



Fixed Operations 2 -

Financial Calculations and Formulas

Service

Service Department Sales And Gross (Labor Only)

Category	Sales	Gross	Gross as % of Sales	Weighted Average
Customer Car Services	\$ 432,221	\$ 113,877	26.34%	46.00%
Customer Express	\$ 17,455	\$ 13,364	76.01%	5.64%
Customer Other - Kiosk	\$ 46,962	\$ 38,469	81.89%	4.17%
Warranty	\$ 55,723	\$ 29,432	52.82%	11.44%
Warranty Other kiosk	\$ 20,520	\$ 19,720	96.10%	6.63%
Revenue	\$ 48,250	\$ 41,665	86.37%	5.59%
Inv / Road Ready/PCI			0%	0.00%
Adj. Cost Of Labor		\$ 3,620	0%	0.00%
Total	\$ 599,541	\$ 262,120	43.72%	100.00%

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The Picture	
Customer Pay Gross Profit %	81.70%
Total Service Dept. G.P. %	84.67%

Parts To Labor Ratios

Company	Parts Sales	Labor Sales	PL Ratio
Customer Car Sales	\$ 24,559	\$ 242,213	0.10
Customer express	\$ 20,060	\$ 17,401	1.15
Customer Other Kia	\$ 40,394	\$ 46,902	0.86
Warranty	\$ 49,974	\$ 50,611	1.00
Warranty Other Kia	\$ 22,871	\$ 20,530	1.11
Income	\$ 40,018	\$ 48,248	0.83
Total	\$ 228,056	\$ 300,563	0.74

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The Picture	
Customer Pay Gross Profit %	81.72%
Total Service Dept. G.P. %	84.67%
Parts / Labor Ratio (Cust. Pay Only)	0.58

Service Department Profit Centering

Financial Category	Value Amount	% of Gross	Profit
Department Office	\$ 262,203	25.36%	
Variable Expense	\$ 66,498	0.00%	
Selling Expense		0.00%	
Personnel Expense	\$ 152,719	0.00%	
Semi-Fixed Expense		0.00%	
Fixed Expense	\$ 40,837	0.00%	
Unallocated Expense		0.00%	
Operator Salary	\$ 280,011	99.20%	
Total Expenses	\$ 2,205	0.00%	
Net Profit	\$ 2,205	0.00%	

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The Picture	
Customer Pay Gross Profit %	81.70%
Total Service Dept. G.P. %	84.67%
Parts / Labor Ratio (Cust. Pay Only)	0.60
Total Service Dept. Expenses	\$ 200,011

Fixed Absorption

Parts Department Total Gross	\$ 236,193	% All Over Exp 73.29%
Service Department Total Gross	\$ 262,347	22.21%
Body Shop Department Total Gross	\$ 61,521	5.21%
Total Fixed Gross Profit	\$ 453,061	
Total Dealership Expense	\$ 1,180,233	

Overhead Expense	\$ 1,180,233	
Total Fixed Gross Profit	\$ 453,061	
Total Dealership Expense	\$ 1,180,233	
Fixed Absorption Percentage	38.39%	Guideline 60%

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The Picture	
Customer Pay Gross Profit %	81.70%
Total Service Dept. C.P. %	84.67%
Parts / Labor Ratio (Cust. Pay Only)	0.56
Total Service Dept. Expenses	\$ 262,011

NADA ACTUAL SERVICE ANALYSIS

Performance

	Labor Sales / Month	Effective Labor Rates	Hours Billed
Customer Subaru	\$ 142,237	÷ 127.63 =	1114.4
Customer express	\$ 17,455	÷ 115.47 =	151.2
Customer Kia	\$ 45,592	÷ 127.63 =	357.2
Warranty	\$ 56,033	÷ 125.92 =	445.0
Internal	\$ 48,246	÷ 100.59 =	479.6
New Vehicle Prep	\$ -	÷ =	0.00
Total	\$ 309,563		2547.5

POTENTIAL

$$\text{\$ } 309,563 \div 2547.45 = \text{\$ } 121.52$$

Total labor sales for month

Total hours billed

Effective Labor Rate

$$20.00 \times 10 \times 17 = 3,400.0$$

Service mechanical technicians

Hours/Day

Working Days/Month

Clock Hour Avail

$$3,400.0 \times \text{\$ } 121.52 = \text{\$ } 413,164 \quad \text{\$ } 516,454.39$$

Clock Hours Available

Effective Labor Rate

Labor sales potential @100%

Labor sales potential @ 125%

How proficient are your technicians ?

$$2,547.5 \div 3,400.00 = 74.93\%$$

Total Hours Billed

Hours Available

Tech Proficiency

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Hours Per RO (Recap Sheet)

Percent of One Item R.O.'s (Recap Sheet)

Customer Pay Effective Labor Rate (Recap Sheet)

Warranty Labor Rate (Recap Sheet)

Total Overall Effective Labor Rate

Overall Technician Proficiency

FACILITY POTENTIAL	
Number of Bays	18
	x
Number of Days	24
	x
Number of Hours	10.5
	x
Effective Labor Rate	\$ 121.52
	<i>equals</i>
FACILITY POTENTIAL	\$ 551,209

FACILITY UTILIZATION	
Total Labor Sales	\$ 309,563
	÷
Facility Potential	\$ 551,209
	<i>equals</i>
FACILITY UTILIZATION	56.16%

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NADA "QUICK" SERVICE ANALYSIS

\$ 309,563
Labor Sales

2,547.5
Divided by Hours Billed

\$ 121.52
= OELR

\$ 309,563
Labor Sales

\$ 262,120
-Labor Gross

\$ 47,443
=Labor Cost

\$ 47,443
Labor Cost

2,547.50
/ Hours Billed

\$ 18.62
=Real Cost

\$18.62
Real Cost

÷

26.00%

=

\$71.62
E.L.R. Needed to earn
74%

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OWNER BASE POTENTIAL

$$\text{8429} \times \text{8} = \text{67,432.0}$$

5 Year Owner Base Annual Hours Purchased Market Potential / Hours

$$\text{67,432.0} \times \$ \text{121.52} = \$ \text{8,194,093}$$

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

$$\$ \text{321,121} \times \text{12} = \$ \text{3,853,452}$$

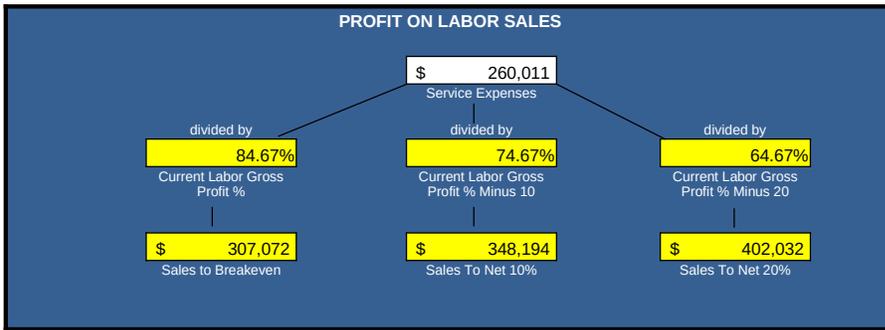
Avg. Mos. Labor Sales (excluding internal, PDI and NVI) Annualized Current Labor Sales Trend

$$\$ \text{3,853,452} \div \$ \text{8,194,093} = \text{47.03\%}$$

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

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

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The Picture

Customer Pay Gross Profit %	81.70%	Customer Pay E.L.R.	\$ 127.63
Total Service Dept. G.P.%	84.67%	Total (overall) E.L.R.	\$ 121.52
Parts / Labor Ratio (Cust Pay Only)	0.56	Warranty Labor Rate	\$ 125.92
Total Service Dept Expense	\$ 260,011	Overall Tech Proficiency	74.93%
Hours Per R.O (recap)	0.57		
Percent Of One Item R.O.'s	96.00%		

Technician Value

Calculate using daily available hours per technician

Hours		x	Days		x	Labor Rate	=	Sales Value
	10			17		\$ 121.52		\$ 20,658

Sales Value		x	Gross Margin		=	Profit Value
\$ 20,658			84.67%			\$ 17,492

\$ 17,492	x	70%		\$ 12,245	
\$ 17,492	x	80%	p r o f i t i c i e n c y	\$ 13,994	
\$ 17,492	x	90%		\$ 15,743	
\$ 17,492	x	100%		\$ 17,492	
\$ 17,492	x	110%		\$ 19,241	
\$ 17,492	x	120%		\$ 20,991	
\$ 17,492	x	84.9%		=	\$ 14,854
Profit Value	Your #				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
\$ 260,011	+	84.67%	= \$ 307,072

B. Sales To Generate 20% Net			
Service Expenses for One Month	+	Current Gross Profit Percent (Minus 20)	= Sales To Generate 20% Net
\$ 260,011	+	64.67%	= \$ 402,032

c. Technician Value								
Daily Work Hours	X	Average Proficiency Rate	X	Overall Effective Labor Rate	X	Work Days Per Month	=	Technician Value
10	X	80%	X	\$ 121.52	X	17	=	\$16,527
10	X	90%	X	\$ 121.52	X	17	=	\$18,592
10	X	100%	X	\$ 121.52	X	17	=	\$20,658
10	X	120%	X	\$ 121.52	X	17	=	\$24,790

d. Staffing To Break Even			
Sales To Break Even	+	Technician Value	= Staffing
\$ 307,072	+	16,527 @ 80%	= 18.6
\$ 307,072	+	18,592 @ 90%	= 16.5
\$ 307,072	+	20,658 @ 100%	= 14.9
\$ 307,072	+	24,790 @ 120%	= 12.4

e. Staffing To Generate 20% Net			
Sales To Generate 20% Net	+	Technician Value	= Staffing
\$ 402,032	+	\$ 16,527 @ 80%	= 24.3
\$ 402,032	+	\$ 18,592 @ 90%	= 21.6
\$ 402,032	+	\$ 20,658 @ 100%	= 19.5
\$ 402,032	+	\$ 24,790 @ 120%	= 16.2

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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	\$26,011
+	
2 Divide by current labor gross profit % to break even	84.67%
=	
3 Equals New Sales Objective	\$ 30,719
+	
4 Number of Advisors	7.0
=	
5 Equals Sales Objective per Advisor	\$ 4,388
+	
6 Number of work days per month	17
=	
7 Equals daily sales objective per advisor	\$ 258
+	
8 Current overall effective labor rate	\$ 121.52
=	
9 Equals daily sales objective per advisor (FRH's)	2.1

Net 10 %	
1 Service Department's Monthly Expenses	\$26,011
+	
2 Divide by current labor gross profit % minus 10 to net 10%	74.67%
=	
3 Equals New Sales Objective	\$ 34,833
+	
4 Number of Advisors	7.0
=	
5 Equals Sales Objective per Advisor	\$ 4,976
+	
6 Number of work days per month	17
=	
7 Equals daily sales objective per advisor	\$ 293
+	
8 Current overall effective labor rate	\$ 121.52
=	
9 Equals daily sales objective per advisor (FRH's)	2.4

Net 20 %	
1 Service Department's Monthly Expenses	\$26,011
+	
2 Divide by current labor gross profit % minus 20 to net 20%	64.67%
=	
3 Equals New Sales Objective	\$ 40,219
+	
4 Number of Advisors	7.0
=	
5 Equals Sales Objective per Advisor	\$ 5,746
+	
6 Number of work days per month	17
=	
7 Equals daily sales objective per advisor	\$ 338
+	
8 Current overall effective labor rate	\$ 121.52
=	
9 Equals daily sales objective per advisor (FRH's)	2.8

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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" value="1220"/>
Multiply by .3 hours		<input type="text" value="0.3 hours"/>
Additional customer labor hours generated	=	<input type="text" value="366.00"/>
	X	
Multiply by Customer Labor Rate		<input type="text" value="\$ 127.63"/>
Equals additional Customer Labor Sales Generated	=	<input type="text" value="\$ 46,713"/>
	X	
Multiply by customer Labor Gross Profit %		<input type="text" value="81.70%"/>
Equals additional Labor Gross Profit \$ generated	= (A)	<input type="text" value="\$ 38,162"/>
Divide Parts Sales R.O. by Labor Sales R.O. to calculate \$ parts sales per \$ of Labor Sales	=	<input type="text" value="0.56"/>
	X	
Multiply by Customer Labor Sales		<input type="text" value="\$ 46,713"/>
	=	
Equals additional Customer Parts Sales generated		<input type="text" value="\$ 26,267"/>
	X	
Multiply by Customer Parts Sales Gross Profit %		<input type="text" value="49.00%"/>
Equals additional Parts Gross Profit \$ Generated	= (B)	<input type="text" value="\$ 12,871"/>
Add Gross Profit from Labor (A) and Parts (B)	=	<input type="text" value="\$ 51,033"/>

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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		
_____	÷	_____	=	\$0.00
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	=	<input style="width: 50px;" type="text"/>
R&R Rear Hub Bearing.	\$ 96.00	÷	0.80	=	<input style="width: 50px;" type="text"/>
Replace Trans. Pan gasket	\$ 107.80	÷	1.10	=	<input style="width: 50px;" type="text"/>
R&R Headlight unit (1)	\$ 108.00	÷	0.90	=	<input style="width: 50px;" type="text"/>
	Total Price <input style="width: 80px;" type="text"/>		Total Units <input style="width: 80px;" type="text"/>		
	↓		↓		
	-----	÷	-----	=	\$0.00
	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)

<input style="width: 100%;" type="text" value="100%"/> 100%	\Rightarrow	<input style="width: 100%;" type="text"/> Desired Gross Profit percent	=	<input style="width: 100%;" type="text" value="0.00"/> Mark-Up Factor
<input style="width: 100%;" type="text"/> Part Cost	X	<input style="width: 100%;" type="text" value="0.00"/> Mark-Up Factor	=	<input style="width: 100%;" type="text" value="\$0.00"/> 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 =	<input style="width: 100%;" type="text"/>
Filter #2	\$4.01 X	56 =	<input style="width: 100%;" type="text"/>
Filter #3	\$3.56 X	85 =	<input style="width: 100%;" type="text"/>
Filter #4	\$3.86 X	202 =	<input style="width: 100%;" type="text"/>
Filter #5	\$3.51 X	36 =	<input style="width: 100%;" type="text"/>
Total Items		<input style="width: 100%;" type="text" value="491"/>	Total Cost <input style="width: 100%;" type="text" value="\$0.00"/>

<input style="width: 100%;" type="text" value="\$ -"/> Total Cost	\div	<input style="width: 100%;" type="text" value="491"/> Total Items	=	<input style="width: 100%;" type="text" value="\$ -"/> Weighted Average Cost
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<input style="width: 100%;" type="text" value="\$ -"/> Weighted Average Cost	X	<input style="width: 100%;" type="text"/> Mark-Up Factor	=	<input style="width: 100%;" type="text" value="\$ -"/> Weighted Average Price
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Cost Of A Come-Back

Lost Customers		<input type="text"/>
Average Hours per R.O.	X	<input type="text"/>
	=	<input type="text" value="0.0"/>
Effective Labor Rate	X	<input type="text" value="\$ 121.52"/>
	=	<input type="text" value="\$ -"/> (A) Service Labor Sales
<hr/>		
Service Department Gross Profit % (Excluding Sublet)	X	<input type="text" value="84.67%"/>
	=	<input type="text" value="\$ -"/> (B) Service Labor Gross
<hr/>		
Service Labor Sales (A)		<input type="text" value="\$ -"/>
Parts / Labor Ratio	X	<input type="text" value="0.39"/>
	=	<input type="text" value="\$ -"/>
Parts Dept Gross Profit % R.O.Sales	X	<input type="text"/>
	=	<input type="text" value="\$ -"/> (C) Service Parts Gross
<hr/>		
(B) Service Labor Gross		<input type="text" value="\$ -"/>
(C) Service Parts Gross	+	<input type="text" value="\$ -"/>
Lost Gross	=	<input type="text" value="\$ -"/>

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