



# Fixed Operations

Financial Calculations and Formulas

# 2 - Service

| Category         | Total             | Gross             | Gross as %<br>of Sales | Margin         |
|------------------|-------------------|-------------------|------------------------|----------------|
| Customer Call    | \$ 1,38,961       | \$ 105,439        | 75.97%                 | 68.81%         |
| Customer Truck   |                   |                   | 0%                     | 0.00%          |
| Customer Other   |                   |                   | 0%                     | 0.00%          |
| Warranty         | \$ 59,576         | \$ 46,445         | 77.90%                 | 25.43%         |
| Warranty Other   |                   |                   | 0%                     | 0.00%          |
| Internal         | \$ 35,675         | \$ 26,909         | 75.43%                 | 15.22%         |
| WPI Retail Ready |                   |                   | 0%                     | 0.00%          |
| AQ_Cost Of Labor |                   |                   | 0%                     | 0.00%          |
| <b>Total</b>     | <b>\$ 234,212</b> | <b>\$ 178,793</b> | <b>76.33%</b>          | <b>100.00%</b> |

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|                             |        |
|-----------------------------|--------|
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| Customer Pay Gross Profit % | 75.87% |
| Total Service Dept. G.P. %  | 76.33% |

| Category       | Parts \$ mil      | Labor \$ mil      | P/L Ratio   |
|----------------|-------------------|-------------------|-------------|
| Customer Car   | \$ 53,857         | \$ 138,911        | 0.63        |
| Customer Truck |                   |                   | 0.00        |
| Customer Other |                   |                   | 0.00        |
| Warranty       | \$ 46,740         | \$ 59,574         | 0.77        |
| Warranty Other |                   |                   | 0.00        |
| Internal       | \$ 27,282         | \$ 35,071         | 0.78        |
| <b>Total</b>   | <b>\$ 127,879</b> | <b>\$ 234,222</b> | <b>0.72</b> |

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| <b>The Picture</b>                   |        |
| Customer Pay Gross Profit %          | 75.87% |
| Total Service Dept. G.P. %           | 76.33% |
| Parts / Labor Ratio (Cust. Pay Only) | 0.68   |

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|                     | Dollar Amount | % of Gross | Profit |
|---------------------|---------------|------------|--------|
| Department Gross    | \$ 181,242    |            |        |
| Variable Expense    |               | 0.00%      |        |
| Selling Expense     |               | 0.00%      |        |
| Personnel Expense   | \$ 76,234     | 41.99%     |        |
| Semi-Fixed Expense  | \$ 82,710     | 45.63%     |        |
| Fixed Expense       | \$ 39,633     | 21.78%     |        |
| Unallocated Expense |               | 0.00%      |        |
| Dealer's Salary     |               | 0.00%      |        |
| Total Expenses      | \$ 198,577    | 109.14%    |        |
| Net Profit          | \$ (17,335)   | -9.14%     |        |

Net Profit

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|------------------------------------|--------------|
| Customer Pay Gross Profit %        | 75.87%       |
| Total Service Dept. G.P. %         | 76.33%       |
| Parts (Labor Rate (Cost. Pay Only) | 0.00%        |
| Total Service Dept. Expenses       | \$ (198,577) |

Fixed Absorption page 4 of 5

|   |                   |                 |         |
|---|-------------------|-----------------|---------|
| Parts Department Total Gross            | \$ 127,076        | % Adj. Over Exp | -21.30% |
| Service Department Total Gross          | \$ 181,342        |                 | 30.62%  |
| Body Shop Department Total Gross        | \$ -              |                 | 0.00%   |
| Total Fixed Gross Profit                | \$ 309,038        |                 |         |
| Total Dealership Expense                | \$ 656,364        |                 |         |
| New & Used Sales Commission Expense     | \$ 56,143         |                 |         |
| New & Used Policy Expense               | \$ 2,608          |                 |         |
| New & Used Get Ready / Delivery Expense | \$ 4,195          |                 |         |
| <b>Adjusted Overhead Expense</b>        | <b>\$ 694,213</b> |                 |         |
| Total Fixed Gross Profit                | \$ 309,038        |                 |         |
| Adjusted Overhead Expense               | \$ 694,213        |                 |         |
| Total Absorption Percentage             | 62.00%            | Guideline       | 75%     |

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|                                      |            |
|--------------------------------------|------------|
| <b>The Picture</b>                   |            |
| Customer Pay Gross Profit %          | 75.87%     |
| Total Service Dept. G.P. %           | 76.38%     |
| Parts / Labor Ratio (Cust. Pay Only) | 0.88       |
| Total Service Dept. Expenses         | \$ 198,577 |

## NADA ACTUAL SERVICE ANALYSIS page B-1

Performance

|                  | Labor Sales / Month | ÷ | Hourly Labor Rate | = | Hours Billed |
|------------------|---------------------|---|-------------------|---|--------------|
| Customer Car*    | \$ 138,981          | ÷ |                   | = | 0.00         |
| Customer Truck*  | \$ -                | ÷ |                   | = | 0.00         |
| Customer Other*  | \$ -                | ÷ |                   | = | 0.00         |
| Warranty         | \$ 59,576           | ÷ |                   | = | 0.00         |
| Internal         | \$ 35,675           | ÷ |                   | = | 0.00         |
| New Vehicle Prep | \$ -                | ÷ |                   | = | 0.00         |
| <b>Total</b>     | <b>\$ 234,232</b>   |   |                   |   | <b>0.0</b>   |

**POTENTIAL**

|                             |   |                    |   |                      |
|-----------------------------|---|--------------------|---|----------------------|
| \$ 234,232                  | ÷ | 1833.00            | = | \$ 127.79            |
| Total labor sales for month |   | Total hours billed |   | Effective Labor Rate |

|                                  |   |             |   |                    |   |                  |
|----------------------------------|---|-------------|---|--------------------|---|------------------|
| 10.00                            | x | 8           | x | 27                 | = | 2,160.0          |
| # Service mechanical technicians |   | # Hours/Day |   | Working Days/Month |   | Clock Hour Avail |

|                       |   |                      |   |                       |
|-----------------------|---|----------------------|---|-----------------------|
| 2,160.0               | x | \$ 127.79            | = | \$ 276,018            |
| Clock Hours Available |   | Effective Labor Rate |   | Labor sales potential |

How proficient are your technicians ?

|                |   |                 |   |                  |
|----------------|---|-----------------|---|------------------|
| 1,833.0        | ÷ | 2,160.00        | = | 84.86%           |
| Hours Produced |   | Hours Available |   | Tech Proficiency |

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|   |           |
|---|-----------|
| Hours Per RO (Recap Sheet)                      | 1.4       |
| Percent of One Item R.O.'s (Recap Sheet)        | 24.00%    |
| Customer Pay Effective Labor Rate (Recap Sheet) | \$ 127.79 |
| Warranty Labor Rate (Recap Sheet)               | \$ 145.00 |
| Total Overall Effective Labor Rate              | \$ 127.79 |
| Overall Technician Proficiency                  | 84.86%    |

| FACILITY POTENTIAL   |                |
|----------------------|----------------|
| Number of Bays       | 14             |
|                      | x              |
| Number of Days       | 27             |
|                      | x              |
| Number of Hours      | 2160           |
|                      | x              |
| Effective Labor Rate | 127.79         |
|                      | <i>equals</i>  |
| FACILITY POTENTIAL   | \$ 104,337,979 |

| FACILITY UTILIZATION |                |
|----------------------|----------------|
| Total Labor Sales    | \$ 234,232     |
|                      | ÷              |
| Facility Potential   | \$ 104,337,979 |
|                      | <i>equals</i>  |
| FACILITY UTILIZATION | 0.22%          |

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**NADA "QUICK" SERVICE ANALYSIS**

|   |   |
|---|---|
| <p style="text-align: center;"><b>\$ 234,232</b><br/>Labor Sales</p> <p style="text-align: center;">_____<br/>Divided by Hours Billed</p> <p style="text-align: center;"><b>0.00</b><br/>= OELR</p> | <p style="text-align: center;"><b>\$ 234,232</b><br/>Labor Sales</p> <p style="text-align: center;">_____<br/>-Labor Gross</p> <p style="text-align: center;"><b>\$ 234,232</b><br/>-Labor Cost</p> |
|---|---|

**\$ 234,232**  
Labor Cost

**0.00**  
/ Hours Billed

**\$0.00**  
=Real Cost

\_\_\_\_\_  
Real Cost

÷    **30.00%**    =    **\$0.00**  
E.L.R. Needed to  
earn 70%

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OWNER BASE POTENTIAL

x  =   
5 Year Owner Base Annual Hours Purchased Market Potential / Hours

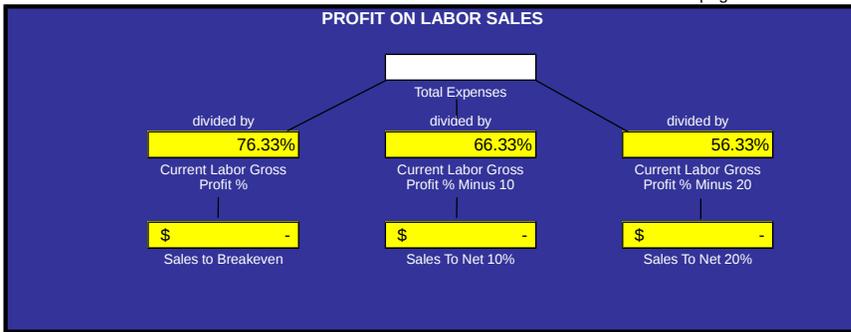
x  =   
Market Potential/ Hours Effective Labor Rate 5 Yr. O.B Sales Potential

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

÷  =   
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="75.87%"/> | Customer Pay E.L.R.      | <input type="text" value="\$ 127.79"/> |
| Total Service Dept. G.P.%           | <input type="text" value="76.33%"/> | Total (overall) E.L.R.   | <input type="text" value="\$ 127.79"/> |
| Parts / Labor Ratio (Cust Pay Only) | <input type="text" value="0.68"/>   | Warranty Labor Rate      | <input type="text" value="\$ 145.00"/> |
| Total Service Dept Expense          | <input type="text" value="###"/>    | Overall Tech Proficiency | <input type="text" value="84.86%"/>    |
| Hours Per R.O (recap)               | <input type="text" value="1.35"/>   |                          |  |
| Percent Of One Item R.O.'s          | <input type="text" value="24.00%"/> |                          |  |

Calculate using daily available hours per technician

|       |      |            |             |
|-------|------|------------|-------------|
| Hours | Days | Labor Rate | Sales Value |
| 8     | 22   | \$ 127.79  | \$ 22,490   |

|             |              |              |
|-------------|--------------|--------------|
| Sales Value | Gross Margin | Profit Value |
| \$ 22,490   | 76.33%       | \$ 17,167    |

|              |      |                       |
|--------------|------|-----------------------|
| \$ 17,167    | 70%  | \$ 12,017             |
| \$ 17,167    | 80%  | \$ 13,734             |
| \$ 17,167    | 90%  | \$ 15,450             |
| \$ 17,167    | 100% | \$ 17,167             |
| \$ 17,167    | 110% | \$ 18,884             |
| \$ 17,167    | 120% | \$ 20,600             |
| Profit Value |      | Adjusted Profit Value |

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## STAFFING REQUIREMENTS

page C-9

**A. Sales To Break Even**

|                              |   |                              |   |                     |
|------------------------------|---|------------------------------|---|---------------------|
| Total Expenses for One Month | ÷ | Current Gross Profit Percent | = | Sales To Break Even |
| \$ 198,577                   | ÷ | 76.33%                       | = | \$ 260,150          |

**B. Sales To Generate 20% Net**

|                              |   |   |   |                           |
|------------------------------|---|---|---|---------------------------|
| Total Expenses for One Month | ÷ | Current Gross Profit Percent (Minus 20) | = | Sales To Generate 20% Net |
| \$ 198,577                   | ÷ | 56.33%                                  | = | \$ 352,514                |

**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 | \$ 127.79                    | X | 22                  | = | \$17,992         |
| 8                | X | 90%                      | X | \$ 127.79                    | X | 22                  | = | \$20,241         |
| 8                | X | 100%                     | X | \$ 127.79                    | X | 22                  | = | \$22,490         |
| 8                | X | 120%                     | X | \$ 127.79                    | X | 22                  | = | \$26,988         |

**D. Staffing To Break Even**

|                     |   |                  |   |          |
|---------------------|---|------------------|---|----------|
| Sales To Break Even | ÷ | Technician Value | = | Staffing |
| \$ 260,150          | ÷ | \$ 17,992 @ 80%  | = | 14.5     |
| \$ 260,150          | ÷ | \$ 20,241 @ 90%  | = | 12.9     |
| \$ 260,150          | ÷ | \$ 22,490 @ 100% | = | 11.6     |
| \$ 260,150          | ÷ | \$ 26,988 @ 120% | = | 9.6      |

**E. Staffing To Generate 20% Net**

|                           |   |                  |   |          |
|---------------------------|---|------------------|---|----------|
| Sales To Generate 20% Net | ÷ | Technician Value | = | Staffing |
| \$ 352,514                | ÷ | \$ 17,992 @ 80%  | = | 19.6     |
| \$ 352,514                | ÷ | \$ 20,241 @ 90%  | = | 17.4     |
| \$ 352,514                | ÷ | \$ 22,490 @ 100% | = | 15.7     |
| \$ 352,514                | ÷ | \$ 26,988 @ 120% | = | 13.1     |

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## Service Advisor Performance

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

| Break Even   |  |
|--|--|
| 1 Department's Average Monthly Expenses                | _____                                    |
| 2 Divide by current labor gross profit % to break even | ÷ <input type="text" value="76.33%"/>    |
| 3 Equals New Sales Objective                           | = \$ <input type="text" value="-"/>      |
| 4 Number of Advisors                                   | ÷ _____                                  |
| 5 Equals Sales Objective per Advisor                   | = <input type="text" value="\$0.00"/>    |
| 6 Number of work days per month                        | ÷ _____                                  |
| 7 Equals daily sales objective per advisor             | = <input type="text" value="\$0.00"/>    |
| 8 Current overall effective labor rate                 | ÷ \$ <input type="text" value="127.79"/> |
| 9 Equals daily sales objective per advisor (FRH's)     | = <input type="text" value="0.0"/>       |

| Net 10 %   |  |
|--|--|
| 1 Department's Average Monthly Expenses                      | _____ \$0                                |
| 2 Divide by current labor gross profit % minus 10 to net 10% | ÷ <input type="text" value="66.33%"/>    |
| 3 Equals New Sales Objective                                 | = \$ <input type="text" value="-"/>      |
| 4 Number of Advisors   | ÷ _____ 0.0                              |
| 5 Equals Sales Objective per Advisor                         | = <input type="text" value="\$0.00"/>    |
| 6 Number of work days per month                              | ÷ _____ 0                                |
| 7 Equals daily sales objective per advisor                   | = <input type="text" value="\$0.00"/>    |
| 8 Current overall effective labor rate                       | ÷ \$ <input type="text" value="127.79"/> |
| 9 Equals daily sales objective per advisor (FRH's)           | = <input type="text" value="0.0"/>       |

| Net 20 %   |  |
|--|--|
| 1 Department's Average Monthly Expenses                      | _____ \$0                                |
| 2 Divide by current labor gross profit % minus 20 to net 20% | ÷ <input type="text" value="56.33%"/>    |
| 3 Equals New Sales Objective                                 | = \$ <input type="text" value="-"/>      |
| 4 Number of Advisors   | ÷ _____ 0.0                              |
| 5 Equals Sales Objective per Advisor                         | = <input type="text" value="\$0.00"/>    |
| 6 Number of work days per month                              | ÷ _____ 0                                |
| 7 Equals daily sales objective per advisor                   | = <input type="text" value="\$0.00"/>    |
| 8 Current overall effective labor rate                       | ÷ \$ <input type="text" value="127.79"/> |
| 9 Equals daily sales objective per advisor (FRH's)           | = <input type="text" value="0.0"/>       |

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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"/>                   |
| Multiply by .3 hours  |       | <input type="text" value="0.3 hours"/> |
| Additional customer labor hours generated   | =     | <input type="text" value="0.00"/>      |
|   | X     |  |
| Multiply by Customer Labor Rate   |       | <input type="text" value="\$ 127.79"/> |
| Equals additional Customer Labor Sales Generated  | =     | <input type="text" value="\$ -"/>      |
|   | X     |  |
| Multiply by customer Labor Gross Profit %   |       | <input type="text" value="75.87%"/>    |
| Equals additional Labor Gross Profit \$ generated   | = (A) | <input type="text" value="\$ -"/>      |
|   |       |  |
| Divide Parts Sales R.O. by Labor Sales R.O. to calculate \$ parts sales per \$ of Labor Sales | =     | <input type="text" value="0.68"/>      |
|   | X     |  |
| Multiply by Customer Labor Sales  |       | <input type="text" value="\$ -"/>      |
|   | =     |  |
| Equals additional Customer Parts Sales generated  |       | <input type="text" value="\$ -"/>      |
|   | X     |  |
| Multiply by Customer Parts Sales Gross Profit %   |       | <input type="text"/>                   |
| Equals additional Parts Gross Profit \$ Generated   | = (B) | <input type="text" value="\$ -"/>      |
| Add Gross Profit from Labor (A) and Parts (B)   | =     | <input type="text" value="\$ -"/>      |

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# Labor Rate Calculations

1 Calculate the **Labor Rate** for the following operation.

A/C Charge and Check

|                 |             |            |          |                 |  |
|-----------------|-------------|------------|----------|-----------------|--|
|                 | Labor Price |            | \$120.00 |                 |  |
|                 | Units       |            | 1.0      |                 |  |
| <u>\$120.00</u> | ÷           | <u>1.0</u> | =        | <b>\$120.00</b> |  |
| 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            |
| Total Price               | \$ 429.40        |   | Total Units |   | 4.0                  |
|                           | <u>\$ 429.40</u> | ÷ | <u>4.0</u>  | = | <b>\$ 107.35</b>     |
|                           | 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)

$$\begin{array}{rcccl}
 \boxed{100\%} & \div & \boxed{100\%} & = & \boxed{1.00} \\
 \text{100\%} & & & & \text{Mark-Up} \\
 & & & & \text{Factor} \\
 \\ 
 \boxed{\$6.72} & \times & \boxed{1.54} & = & \boxed{\$10.34} \\
 \text{Part Cost} & & \text{Mark-Up Factor} & & \text{Retail Price}
 \end{array}$$

$\frac{100\% - 35\%}{100\%} = 1.54$

- 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 | 112             | \$488.32                     |
| Filter #2   | \$4.01 | 56              | \$224.56                     |
| Filter #3   | \$3.56 | 85              | \$302.60                     |
| Filter #4   | \$3.86 | 202             | \$779.72                     |
| Filter #5   | \$3.51 | 36              | \$126.36                     |
| Total Items |        | <b>491</b>      | Total Cost <b>\$1,921.56</b> |

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

$$\begin{array}{rcccl}
 \boxed{\$3.91} & \times & \boxed{40.00} & = & \boxed{\$156.54} \\
 \text{Weighted Average} & & \text{Mark-Up} & & \text{Weighted} \\
 \text{Cost} & & \text{Factor} & & \text{Average Price}
 \end{array}$$

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## Cost Of A Come-Back

|  |   |   |
|--|---|---|
| Lost Customers                                       |   | <input type="text" value="10.0"/>                             |
| Average Hours per R.O.                               | X | <input type="text" value="1.4"/>                              |
|  | = | <input type="text" value="13.5"/>                             |
| Effective Labor Rate                                 | X | <input type="text" value="\$ 127.79"/>                        |
|  | = | <input type="text" value="\$ 1,725"/> (A) Service Labor Sales |
| <hr/>  |   |   |
| Service Department Gross Profit % (Excluding Sublet) | X | <input type="text" value="76.33%"/>                           |
|  | = | <input type="text" value="\$ 1,317"/> (B) Service Labor Gross |
| <hr/>  |   |   |
| Service Labor Sales (A)                              |   | <input type="text" value="\$ 1,725"/>                         |
| Parts / Labor Ratio                                  | X | <input type="text" value="0.68"/>                             |
|  | = | <input type="text" value="\$ 1,165"/>                         |
| Parts Dept Gross Profit % R.O.Sales                  | X | <input type="text" value="29.55%"/>                           |
|  | = | <input type="text" value="\$ 344"/> (C) Service Parts Gross   |
| <hr/>  |   |   |
| (B) Service Labor Gross                              |   | <input type="text" value="\$ 1,317"/>                         |
| (C) Service Parts Gross                              | + | <input type="text" value="\$ 344"/>                           |
| Lost Gross   | = | <input type="text" value="\$ 1,661"/>                         |

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