days per month	=	24
7 Equals daily sales objective per advisor	=	\$ 4,831
8 Current overall effective labor rate	=	\$ 135.51
9 Equals daily sales objective per advisor (FRH's)	=	35.6

Net 20 %

1 Service Department's Monthly Expenses		\$567,557
	,	
2 Divide by current labor gross profit % minus 20 to net 20%		59.94%
	=	
3 Equals New Sales Objective		\$ 946,935
	,	
4 Number of Advisors		7.0
	=	
5 Equals Sales Objective per Advisor		\$ 135,276
	,	
6 Number of work days per month		24
	=	
7 Equals daily sales objective per advisor		\$ 5,637
	,	
8 Current overall effective labor rate		\$ 135.51
	=	
9 Equals daily sales objective per advisor (FRH's)		41.6

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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		4146
Multiply by .3 hours	X	0.3 hours
Additional customer labor hours generated	=	1243.80
Multiply by Customer Labor Rate	X	\$ 135.51
Equals additional Customer Labor Sales Generated	=	\$ 168,548
Multiply by customer Labor Gross Profit %	X	70.10%
Equals additional Labor Gross Profit \$ generated	= (A)	\$ 118,151
Divide Parts Sales R.O. by Labor Sales R.O. to calculate \$ parts sales per 1\$ of Labor Sales	=	0.48
Multiply by Customer Labor Sales	X	\$ 168,548
Equals additional Customer Parts Sales generated	=	\$ 80,918

Multiply by Customer Parts Sales Gross Profit %	X		40.80%
Equals additional Parts Gross Profit \$ Generated	=	(B)	\$ 33,015
Add Gross Profit from Labor (A) and Parts (B)	=		\$ 151,166

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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	
	Hours	1.2	
<u>Price</u>		<u>1.2</u>	=
		Hours	

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	
	<u>Total Price</u>	

Calculating Mark-Up

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

$$\begin{array}{rcccl}
 \boxed{100\%} & \div & \boxed{65\%} & = & \\
 100\% & & \text{Desired Gross Profit percent} & & \\
 \\
 \boxed{\$6.72} & \times & \boxed{1.54} & = & \\
 \text{Part Cost} & & \text{Mark-Up Factor} & &
 \end{array}$$

4 Calculate the "Weighted Average" price at a 40% Gross Profit for 5 parts (round to the nearest cent)

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

$$\begin{array}{rcccl}
 \boxed{\$ 1,921.56} & \div & \boxed{491} & = & \boxed{\$ 3.91} \\
 \text{Total Cost} & & \text{Total Items} & & \text{Average Cost}
 \end{array}$$

$$\begin{array}{rcccl}
 \boxed{\$ 3.91} & \times & \boxed{1.67} & = & \boxed{\$ 6.54} \\
 \text{Cost} & & \text{Factor} & & \text{Average Price}
 \end{array}$$

to attain a 35%

1.54

Mark-Up
Factor

\$10.34

Retail Price

for 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 Customer Opportunity		<input type="text" value="1.5"/>
Average Hours per R.O.	X	<input type="text" value="2.3"/>
	=	<input type="text" value="3.5"/>
Effective Labor Rate	X	<input type="text" value="\$ 135.51"/>
Lost Labor Sales	=	<input type="text" value="\$ 468 (A)"/>
<hr/>		
Service Department Gross Profit % (Excluding Sublet)	X	<input type="text" value="79.94%"/>
Lost Labor Gross	=	<input type="text" value="\$ 374 (B)"/>
<hr/>		
Lost Labor Sales		<input type="text" value="\$ 468 (A)"/>
Parts / Labor Ratio	X	<input type="text" value="0.48"/>
	=	<input type="text" value="\$ 224"/>
Parts Dept Gross Profit % R.O.Sales	X	<input type="text" value="77.3"/>
Lost Parts Gross	=	<input type="text" value="\$ 17,350 (C)"/>
<hr/>		
Lost Labor Gross		<input type="text" value="\$ 374 (B)"/>
Lost Parts Gross	+	<input type="text" value="\$ 17,350 (C)"/>
Total Lost Gross	=	<input type="text" value="\$ 17,723"/>

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