This document was exported from Numbers. Each table was converte
objects on each Numbers sheet were placed on separate worksheets.
calculations may differ in Excel.

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	Table 1

d to an Excel worksheet. All other
Please be aware that formula

Excel Worksheet Name

Fixed Operations 2 -

Financial Calculations and Formulas

Audi Dominion

Dealership

Martin Silva

Student

NADA 388

Class #

Service

Service Department Sales And Gross (Labor Only)

Category	Sales	Gross	Gross as % of Sales	%Sales Contribution
Customer Pay	$ 411,843	$ 323,153	78.47%	47.69%
Customer Executive Svc	$ 16,235	$ 13,885	85.53%	1.88%
Customer Other			0%	0.00%
Warranty	$ 212,372	$ 177,787	83.71%	24.59%
Warranty Other Exec Svc	$ 24,678	$ 22,108	89.59%	2.86%
Internal	$ 198,539	$ 152,520	76.82%	22.99%
NVI / Road Ready/ PDI			0%	0.00%
Adj. Cost Of Labor		$ (9,936)	0%	0.00%
Total	$ 863,667	$ 679,517	78.68%	100.00%

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Customer Pay Gross Profit %	78.73%
Total Service Dept. G.P. %	78.68%

Parts To Labor Ratios

Category	Parts Sales	Labor Sales	P/L Ratio
Customer Pay	$ 276,670	$ 411,843	0.67
Customer Executuve Svc	$ 7,251	$ 16,235	0.45
Customer Other		$ -	0.00
Warranty	$ 191,506	$ 212,372	0.90
Warranty Other Exec Svc	$ 11,091	$ 24,678	0.45
Internal	$ 74,661	$ 198,539	0.38
Total	$ 561,179	$ 863,667	0.65

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Customer Pay Gross Profit %	78.73%
Total Service Dept. G.P. %	78.68%
Parts / Labor Ratio (Cust. Pay Only)	0.66

Service Department Profit Centering

Expense Category	Dollar Amount	% of Gross	Profitie
Department Gross	$ 679,517		
Variable Expense		0.00%	
Selling Expense	$ 27,451	4.04%	
Personnel Expense	$ 330,198	48.59%	
Semi-Fixed Expense	$ 157,868	23.23%	
Fixed Expense	$ 125,774	18.51%	
Unallocated Expense		0.00%	
Dealer's Salary		0.00%	
Total Expenses	$ 641,291	94.37%	
Net Profit	$ 38,226	5.63%	

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Customer Pay Gross Profit %	78.73%
Total Service Dept. G.P. %	78.68%
Parts / Labor Ratio (Cust. Pay Only)	0.66
Total Service Dept. Expenses	$ 641,291

Fi

xed Absorption

			% Adj Ovhd Exp
Parts Department Total Gross	$	316,968	14.17%
Service Department Total Gross	$	690,337	30.87%
Body Shop Department Total Gross			0.00%
Total Fixed Gross Profit	$	1,007,305	
Total Dealership Expense	$	2,236,514	

Overhead Expense	$	2,236,514	
Total Fixed Gross Profit	$	1,007,305	
Total Dealership Expense	$	2,236,514	
Fixed Absorption Percentage		45.04%	**Guideline** 60%

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Customer Pay Gross Profit %		78.73%
Total Service Dept. G.P. %		78.68%
Parts / Labor Ratio (Cust. Pay Only)		0.66
Total Service Dept. Expenses	$	641,291

NADA ACTUAL SERVICE ANALYSIS

	Labor Sales / Month		*Effective Labor Rates*		*Hours Billed*
Customer Pay	$ 411,843	÷	195.00	=	2112.0
Customer	$ 16,235	÷	195.00	=	83.3
Customer Other	$ -	÷		=	0.00
Warranty	$ 237,050	÷	170.00	=	1394.4
Internal	$ 198,539	÷	125.00	=	1588.3
New Vehicle Prep	$ -	÷		=	0.00
Total	$ 863,667				5178.0

POTENTIAL

$ 863,667	÷	5178.00	=	$ 166.80			
Total labor sales for month		Total hours billed		Effective Labor Rate			
32.00	x	8	x	22	=	5,632.0	
# Service mechanical technicians		# Hours/Day		Working Days/Month		Hours Available to Sell	
5,632.0	x	$ 166.80	=	$ 939,393		$ 1,174,241.19	
Hours Available to Sell		Effective Labor Rate		Labor sales potential @100%		Labor sales potential @ 125%	

How proficient are your technicians ?

5,178.0	÷	5,632.00	=	91.94%
Total Hours Billed		Hours Available to Sell		Tech Proficiency

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Hours Per RO (RO Analysis)	4.4
Percent of One Item R.O.'s (RO Analysis)	52.00%
Customer Pay Effective Labor Rate (DMS Reoprt)	$ 195.00
Warranty Labor Rate (DMS Report)	$ 170.00
Total Overall Effective Labor Rate	$ 166.80
Overall Technician Proficiency	91.94%

FACILITY POTENTIAL

Number of Bays		48
	x	
Number of Days		26
	x	
Number of Hours		12
	x	
Effective Labor Rate	$	166.80
	equals	
FACILITY POTENTIAL	$	2,497,931

FACILITY UTILIZATION

Total Labor Sales	$	863,667
	÷	
Facility Potential	$	2,497,931
	equals	
FACILITY UTILIZATION		34.58%

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Calculating Real Cost of

$	863,667
	Labor Sales
	5,178.0
	Divided by Hours Billed
$	166.80
	= OELR

$	184,149
	Labor Cost
	5,178.00
	/ Hours Billed
$	35.56
	=Real Cost

$35.56	÷	24.00%
Real Cost		

Labor

OWNER BASE POTENTIAL

$ 863,667 Labor Sales	5389 5 Year Owner Base	x	8 Annual Hours Purchased	=	43,112.0 Market Potential / Hours	
$ 679,518 -Labor Gross	43,112.0 Market Potentail/ Hours	x	$ 166.80 Effective Labor Rate	=	$ 7,190,887 5 Yr. O.B Sales Potential	
$ 184,149 =Labor Cost	$ 658,165 Avg. Mos. Labor Sales (excluding internal, PDI and NVI)	x	12 Annualized	=	$ 7,897,980 Current Labor Sales Trend	
	$ 7,897,980 Labor Sales Trend	÷	$ 7,190,887 5 Yr. O.B. Sales Potential	=	109.83% Ouch	

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

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I removed Sublet as this is mostly PDI work from Internal R

= $148.17
E.L.R. Needed to earn 76%

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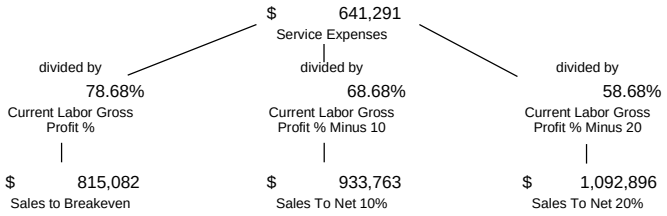
PROFIT ON LABOR SALES



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Customer Pay Gross Profit %	78.73%	Customer Pay E.L.R.	$ 195.00
Total Service Dept. G.P.%	78.68%	Total (overall) E.L.R.	$ 166.80
Parts / Labor Ratio (Cust Pay Only)	0.66	Warranty Labor Rate	$ 170.00
Total Service Dept Expense	$ 641,291	Overall Tech Proficiency	91.94%
Hours Per R.O (recap)	4.42		
Percent Of One Item R.O.'s	52.00%		

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Technician Value

Calculate using daily available hours per technician

Hours		Days		Labor Rate		Sales Value
8	X	22	23	$ 166.80	=	$ 29,356

Sales Value		Gross Margin		Profit Value
$ 29,356	X	78.68%	=	$ 23,097

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Profit Value		Your Proficiency #		Adjusted Profit Value
$ 23,097	x	70%		$ 16,168
$ 23,097	x	80%		$ 18,477
$ 23,097	x	90%	proficiency	$ 20,787
$ 23,097	x	100%		$ 23,097
$ 23,097	x	110%		$ 25,406
$ 23,097	x	120%		$ 27,716
$ 23,097	x	91.9%	=	$ 21,235

STAFFING REQUIREMENTS

A. Sales To Break Even

Service Expenses for One Month		Current Gross Profit Percent	=	Sales To Break Even
$ 641,291	|	78.68%	=	$ 815,082

B. Sales To Generate 20% Net

Service Expenses for One Month		Current Gross Profit Percent (Minus 20)	=	Sales To Generate 20% Net
$ 641,291	|	58.68%	=	$ 1,092,896

C. Technician Value

Daily Work Hours	X	Average Proficiency Rate	X	Overall Effective Labor Rate	X	Work Days Per Month	=	Technician Value
8		80%		$ 166.80		22		$23,485
8		90%		$ 166.80		22		$26,420
8		100%		$ 166.80		22		$29,356
8		120%		$ 166.80		22		$35,227

D. Staffing To Break Even

Sales To Break Even		Technician Value	=	Staffing
$ 815,082	|	23,485 @ 80%	=	34.7
$ 815,082	|	26,420 @ 90%	=	30.9
$ 815,082	|	29,356 @ 100%	=	27.8
$ 815,082	|	35,227 @ 120%	=	23.1

E. Staffing To Generate 20% Net

Sales To Generate 20% Net		Technician Value	=	Staffing
$ 1,092,896	|	$ 23,485 @ 80%	=	46.5
$ 1,092,896	|	$ 26,420 @ 90%	=	41.4
$ 1,092,896	|	$ 29,356 @ 100%	=	37.2
$ 1,092,896	|	$ 35,227 @ 120%	=	31.0

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Service Advisor Performance

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

Break Even

1	Service Department's Monthly Expenses	$641,291
2	Divide by current labor gross profit % to break even	78.68%
3	Equals New Sales Objective	$ 815,082
4	Number of Advisors	9.0
5	Equals Sales Objective per Advisor	$ 90,565
6	Number of work days per month	22
7	Equals daily sales objective per advisor	$ 4,117
8	Current overall effective labor rate	$ 166.80
9	Equals daily sales objective per advisor (FRH's)	24.7

Net 10 %

1	Service Department's Monthly Expenses	$641,291
2	Divide by current labor gross profit % minus 10 to net 10%	68.68%
3	Equals New Sales Objective	$ 933,763
4	Number of Advisors	9.0
5	Equals Sales Objective per Advisor	$ 103,751
6	Number of work days per month	22
7	Equals daily sales objective per advisor	$ 4,716
8	Current overall effective labor rate	$ 166.80
9	Equals daily sales objective per advisor (FRH's)	28.3

Net 20 %

1	Service Department's Monthly Expenses
2	Divide by current labor gross profit % minus 20 to net 20%
3	Equals New Sales Objective
4	Number of Advisors
5	Equals Sales Objective per Advisor
6	Number of work days per month
7	Equals daily sales objective per advisor
8	Current overall effective labor rate
9	Equals daily sales objective per advisor (FRH's)

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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				885
		x			
	Multiply by .3 hours				0.3 hours
$641,291	Additional customer labor hours generated	=			265.50
		x			
58.68%	Multiply by Customer Labor Rate			$	195.00
$ 1,092,896	Equals additional Customer Labor Sales Generated	=		$	51,773
		x			
9.0	Multiply by customer Labor Gross Profit %				78.73%
$ 121,433	Equals additional Labor Gross Profit $ generated	=	(A)	$	40,762
22					
$ 5,520					
	Divide Parts Sales R.O. by Labor Sales R.O. to calculate $ parts sales per 1$ of Labor Sales	=			0.66
$ 166.80					
		x			
33.1	Multiply by Customer Labor Sales			$	51,773
		=			
	Equals additional Customer Parts Sales generated			$	34,338
		x			
	Multiply by Customer Parts Sales Gross Profit %				39.41%
	Equals additional Parts Gross Profit $ Generated	=	(B)	$	13,533
	Add Gross Profit from Labor (A) and Parts (B)	=		$	54,295

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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
$144.00	|	1.2	=	$120.00
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	=	$ 98.00
R&R Rear Hub Bearing.	$ 96.00	|	0.80	=	$ 120.00
Replace Trans. Pan gasket	$ 107.80	|	1.10	=	$ 98.00
R&R Headlight unit (1)	$ 108.00	|	0.90	=	$ 120.00
	$ 429.40	|	4.0	=	$ 107.35
	Total Price		Total Units		Effective Labor Rate
					(For This R.O.)

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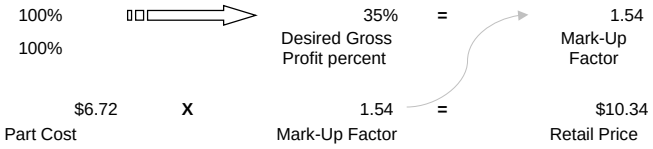
Calculating Mark-Up

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	**=**	$488.32
Filter #2	$4.01	**X**	56	**=**	$224.56
Filter #3	$3.56	**X**	85	**=**	$302.60
Filter #4	$3.86	**X**	202	**=**	$779.72
Filter #5	$3.51	**X**	36	**=**	$126.36
	Total Items		491	Total Cost	$1,921.56

$ 1,921.56 Total Cost		491 Total Items	**=**	$ 3.91 Weighted Average **Cost**
$ 3.91 Weighted Average Cost	X	1.67 Mark-Up Factor	**=**	$ 6.54 Weighted Average **Price**

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Cost Of A Come-Back

Lost Customer Opportunity			1.5
Average Hours per R.O.	X		4.4
	=		6.6
Effective Labor Rate	X	$	166.80
Lost Labor Sales	=	$	1,101 (A)
Service Department Gross Profit % (Excluding Sublet)	X		78.68%
Lost Labor Gross	=	$	866 (B)
Lost Labor Sales		$	1,101 (A)
Parts / Labor Ratio	X		0.67
	=	$	740
Parts Dept Gross Profit % R.O.Sales	X		39.41%
Lost Parts Gross	=	$	291 (C)
Lost Labor Gross		$	866 (B)
Lost Parts Gross	+	$	291 (C)
Total Lost Gross	=	$	1,158

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