



Fixed Operations 2 -

Financial Calculations and Formulas

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Dealership

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Class #

Service

Service Department Sales And Gross (Labor Only)

| Category | Sales | Gross | Gross as % of Sales | Margin |
|------------------------|-------------------|------------------|---------------------|----------------|
| Customer Pay | \$ 48,228 | \$ 34,674 | 71.91% | 43.50% |
| Customer | \$ 6,072 | \$ 4,615 | 75.99% | 5.27% |
| Customer Aerial | \$ | \$ | 0% | -0.00% |
| Warranty | \$ 22,220 | \$ 17,062 | 76.78% | 19.21% |
| Warranty Other | \$ | \$ | 0% | -0.00% |
| Internal | \$ 39,214 | \$ 30,248 | 77.14% | 31.19% |
| Inv / Road Ready / PDI | \$ | \$ | 0% | 0.00% |
| Prod Cost/Off Labor | \$ | \$ (26,472) | 0% | -2.00% |
| Total | \$ 115,728 | \$ 77,527 | 66.99% | 100.00% |

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|-----------------------------|--------|
| Customer Pay Gross Profit % | 74.94% |
| Total Service Dept. G.P. % | 66.99% |

Parts To Labor Ratio

| Customer Category | Parts Service | Labor Service | Ratio |
|-------------------|-------------------|-------------------|-------------|
| Customer Pay | \$ 43,572 | \$ 48,323 | 0.90 |
| Customer | \$ | \$ 6,073 | 0.00 |
| Customer Agent | \$ | \$ | 0.00 |
| Warranty | \$ 23,146 | \$ 22,220 | 0.95 |
| Warranty Other | \$ | \$ | 0.00 |
| Internal | \$ 38,793 | \$ 39,214 | 1.01 |
| Total | \$ 104,954 | \$ 115,738 | 0.91 |

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|--------------------------------------|--------|
| Customer Pay Gross Profit % | 74.64% |
| Total Service Dept. G.P. % | 66.99% |
| Parts / Labor Ratio (Cust. Pay Only) | 0.91 |

Service Department Profit Centering

| Revenue Component | Value Amount | % of Gross Profit |
|---------------------|--------------|-------------------|
| Customer Service | \$ 72,223 | 0.00% |
| Variable Expense | | 0.00% |
| Selling Expense | | 0.00% |
| Personnel Expense | \$ 40,507 | 52.37% |
| Items Fixed Expense | \$ 14,452 | 18.44% |
| Cost Expense | \$ 15,364 | 20.14% |
| Unallocated Expense | | 0.00% |
| Dealer's Salary | | 0.00% |
| Total Expenses | \$ 71,123 | 91.74% |
| Net Profit | \$ 6,454 | 8.26% |

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| Customer Pay Gross Profit % | 74.92% |
| Total Service Dept. G.P. % | 66.99% |
| Parts / Labor Ratio (Cost. Pay Only) | 0.81 |
| Total Service Dept. Expenses | \$ 71,123 |

Fixed Absorption

| | | |
|----------------------------------|------------|----------------------------|
| Parts Department Total Gross | \$ 52,224 | % All Outlet Exp 11.33% |
| Service Department Total Gross | \$ 84,660 | 22.63% |
| Body Shop Department Total Gross | | 0.00% |
| Total Fixed Gross Profit | \$ 137,084 | |
| Total Dealership Expense | \$ 374,259 | |

| | | |
|---|------------|---------------|
| Overhead Expense | \$ 374,259 | |
| Total Fixed Gross Profit | \$ 137,084 | |
| Total Dealership Expense | \$ 374,259 | |
| Fixed Absorption Percentage | 36.87% | Guideline 60% |
| <input type="button" value="Clear Form"/> | | |

| | |
|--------------------------------------|-----------|
| The Picture | |
| Customer Pay Gross Profit % | 74.94% |
| Total Service Dept. C.P. % | 56.90% |
| Parts / Labor Ratio (Cust. Pay Only) | 0.81 |
| Total Service Dept. Expenses | \$ 71,123 |

SERVICE INVENTORY ANALYSIS

| | Labor Sales / Month | Effective Labor Rates | Hours Billed |
|------------------|---------------------|-----------------------|--------------|
| Customer Pay | \$ 48,221 | ÷ 116.71 = | 413.2 |
| Customer | \$ 6,073 | ÷ 116.71 = | 52.0 |
| Customer Other | \$ - | ÷ = | 0.00 |
| Warranty | \$ 22,228 | ÷ 125.58 = | 177.0 |
| Internal | \$ 39,214 | ÷ 139.95 = | 280.2 |
| New Vehicle Prep | \$ - | ÷ = | 0.00 |
| Total | \$ 115,736 | | 922.4 |

POTENTIAL

| | | | | |
|-----------------------------|---|--------------------|---|----------------------|
| \$ 115,736 | ÷ | 922.41 | = | \$ 125.47 |
| Total labor sales for month | | Total hours billed | | Effective Labor Rate |

| | | | | | | |
|----------------------------------|---|-------------|---|--------------------|---|-------------------------|
| 6.00 | x | 8 | x | 24.0 | = | 1,152.0 |
| # Service mechanical technicians | | # Hours/Day | | Working Days/Month | | Hours Available to Sell |

| | | | | | |
|-------------------------|---|----------------------|---|-----------------------------|------------------------------|
| 1,152.0 | x | \$ 125.47 | = | \$ 144,543 | \$ 180,679.26 |
| Hours Available to Sell | | Effective Labor Rate | | Labor sales potential @100% | Labor sales potential @ 125% |

How proficient are your technicians ?

| | | | | |
|--------------------|---|-------------------------|---|------------------|
| 922.4 | ÷ | 1,152.00 | = | 80.07% |
| Total Hours Billed | | Hours Available to Sell | | Tech Proficiency |

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| | |
|--|-----------|
| Hours Per RO (RO Analysis) | 1.7 |
| Percent of One Item R.O.'s (RO Analysis) | 64.00% |
| Customer Pay Effective Labor Rate (DMS Report) | \$ 116.71 |
| Warranty Labor Rate (DMS Report) | \$ 125.58 |
| Total Overall Effective Labor Rate | \$ 125.47 |
| Overall Technician Proficiency | 80.07% |

| FACILITY POTENTIAL | |
|----------------------|---|
| Number of Bays | <input type="text" value="13"/> |
| | x |
| Number of Days | <input type="text" value="25"/> |
| | x |
| Number of Hours | <input type="text" value="9"/> |
| | x |
| Effective Labor Rate | \$ <input type="text" value="125.47"/> |
| | <i>equals</i> |
| FACILITY POTENTIAL | \$ <input type="text" value="367,005"/> |

| FACILITY UTILIZATION | |
|----------------------|---|
| Total Labor Sales | \$ <input type="text" value="115,736"/> |
| | ÷ |
| Facility Potential | \$ <input type="text" value="367,005"/> |
| | <i>equals</i> |
| FACILITY UTILIZATION | <input type="text" value="31.54%"/> |

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Calculating Real Cost of Labor

\$ 115,736
Labor Sales

922.4
Divided by Hours Billed

\$ 125.47
= OELR

\$ 115,736
Labor Sales

\$ 77,527
-Labor Gross

\$ 38,209
=Labor Cost

\$ 38,209
Labor Cost

922.41
/ Hours Billed

\$ 41.42
=Real Cost

\$41.42
Real Cost

÷

24.00%

=

\$172.58
E.L.R. Needed to earn
76%

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OWNER BASE POTENTIAL

$$\text{1378} \times \text{8} = \text{11,024.0}$$

5 Year Owner Base Annual Hours Purchased Market Potential / Hours

$$\text{11,024.0} \times \$ \text{125.47} = \$ \text{1,383,196}$$

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

$$\$ \text{79,550} \times \text{12} = \$ \text{954,600}$$

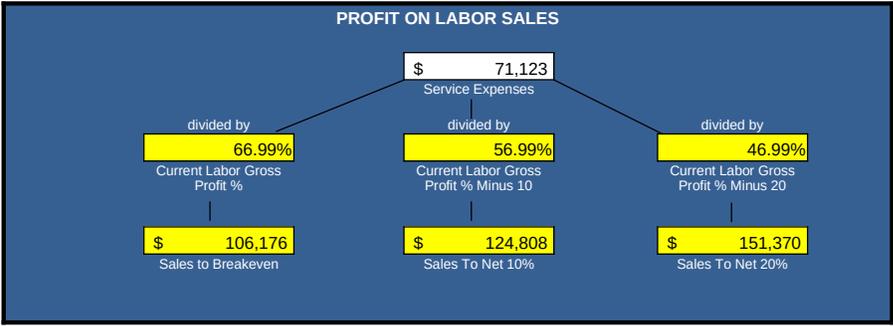
Avg. Mos. Labor Sales
(excluding internal, PDI and
NVI) Annualized Current Labor Sales Trend

$$\$ \text{954,600} \div \$ \text{1,383,196} = \text{69.01\%}$$

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 % | <input type="text" value="74.94%"/> | Customer Pay E.L.R. | <input type="text" value="\$ 116.71"/> |
| Total Service Dept. G.P.% | <input type="text" value="66.99%"/> | Total (overall) E.L.R. | <input type="text" value="\$ 125.47"/> |
| Parts / Labor Ratio (Cust Pay Only) | <input type="text" value="0.81"/> | Warranty Labor Rate | <input type="text" value="\$ 125.58"/> |
| Total Service Dept Expense | <input type="text" value="\$ 71,123"/> | Overall Tech Proficiency | <input type="text" value="80.07%"/> |
| Hours Per R.O (recap) | <input type="text" value="1.70"/> | | |
| Percent Of One Item R.O.'s | <input type="text" value="64.00%"/> | | |

Technician Value

Calculate using daily available hours per technician

| | | | | | | | | |
|-------|---|---|------|----|---|------------|---|-------------|
| Hours | | x | Days | | x | Labor Rate | = | Sales Value |
| | 8 | | | 24 | | \$ 125.47 | | \$ 24,091 |

| | | | | | | |
|-------------|--|---|--------------|--|---|--------------|
| Sales Value | | x | Gross Margin | | = | Profit Value |
| \$ 24,091 | | | 66.99% | | | \$ 16,137 |

| | | | | |
|--------------|---|--------------------|---|-----------------------|
| \$ 16,137 | x | 70% | | \$ 11,296 |
| \$ 16,137 | x | 80% | | \$ 12,910 |
| \$ 16,137 | x | 90% | | \$ 14,524 |
| \$ 16,137 | x | 100% | | \$ 16,137 |
| \$ 16,137 | x | 110% | | \$ 17,751 |
| \$ 16,137 | x | 120% | | \$ 19,365 |
| \$ 16,137 | x | 80.1% | = | \$ 12,921 |
| Profit Value | | Your Proficiency # | | 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 |
| \$ 71,123 | + | 66.99% | = \$ 106,176 |

| B. Sales To Generate 20% Net | | | |
|--------------------------------|---|---|-----------------------------|
| Service Expenses for One Month | + | Current Gross Profit Percent (Minus 20) | = Sales To Generate 20% Net |
| \$ 71,123 | + | 46.99% | = \$ 151,370 |

| C. Technician Value | | | | | | | | |
|---------------------|---|--------------------------|---|------------------------------|---|---------------------|---|------------------|
| Daily Work Hours | X | Average Proficiency Rate | X | Overall Effective Labor Rate | X | Work Days Per Month | = | Technician Value |
| 8 | X | 80% | X | \$ 125.47 | X | 24 | = | \$19,272 |
| 8 | X | 90% | X | \$ 125.47 | X | 24 | = | \$21,682 |
| 8 | X | 100% | X | \$ 125.47 | X | 24 | = | \$24,091 |
| 8 | X | 120% | X | \$ 125.47 | X | 24 | = | \$28,909 |

| D. Staffing To Break Even | | | |
|---------------------------|---|------------------|------------|
| Sales To Break Even | + | Technician Value | = Staffing |
| \$ 106,176 | + | 19,272 @ 80% | = 5.5 |
| \$ 106,176 | + | 21,682 @ 90% | = 4.9 |
| \$ 106,176 | + | 24,091 @ 100% | = 4.4 |
| \$ 106,176 | + | 28,909 @ 120% | = 3.7 |

| E. Staffing To Generate 20% Net | | | |
|---------------------------------|---|------------------|------------|
| Sales To Generate 20% Net | + | Technician Value | = Staffing |
| \$ 151,370 | + | 19,272 @ 80% | = 7.9 |
| \$ 151,370 | + | 21,682 @ 90% | = 7.0 |
| \$ 151,370 | + | 24,091 @ 100% | = 6.3 |
| \$ 151,370 | + | 28,909 @ 120% | = 5.2 |

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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 | \$71,123 |
| 2 Divide by current labor gross profit % to break even | 66.99% |
| 3 Equals New Sales Objective | \$ 106,176 |
| 4 Number of Advisors | 2.0 |
| 5 Equals Sales Objective per Advisor | \$ 53,088 |
| 6 Number of work days per month | 24 |
| 7 Equals daily sales objective per advisor | \$ 2,212 |
| 8 Current overall effective labor rate | \$ 125.47 |
| 9 Equals daily sales objective per advisor (FRH's) | 17.6 |

| Net 10 % | |
|--|------------|
| 1 Service Department's Monthly Expenses | \$71,123 |
| 2 Divide by current labor gross profit % minus 10 to net 10% | 56.99% |
| 3 Equals New Sales Objective | \$ 124,808 |
| 4 Number of Advisors | 2.0 |
| 5 Equals Sales Objective per Advisor | \$ 62,404 |
| 6 Number of work days per month | 24 |
| 7 Equals daily sales objective per advisor | \$ 2,600 |
| 8 Current overall effective labor rate | \$ 125.47 |
| 9 Equals daily sales objective per advisor (FRH's) | 20.7 |

| Net 20 % | |
|--|------------|
| 1 Service Department's Monthly Expenses | \$71,123 |
| 2 Divide by current labor gross profit % minus 20 to net 20% | 46.99% |
| 3 Equals New Sales Objective | \$ 151,370 |
| 4 Number of Advisors | 2.0 |
| 5 Equals Sales Objective per Advisor | \$ 75,685 |
| 6 Number of work days per month | 24 |
| 7 Equals daily sales objective per advisor | \$ 3,154 |
| 8 Current overall effective labor rate | \$ 125.47 |
| 9 Equals daily sales objective per advisor (FRH's) | 25.1 |

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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 | X | <input type="text" value="209"/> |
| Multiply by .3 hours | | <input type="text" value="0.3 hours"/> |
| Additional customer labor hours generated | = | <input type="text" value="62.70"/> |
| | X | |
| Multiply by Customer Labor Rate | | <input type="text" value="\$ 116.71"/> |
| Equals additional Customer Labor Sales Generated | = | <input type="text" value="\$ 7,318"/> |
| | X | |
| Multiply by customer Labor Gross Profit % | | <input type="text" value="74.94%"/> |
| Equals additional Labor Gross Profit \$ generated | = (A) | <input type="text" value="\$ 5,484"/> |
| | | |
| Divide Parts Sales R.O. by Labor Sales R.O. to calculate \$ parts sales per 1\$ of Labor Sales | = | <input type="text" value="0.81"/> |
| | X | |
| Multiply by Customer Labor Sales | | <input type="text" value="\$ 7,318"/> |
| | = | |
| Equals additional Customer Parts Sales generated | | <input type="text" value="\$ 5,927"/> |
| | X | |
| Multiply by Customer Parts Sales Gross Profit % | | <input type="text" value="38.26%"/> |
| Equals additional Parts Gross Profit \$ Generated | = (B) | <input type="text" value="\$ 2,268"/> |
| Add Gross Profit from Labor (A) and Parts (B) | = | <input type="text" value="\$ 7,752"/> |

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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 | | | |
| \$144.00 | ÷ | 1.2 | = | \$120.00 | |
| Price | | Hours | | 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 | = | \$ 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 |
| | \$ 422.00 | ÷ | 4.0 | = | \$ 105.50 |
| | Total Price | | Total Hours | | 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)

$$\begin{array}{rcl}
 \boxed{100\%} & \xrightarrow{\quad} & \boxed{35\%} \\
 100\% & & \text{Desired Gross Profit percent} \\
 \\
 \boxed{\$6.72} & \times & \boxed{1.54} \\
 \text{Part Cost} & & \text{Mark-Up Factor} \\
 \\
 & & = \boxed{\$10.34} \\
 & & \text{Retail Price}
 \end{array}$$

$100\% - 35\% = 65\%$
 $100\% \div 65\% = 1.54$ (Mark-Up Factor)

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

| Item | Cost | X | Annual Turnover | = | Total Cost |
|-------------|--------|---|----------------------------------|------------|---|
| Filter #1 | \$4.36 | X | 112 | = | <input type="text" value="\$488.32"/> |
| Filter #2 | \$4.01 | X | 56 | = | <input type="text" value="\$224.56"/> |
| Filter #3 | \$3.56 | X | 85 | = | <input type="text" value="\$302.60"/> |
| Filter #4 | \$3.86 | X | 202 | = | <input type="text" value="\$779.72"/> |
| Filter #5 | \$3.51 | X | 36 | = | <input type="text" value="\$126.36"/> |
| Total Items | | | <input type="text" value="491"/> | Total Cost | <input type="text" value="\$1,921.56"/> |

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

$$\begin{array}{rcl}
 \boxed{\$ 3.91} & \times & \boxed{1.67} \\
 \text{Weighted Average Cost} & & \text{Mark-Up Factor} \\
 \\
 & & = \boxed{\$ 6.54} \\
 & & \text{Weighted Average Price}
 \end{array}$$

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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="1.7"/> |
| | = | <input type="text" value="2.6"/> |
| Effective Labor Rate | X | <input type="text" value="\$ 125.47"/> |
| Lost Labor Sales | = | <input type="text" value="\$ 320 (A)"/> |

| | | |
|---|---|---|
| Service Department Gross Profit % (Excluding Sublet) | X | <input type="text" value="66.99%"/> |
| Lost Labor Gross | = | <input type="text" value="\$ 214 (B)"/> |

| | | |
|--|---|---|
| Lost Labor Sales | | <input type="text" value="\$ 320 (A)"/> |
| Parts / Labor Ratio | X | <input type="text" value="0.91"/> |
| | = | <input type="text" value="\$ 292"/> |
| Parts Dept Gross Profit % R.O.Sales | X | <input type="text" value="38.26%"/> |
| Lost Parts Gross | = | <input type="text" value="\$ 112 (C)"/> |

| | | |
|------------------|---|---|
| Lost Labor Gross | | <input type="text" value="\$ 214 (B)"/> |
| Lost Parts Gross | + | <input type="text" value="\$ 112 (C)"/> |
| Total Lost Gross | = | <input type="text" value="\$ 326"/> |

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