Finance Operations 2 -

Financial Calculations and Formulas

~~Dealership~~ _____

~~Student~~ _____

~~Class #~~ _____

· Service

Service Department Sales And Gross (Labor Only)

Category	Sales	Gross	Gross as % of Sales	%Sales contribution
Customer Pay	$ 162,842	$ 127,399	78.23%	48.08%
Customer Pre paid maint	$ 13,788	$ 10,315	74.09%	4.07%
Customer Express	$ 10,599	$ 7,061	66.62%	3.13%
Warranty	$ 89,901	$ 67,062	74.60%	26.54%
Warranty Service contract	$ 7,209	$ 5,080	70.04%	2.13%
Internal	$ 48,927	$ 37,685	77.02%	14.45%
NVI / Road Ready/ PDI	$ 5,420	$ 3,648	67.32%	1.60%
Adj. Cost Of Labor		$ (22,757)	0%	0.00%
Total	$ 338,686	$ 235,363	69.49%	100.00%

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Customer Pay Gross Profit %	77.27%
Total Service Dept. G.P. %	69.49%

Parts To Labor Ratios

Category	Parts Sales	Labor Sales	P/L Ratio
Customer pay	$ 84,561	$ 162,842	0.52
Customer	$ 3,064	$ 13,788	0.22
Customer Other	$ 27,999	$ 10,599	2.64
Warranty	$ 81,714	$ 89,901	0.91
Warranty Other	$ 4,757	$ 7,209	0.66
Internal	$ 24,970	$ 48,927	0.51
Total	$ 227,065	$ 333,266	0.68

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Customer Pay Gross Profit %	77.27%
Total Service Dept. G.P. %	69.49%
Parts / Labor Ratio (Cust. Pay Only)	0.82

Service Department Profit Centering

Expense Category	Dollar Amount	% of Gross	Profile
Department Gross	$ 235,363		
Variable Expense		0.00%	
Selling Expense	$ 67,570	28.71%	
Personnel Expense		0.00%	
Semi-Fixed Expense	$ 64,678	27.48%	
Fixed Expense	$ 84,006	35.69%	
Unallocated Expense		0.00%	
Dealer's Salary		0.00%	
Total Expenses	$ 216,254	91.88%	
Net Profit	$ 19,109	8.12%	

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Customer Pay Gross Profit %	77.27%
Total Service Dept. G.P. %	69.49%
Parts / Labor Ratio (Cust. Pay Only)	0.62
Total Service Dept. Expenses	$ 216,254

Fixed Absorption

		% Adj Ovhd Exp
Parts Department Total Gross	$ 134,615	17.74%
Service Department Total Gross	$ 234,294	30.88%
Body Shop Department Total Gross	$ 25,285	3.33%
Total Fixed Gross Profit	$ 394,194	
Total Dealership Expense	$ 758,759	

Overhead Expense	$ 758,759
Total Fixed Gross Profit	$ 394,194
Total Dealership Expense	$ 758,759
Fixed Absorption Percentage	51.95%

Guideline 60%

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Customer Pay Gross Profit %	77.27%
Total Service Dept. G.P. %	69.49%
Parts / Labor Ratio (Cust. Pay Only)	0.62
Total Service Dept. Expenses	$ 216,254

SERVICE INVENTORY ANALYSIS

	Labor Sales / Month		Effective Labor Rates		Hours Billed
Customer Pay	$ 162,842	÷	165.00	=	986.9
Customer	$ 13,788	÷	57.00	=	241.9
Customer Other	$ 10,599	÷	105.00	=	100.9
Warranty	$ 97,110	÷	117.05	=	829.6
Internal	$ 48,927	÷	165.00	=	296.5
New Vehicle Prep	$ 5,420	÷	117.05	=	46.3
Total	$ 338,686				2502.2

POTENTIAL

$ 338,686	÷	2502.24	=	$ 135.35			
Total labor sales for month		Total hours billed		Effective Labor Rate			
23.00	x	8	x	23.0	=	4,232.0	
# Service mechanical technicians		# Hours/Day		Working Days/Month		Hours Available to Sell	
4,232.0	x	$ 135.35	=	$ 572,815		$ 716,019.02	
Hours Available to Sell		Effective Labor Rate		Labor sales potential @100%		Labor sales potential @ 125%	

How proficient are your technicians ?

2,502.2	÷	4,232.00	=	59.13%
Total Hours Billed		Hours Available to Sell		Tech Proficiency

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Hours Per RO (RO Analysis)	
Percent of One Item R.O.'s (RO Analysis)	
Customer Pay Effective Labor Rate (DMS Report)	
Warranty Labor Rate (DMS Report)	
Total Overall Effective Labor Rate	$ 135.35
Overall Technician Proficiency	59.13%

FACILITY POTENTIAL

Number of Bays	45	
	x	
Number of Days	23	
	x	
Number of Hours	184	
	x	
Effective Labor Rate	$ 135.35	
	equals	
FACILITY POTENTIAL		$ 25,776,685

FACILITY UTILIZATION

Total Labor Sales	$ 338,686	
	÷	
Facility Potential	$ 25,776,685	
	equals	
FACILITY UTILIZATION		1.31%

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Calculating Real Cost of Labor

$ 338,686	Labor Sales
2,634.0	Divided by Hours Billed
$ 128.58	= OELR

$ 338,686	Labor Sales
$ 234,295	-Labor Gross
$ 104,391	=Labor Cost

$ 104,391	Labor Cost
2,634.00	/ Hours Billed
$ 39.63	=Real Cost

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$39.63	÷	24.00%	=	$165.13
Real Cost				E.L.R. Needed to

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OWNER BASE POTENTIAL

	x	8	=	0.0
5 Year Owner Base		Annual Hours Purchased		Market Potential / Hours
0.0	x	$ 128.58	=	$ -
Market Potentail/ Hours		Effective Labor Rate		5 Yr. O.B Sales Potential
	x	12	=	$ -
Avg. Mos. Labor Sales (excluding internal, PDI and		Annualized		Current Labor Sales Trend
$ -	÷	$ -	=	0.00%
Labor Sales Trend		5 Yr. O.B. Sales Potential		Ouch

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

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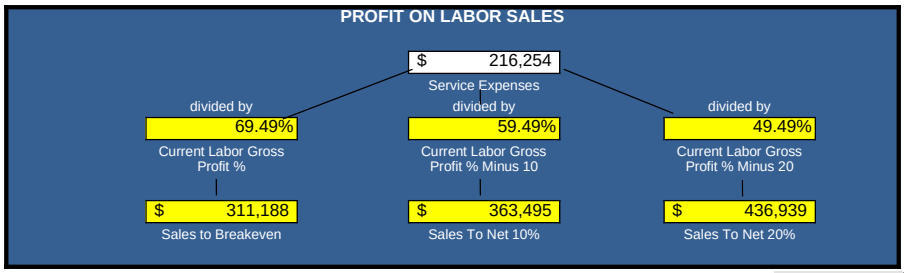

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Customer Pay Gross Profit %	77.27%	Customer Pay E.L.R.	$ -
Total Service Dept. G.P.%	69.49%	Total (overall) E.L.R.	$ 135.35
Parts / Labor Ratio (Cust Pay Only)	0.62	Warranty Labor Rate	$ -
Total Service Dept Expense	$ 216,254	Overall Tech Proficiency	59.13%
Hours Per R.O (recap)	0.00		
Percent Of One Item R.O.'s			

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Technician Value

Calculate using daily available hours per technician

Hours		Days		Labor Rate		Sales Value
8	x	23	x	$ 135.35	=	$ 24,905

Sales Value		Gross Margin		Profit Value
$ 24,905	x	69.49%	=	$ 17,307

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Profit Value		Proficiency		Adjusted Profit Value
$ 17,307	x	70%		$ 12,115
$ 17,307	x	80%		$ 13,846
$ 17,307	x	90%		$ 15,577
$ 17,307	x	100%		$ 17,307
$ 17,307	x	110%		$ 19,038
$ 17,307	x	120%		$ 20,769
$ 17,307	x	59.1%	=	$ 10,234
		Your Proficiency #		

STAFFING REQUIREMENTS

A. Sales To Break Even

Service Expenses for One Month	÷	Current Gross Profit Percent	=	Sales To Break Even
$ 216,254	÷	69.49%	=	$ 311,188

B. Sales To Generate 20% Net

Service Expenses for One Month	÷	Current Gross Profit Percent (Minus 20)	=	Sales To Generate 20% Net
$ 216,254	÷	49.49%	=	$ 436,939

C. Technician Value

Daily Work Hours	X	Average Proficiency Rate	X	Overall Effective Labor Rate	X	Work Days Per Month	=	Technician Value
8		80%		$ 135.35		23		$19,924
8		90%		$ 135.35		23		$22,415
8		100%		$ 135.35		23		$24,905
8		120%		$ 135.35		23		$29,886

D. Staffing To Break Even

Sales To Break Even	÷	Technician Value		=	Staffing
$ 311,188	÷	19,924	@ 80%	=	15.6
$ 311,188	÷	22,415	@ 90%	=	13.9
$ 311,188	÷	24,905	@ 100%	=	12.5
$ 311,188	÷	29,886	@ 120%	=	10.4

E. Staffing To Generate 20% Net

Sales To Generate 20% Net	÷	Technician Value		=	Staffing
$ 436,939	÷	$ 19,924	@ 80%	=	21.9
$ 436,939	÷	$ 22,415	@ 90%	=	19.5
$ 436,939	÷	$ 24,905	@ 100%	=	17.5
$ 436,939	÷	$ 29,886	@ 120%	=	14.6

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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	$216,254
÷		
2	Divide by current labor gross profit % to break even	69.49%
=		
3	Equals New Sales Objective	$ 311,188
÷		
4	Number of Advisors	5.0
=		
5	Equals Sales Objective per Advisor	$ 62,238
÷		
6	Number of work days per month	23
=		
7	Equals daily sales objective per advisor	$ 2,706
÷		
8	Current overall effective labor rate	$ 135.35
=		
9	Equals daily sales objective per advisor (FRH's)	20.0

Net 10 %

1	Service Department's Monthly Expenses	$216,254
÷		
2	Divide by current labor gross profit % minus 10 to net 10%	59.49%
=		
3	Equals New Sales Objective	$ 363,495
÷		
4	Number of Advisors	5.0
=		
5	Equals Sales Objective per Advisor	$ 72,699
÷		
6	Number of work days per month	23
=		
7	Equals daily sales objective per advisor	$ 3,161
÷		
8	Current overall effective labor rate	$ 135.35
=		
9	Equals daily sales objective per advisor (FRH's)	23.4

Net 20 %

1	Service Department's Monthly Expenses	$216,254
÷		
2	Divide by current labor gross profit % minus 20 to net 20%	49.49%
=		
3	Equals New Sales Objective	$ 436,939
÷		
4	Number of Advisors	5.0
=		
5	Equals Sales Objective per Advisor	$ 87,388
÷		
6	Number of work days per month	23
=		
7	Equals daily sales objective per advisor	$ 3,799
÷		
8	Current overall effective labor rate	$ 135.35
=		
9	Equals daily sales objective per advisor (FRH's)	28.1

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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			1288
Multiply by .3 hours	x		0.3 hours
Additional customer labor hours generated	=		386.40
Multiply by Customer Labor Rate	x		$ -
Equals additional Customer Labor Sales Generated	=		$ -
Multiply by customer Labor Gross Profit %	x		77.27%
Equals additional Labor Gross Profit $ generated	=	(A)	$ -
Divide Parts Sales R.O. by Labor Sales R.O. to calculate $ parts sales per 1$ of Labor Sales	=		0.62
Multiply by Customer Labor Sales	x		$ -
Equals additional Customer Parts Sales generated	=		$ -
Multiply by Customer Parts Sales Gross Profit %	x		35.00%
Equals additional Parts Gross Profit $ Generated	=	(B)	$ -
Add Gross Profit from Labor (A) and Parts (B)	=		$ -

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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
Hours	1.2

Price	÷	Hours	=	$0.00 Labor Rate

2 Calculate the **Effective Labor Rate** for the following "Repair" operations.

Labor Operations	Labor Price		Labor Hours		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 Hours	=	$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)

100%	⇨		=	0.00
100%		Desired Gross Profit percent		Mark-Up Factor
	X	0.00	=	$0.00
Part Cost		Mark-Up Factor		Retail Price

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	=	
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	$0.00

$ -	÷	491	=	$ -
Total Cost		Total Items		Average **Cost**
$ -	X		=	$ -
Cost		Factor		Average **Price**

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Cost Of A Come-Back

Lost Customer Opportunity			
Average Hours per R.O.	X		
	=	0.0	
Effective Labor Rate	X	$ 135.35	
Lost Labor Sales	=	$ -	(A)
Service Department Gross Profit % (Excluding Sublet)	X	69.49%	
Lost Labor Gross	=	$ -	(B)
Lost Labor Sales		$ -	(A)
Parts / Labor Ratio	X	0.52	
	=	$ -	
Parts Dept Gross Profit % R.O.Sales	X		
Lost Parts Gross	=	$ -	(C)
Lost Labor Gross		$ -	(B)
Lost Parts Gross	+	$ -	(C)
Total Lost Gross	=	$ -	

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