



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

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Customer Pay Gross Profit %

Total Service Dept. G.P. %

Loss (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

$$\begin{array}{lcl}
 \$ 704,503 & \div & 5198.87 = \\
 \text{Total labor sales for month} & & \text{Total hours billed} \\
 \\
 27.00 & \times & 8 \times \\
 \text{\# Service mechanical technicians} & & \text{\# Hours/Day} \\
 \\
 5,184.0 & \times & \$ 135.51 = \\
 \text{Hours Available to Sell} & & \text{Effective Labor Rate}
 \end{array}$$

How proficient are your technicians ?

$$\begin{array}{lcl}
 5,198.9 & \div & 5,184.00 = \\
 \text{Total Hours Billed} & & \text{Hours Available to Sell}
 \end{array}$$

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

24.0 = 5,184.0

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

x

Number of Days

x

Number of Hours

x

Effective Labor Rate

equals

FACILITY POTENTIAL

FACILITY UTILIZATION

Total Labor Sales

÷

Facility Potential

equals

FACILITY UTILIZATION

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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

1532	x	8	=	12,256.0
5 Year Owner Base		Annual Hours Purchased		Market Potential / Hours

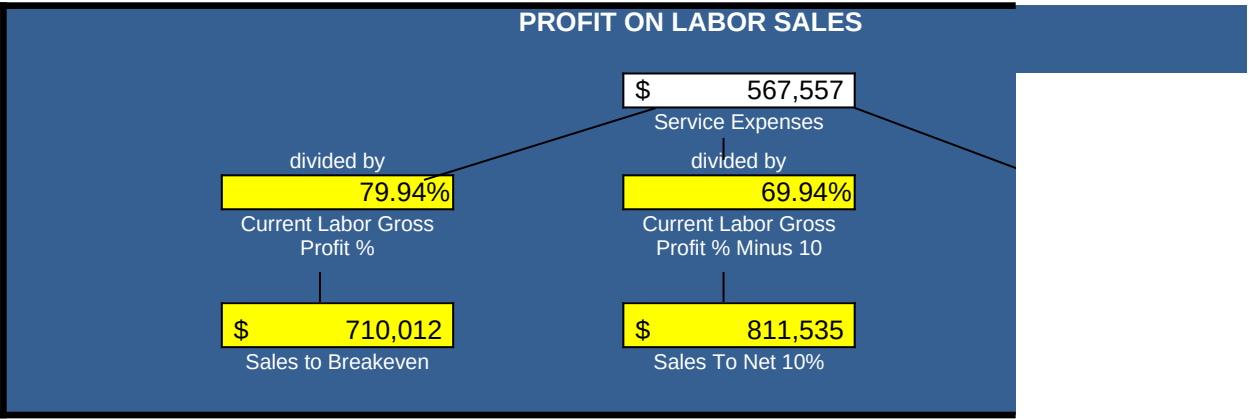
12,256.0	x	\$ 135.51	=	\$ 1,660,821
Market Potential/ Hours		Effective Labor Rate		5 Yr. O.B Sales Potential

\$ 636,932	x	12	=	\$ 7,643,184
Avg. Mos. Labor Sales (Estimated Annual Sales / 12)		Annualized		Current Labor Sales Trend

\$ 7,643,184	÷	\$ 1,660,821	=	460.21%
Labor Sales Trend		5 Yr. O.B. Sales Potential		Owner Base Retention

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

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Customer Pay Gross Profit %	70.10%	Customer Pay Gross Profit %
Total Service Dept. G.P.%	79.94%	Total (overall) G.P.%
Parts / Labor Ratio (Cust Pay Only)	0.48	Warranty Labor %
Total Service Dept Expense	\$ 567,557	Overall Technician Pay
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	8	x	Days	24	x
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Sales Value	\$ 26,018	x	Gross Margin	79.94%	=
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\$ 20,798	x	70%		\$ 14,559
\$ 20,798	x	80%	p r o f i c i e n c y	\$ 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
---------------------	------------------

\$ 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

= 34.1

= 30.3

= 27.3

= 22.7

= Staffing

= 45.5

= 40.4

= 36.4

= 30.3

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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

et 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
	X	
Multiply by Customer Labor Rate		\$ 135.51
Equals additional Customer Labor Sales Generated	=	\$ 168,548
	X	
Multiply by customer Labor Gross Profit %		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
	X	
Multiply by Customer Labor Sales		\$ 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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LAVU RATE CALCULI

1 Calculate the Labor Rate for the following operation.

A/C Charge and Check

Labor Price	\$144.00
Hours	1.2

$$\frac{\$144.00}{\text{Price}} \cdot \frac{1.2}{\text{Hours}} =$$

2 Calculate the Effective Labor Rate for the following "R

Labor Operations Clean Fuel Injectors

Labor Price
\$ 117.60

R&R Rear Hub Bearing.

\$	96.00
----	-------

Replace Trans. Pan gasket

\$	107.80
----	--------

R&R Headlight unit (1)

\$ 108.00

Total Price

[illegible]

\$120.00
Labor Rate

epair" operations.

Labor Hours	<u>Labor Rate</u>
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1.20 = \$ 141.12

0.80 = \$ 76.80

$$1.10 = \boxed{\$ 118.58}$$
$$0.90 = \boxed{\$ 97.20}$$

= \$0.00
Effective Labor Rate
(For This R.O.)

Total Hours

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Calculating Mark-Up

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

$$\begin{array}{rcl}
 \frac{100\%}{100\%} & \longrightarrow & \frac{35\%}{\text{Desired Gross Profit percent}} \\
 \\
 \$6.72 & \times & 1.54 \\
 \text{Part Cost} & & \text{Mark-Up Factor}
 \end{array}$$

- 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	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

$$\frac{\$1,921.56}{\text{Total Cost}} \div \frac{491}{\text{Total Items}} = \$3.91 \text{ Average Cost}$$

$$\$3.91 \times 1.67 = \$6.54 \text{ Average Price}$$

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

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