



# Fixed Operations 2 -

Financial Calculations and Formulas

- Service

Service Department Sales And Gross (Labor Only)

| Category               | Sales             | Gross             | Gross as % of Sales | Margin        |
|------------------------|-------------------|-------------------|---------------------|---------------|
| Customer Car           | \$ 27,523         | \$ 62,448         | 226.5%              | 34.92%        |
| Customer Express       |                   |                   | 0%                  | 0.00%         |
| Customer Other         |                   |                   | 0%                  | 0.00%         |
| Warranty               | \$ 33,660         | \$ 40,457         | 120.19%             | 28.18%        |
| Warranty Other         | \$ 6,968          | \$ -1,157         | -16.60%             | -1.68%        |
| Revenue                | \$ 11,851         | \$ 207,213        | 174.77%             | 17.48%        |
| Inv / Road Ready / PDI |                   |                   | 0%                  | 0.00%         |
| Adj Cost Of Labor      |                   | \$ (2,112)        | -1.78%              | -1.78%        |
| <b>Total</b>           | <b>\$ 100,462</b> | <b>\$ 175,521</b> | <b>174.77%</b>      | <b>17.48%</b> |

| The Picture                 |        |
|-----------------------------|--------|
| Customer Pay Gross Profit % | 63.80% |
| Total Service Dept. G.P. %  | 65.90% |

Parts To Labor Ratios

| Category       | Parts Value       | Labor Value       | Ratio       |
|----------------|-------------------|-------------------|-------------|
| Customer Car   | \$ 68,119         | \$ 27,819         | 1.00        |
| Customer Truck | \$ -              | \$ -              | 0.00        |
| Customer Other | \$ -              | \$ -              | 0.00        |
| Warranty       | \$ 56,198         | \$ 11,680         | 1.00        |
| Warranty/Other | \$ 18,272         | \$ 9,900          | 2.13        |
| Other          | \$ 23,824         | \$ 11,900         | 1.00        |
| <b>Total</b>   | <b>\$ 190,433</b> | <b>\$ 100,482</b> | <b>1.00</b> |

| The Picture                          |        |
|--------------------------------------|--------|
| Customer Pay Gross Profit %          | 63.86% |
| Total Service Dept. G.P. %           | 65.90% |
| Parts / Labor Ratio (Cust. Pay Only) | 1.00   |

Service Department Profit Centering

| Department Expense  | Amount          | % of Gross | Profit |
|---------------------|-----------------|------------|--------|
| Department Office   | \$ 326,943      |            |        |
| Variable Expense    | Same as Setting | 0.00%      |        |
| Selling Expense     | \$ 28,755       | 0.100%     |        |
| Personnel Expense   | Same as Setting | 0.00%      |        |
| Semi-Fixed Expense  |                 | 0.00%      |        |
| Fixed Expense       | \$ 80,495       | 0.110%     |        |
| Unallocated Expense |                 | 0.00%      |        |
| Dealer's Salary     | \$ 15,005       | 1.150%     |        |
| Total Expenses      | \$ 176,181      | 0.000%     |        |
| Net Profit          | \$ 44,655       | 0.000%     |        |

| The Picture                           |            |
|---------------------------------------|------------|
| Customer Play Gross Profit %          | 63.80%     |
| Total Service Dept. G.P. %            | 66.90%     |
| Parts / Labor Ratio (Cust. Play Only) | 1.50       |
| Total Service Dept. Expenses          | \$ 176,181 |

**Fixed Absorption**

|                                  |            |                 |        |
|----------------------------------|------------|-----------------|--------|
| Parts Department Total Gross     | \$ 83,914  | % Adj. Over Exp | 11.33% |
| Service Department Total Gross   | \$ 190,258 |                 |        |
| Body Shop Department Total Gross | \$ -       |                 | 0.00%  |
| Total Fixed Gross Profit         | \$ 214,172 |                 |        |
| Total Dealership Expense         | \$ 610,300 |                 |        |

|                             |            |           |     |
|-----------------------------|------------|-----------|-----|
| Overhead Expense            | \$ 610,300 |           |     |
| Total Fixed Gross Profit    | \$ 214,172 |           |     |
| Total Dealership Expense    | \$ 610,300 |           |     |
| Fixed Absorption Percentage | 35.09%     | Guideline | 60% |

|                                      |            |
|--------------------------------------|------------|
| <b>The Picture</b>                   |            |
| Customer Pay Gross Profit %          | 63.86%     |
| Total Service Dept. G.P. %           | 66.90%     |
| Parts / Labor Ratio (Cust. Pay Only) | 1.00       |
| Total Service Dept. Expenses         | \$ 176,483 |

## NADA ACTUAL SERVICE ANALYSIS

Performance

|                  | <i>Labor Sales / Month</i> | ÷ | <i>Hourly Labor Rate</i> | = | <i>Hours Billed</i> |
|------------------|----------------------------|---|--------------------------|---|---------------------|
| Customer Car*    | \$ 97,939                  | ÷ | 92.98                    | = | 1053.3              |
| Customer Truck*  | \$ -                       | ÷ |                          | = | 0.00                |
| Customer Other*  | \$ -                       | ÷ |                          | = | 0.00                |
| Warranty         | \$ 60,648                  | ÷ | 122.66                   | = | 494.4               |
| Internal         | \$ 31,895                  | ÷ | 87.63                    | = | 364.0               |
| New Vehicle Prep | \$ -                       | ÷ |                          | = | 0.00                |
| <b>Total</b>     | <b>\$ 190,482</b>          |   |                          |   | <b>1911.7</b>       |

**POTENTIAL**

|                             |   |                    |   |                      |
|-----------------------------|---|--------------------|---|----------------------|
| \$ 190,482                  | ÷ | 1911.75            | = | \$ 99.64             |
| Total labor sales for month |   | Total hours billed |   | Effective Labor Rate |

|                                  |   |             |   |                    |   |                  |
|----------------------------------|---|-------------|---|--------------------|---|------------------|
| 15.00                            | x | 8           | x | 22                 | = | 2,640.0          |
| # Service mechanical technicians |   | # Hours/Day |   | Working Days/Month |   | Clock Hour Avail |

|                       |   |                      |   |                       |
|-----------------------|---|----------------------|---|-----------------------|
| 2,640.0               | x | \$ 99.64             | = | \$ 263,043            |
| Clock Hours Available |   | Effective Labor Rate |   | Labor sales potential |

How proficient are your technicians ?

|                    |   |                 |   |                  |
|--------------------|---|-----------------|---|------------------|
| 1,911.8            | ÷ | 2,640.00        | = | 72.41%           |
| Total Hours Billed |   | Hours Available |   | Tech Proficiency |

|                                                 |           |
|-------------------------------------------------|-----------|
| Hours Per RO (Recap Sheet)                      | 2.2       |
| Percent of One Item R.O.'s (Recap Sheet)        | 48.15%    |
| Customer Pay Effective Labor Rate (Recap Sheet) | \$ 92.98  |
| Warranty Labor Rate (Recap Sheet)               | \$ 122.66 |
| Total Overall Effective Labor Rate              | \$ 99.64  |
| Overall Technician Proficiency                  | 72.41%    |

| FACILITY POTENTIAL   |               |
|----------------------|---------------|
| Number of Bays       | 26            |
|                      | x             |
| Number of Days       | 22            |
|                      | x             |
| Number of Hours      | 10            |
|                      | x             |
| Effective Labor Rate | 99.64         |
|                      | <i>equals</i> |
| FACILITY POTENTIAL   | \$ 569,941    |

| FACILITY UTILIZATION |               |
|----------------------|---------------|
| Total Labor Sales    | \$ 190,482    |
|                      | ÷             |
| Facility Potential   | \$ 569,941    |
|                      | <i>equals</i> |
| FACILITY UTILIZATION | 33.42%        |

NADA "QUICK" SERVICE ANALYSIS

\$ 190,482  
Labor Sales

1,911.8  
Divided by Hours Billed

\$ 99.64  
= OELR

\$ 190,482  
Labor Sales

\$ 125,521  
-Labor Gross

\$ 64,961  
-Labor Cost

\$ 64,961  
Labor Cost

1,911.75  
/ Hours Billed

\$ 33.98  
-Real Cost

\$33.98  
Real Cost

÷

26.00%

=

\$130.69  
E.L.R. Needed to earn  
74%

OWNER BASE POTENTIAL

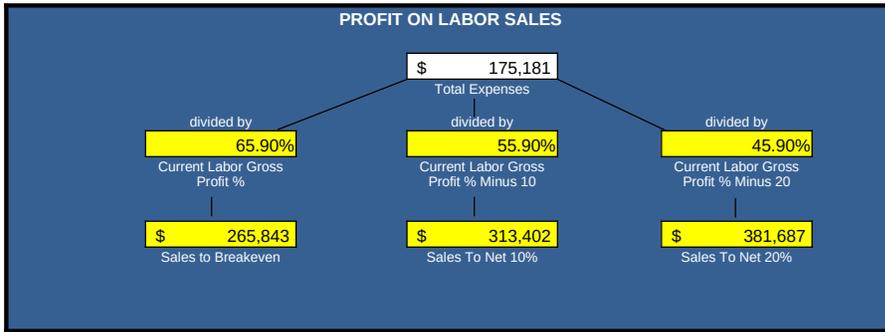
|                   |   |                        |   |                          |
|-------------------|---|------------------------|---|--------------------------|
| 3549              | x | 8                      | = | 28,392.0                 |
| 5 Year Owner Base |   | Annual Hours Purchased |   | Market Potential / Hours |

|                         |   |                      |   |                           |
|-------------------------|---|----------------------|---|---------------------------|
| 28,392.0                | x | \$ 99.64             | = | \$ 2,828,908              |
| Market Potential/ Hours |   | Effective Labor Rate |   | 5 Yr. O.B Sales Potential |

|                                                               |   |            |   |                           |
|---------------------------------------------------------------|---|------------|---|---------------------------|
| \$ 191,155                                                    | x | 12         | = | \$ 2,293,860              |
| Avg. Mos. Labor Sales<br>(excluding internal, PDI and<br>NVI) |   | Annualized |   | Current Labor Sales Trend |

|                   |   |                            |   |        |
|-------------------|---|----------------------------|---|--------|
| \$ 2,293,860      | ÷ | \$ 2,828,908               | = | 81.09% |
| Labor Sales Trend |   | 5 Yr. O.B. Sales Potential |   | Ouch   |

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



**The Picture**

|                                     |            |                          |           |
|-------------------------------------|------------|--------------------------|-----------|
| Customer Pay Gross Profit %         | 63.86%     | Customer Pay E.L.R.      | \$ 92.98  |
| Total Service Dept. G.P.%           | 65.90%     | Total (overall) E.L.R.   | \$ 99.64  |
| Parts / Labor Ratio (Cust Pay Only) | 1.00       | Warranty Labor Rate      | \$ 122.66 |
| Total Service Dept Expense          | \$ 175,181 | Overall Tech Proficiency | 72.41%    |
| Hours Per R.O (recap)               | 2.24       |                          |           |
| Percent Of One Item R.O.'s          | 48.15%     |                          |           |

### Technician Value

Calculate using daily available hours per technician

|       |   |      |    |            |          |             |
|-------|---|------|----|------------|----------|-------------|
| Hours |   | Days |    | Labor Rate |          | Sales Value |
|       | 8 | x    | 22 | x          | \$ 99.64 | = \$ 17,536 |

|             |   |              |   |              |
|-------------|---|--------------|---|--------------|
| Sales Value |   | Gross Margin |   | Profit Value |
| \$ 17,536   | x | 65.90%       | = | \$ 11,556    |

|              |      |                       |
|--------------|------|-----------------------|
| \$ 11,556    | 70%  | \$ 8,089              |
| \$ 11,556    | 80%  | \$ 9,245              |
| \$ 11,556    | 90%  | \$ 10,400             |
| \$ 11,556    | 100% | \$ 11,556             |
| \$ 11,556    | 110% | \$ 12,711             |
| \$ 11,556    | 120% | \$ 13,867             |
| Profit Value |      | Adjusted Profit Value |

## STAFFING REQUIREMENTS

### A. Sales To Break Even

|                              |   |                              |   |                     |
|------------------------------|---|------------------------------|---|---------------------|
| Total Expenses for One Month | ÷ | Current Gross Profit Percent | = | Sales To Break Even |
| \$ 175,181                   | ÷ | 65.90%                       | = | \$ 265,843          |

### B. Sales To Generate 20% Net

|                              |   |                                         |   |                           |
|------------------------------|---|-----------------------------------------|---|---------------------------|
| Total Expenses for One Month | ÷ | Current Gross Profit Percent (Minus 20) | = | Sales To Generate 20% Net |
| \$ 175,181                   | ÷ | 45.90%                                  | = | \$ 381,687                |

### 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 | \$ 99.64                     | X | 22                  | = | \$14,029         |
| 8                | X | 90%                      | X | \$ 99.64                     | X | 22                  | = | \$15,783         |
| 8                | X | 100%                     | X | \$ 99.64                     | X | 22                  | = | \$17,536         |
| 8                | X | 120%                     | X | \$ 99.64                     | X | 22                  | = | \$21,043         |

### D. Staffing To Break Even

|                     |   |                  |   |          |
|---------------------|---|------------------|---|----------|
| Sales To Break Even | ÷ | Technician Value | = | Staffing |
| \$ 265,843          | ÷ | \$ 14,029 @ 80%  | = | 18.9     |
| \$ 265,843          | ÷ | \$ 15,783 @ 90%  | = | 16.8     |
| \$ 265,843          | ÷ | \$ 17,536 @ 100% | = | 15.2     |
| \$ 265,843          | ÷ | \$ 21,043 @ 120% | = | 12.6     |

### E. Staffing To Generate 20% Net

|                           |   |                  |   |          |
|---------------------------|---|------------------|---|----------|
| Sales To Generate 20% Net | ÷ | Technician Value | = | Staffing |
| \$ 381,687                | ÷ | \$ 14,029 @ 80%  | = | 27.2     |
| \$ 381,687                | ÷ | \$ 15,783 @ 90%  | = | 24.2     |
| \$ 381,687                | ÷ | \$ 17,536 @ 100% | = | 21.8     |
| \$ 381,687                | ÷ | \$ 21,043 @ 120% | = | 18.1     |

## Service Advisor Performance

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

| Break Even                                             |            |
|--------------------------------------------------------|------------|
| 1 Department's Average Monthly Expenses                | \$175,181  |
| 2 Divide by current labor gross profit % to break even | 65.90%     |
| 3 Equals New Sales Objective                           | \$ 265,843 |
| 4 Number of Advisors                                   | 3.0        |
| 5 Equals Sales Objective per Advisor                   | \$ 88,614  |
| 6 Number of work days per month                        | 22         |
| 7 Equals daily sales objective per advisor             | \$ 4,028   |
| 8 Current overall effective labor rate                 | \$ 99.64   |
| 9 Equals daily sales objective per advisor (FRH's)     | 40.4       |

| Net 10 %                                                     |            |
|--------------------------------------------------------------|------------|
| 1 Department's Average Monthly Expenses                      | \$175,181  |
| 2 Divide by current labor gross profit % minus 10 to net 10% | 55.90%     |
| 3 Equals New Sales Objective                                 | \$ 313,402 |
| 4 Number of Advisors                                         | 3.0        |
| 5 Equals Sales Objective per Advisor                         | \$ 104,467 |
| 6 Number of work days per month                              | 22         |
| 7 Equals daily sales objective per advisor                   | \$ 4,749   |
| 8 Current overall effective labor rate                       | \$ 99.64   |
| 9 Equals daily sales objective per advisor (FRH's)           | 47.7       |

| Net 20 %                                                     |            |
|--------------------------------------------------------------|------------|
| 1 Department's Average Monthly Expenses                      | \$175,181  |
| 2 Divide by current labor gross profit % minus 20 to net 20% | 45.90%     |
| 3 Equals New Sales Objective                                 | \$ 381,687 |
| 4 Number of Advisors                                         | 3.0        |
| 5 Equals Sales Objective per Advisor                         | \$ 127,229 |
| 6 Number of work days per month                              | 22         |
| 7 Equals daily sales objective per advisor                   | \$ 5,783   |
| 8 Current overall effective labor rate                       | \$ 99.64   |
| 9 Equals daily sales objective per advisor (FRH's)           | 58.0       |

### Exercise to See What Happens When You Increase Your Hours Per Repair Order

|                                                                                                |       |           |
|------------------------------------------------------------------------------------------------|-------|-----------|
| Number of customer R.O.'s for the month                                                        | X     | 946       |
| Multiply by .3 hours                                                                           |       | 0.3 hours |
| Additional customer labor hours generated                                                      | =     | 283.80    |
|                                                                                                | X     |           |
| Multiply by Customer Labor Rate                                                                |       | \$ 92.98  |
| Equals additional Customer Labor Sales Generated                                               | =     | \$ 26,388 |
|                                                                                                | X     |           |
| Multiply by customer Labor Gross Profit %                                                      |       | 63.86%    |
| Equals additional Labor Gross Profit \$ generated                                              | = (A) | \$ 16,852 |
|                                                                                                |       |           |
| Divide Parts Sales R.O. by Labor Sales R.O. to calculate \$ parts sales per 1\$ of Labor Sales | =     | 1.00      |
|                                                                                                | X     |           |
| Multiply by Customer Labor Sales                                                               |       | \$ 26,388 |
|                                                                                                | =     |           |
| Equals additional Customer Parts Sales generated                                               |       | \$ 26,433 |
|                                                                                                | X     |           |
| Multiply by Customer Parts Sales Gross Profit %                                                |       | 33.21%    |
| Equals additional Parts Gross Profit \$ Generated                                              | = (B) | \$ 8,779  |
| Add Gross Profit from Labor (A) and Parts (B)                                                  | =     | \$ 25,631 |

# Labor Rate Calculations

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

A/C Charge and Check

|       |             |       |          |   |            |
|-------|-------------|-------|----------|---|------------|
|       | Labor Price |       | \$144.00 |   |            |
|       | Units       |       | 1.2      |   |            |
| Price | ÷           | Units | =        |   | \$0.00     |
|       |             |       |          | = | Labor Rate |

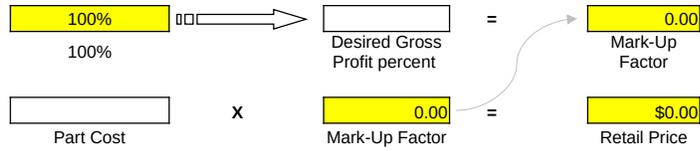
2 Calculate the **Effective Labor Rate** for the following "Repair" operations.

| Labor Operations          | Labor Price                      | ÷ | Labor Units                      | = | Labor Rate           |
|---------------------------|----------------------------------|---|----------------------------------|---|----------------------|
| Clean Fuel Injectors      | \$ 117.60                        | ÷ | 1.20                             | = | <input type="text"/> |
| R&R Rear Hub Bearing.     | \$ 96.00                         | ÷ | 0.80                             | = | <input type="text"/> |
| Replace Trans. Pan gasket | \$ 107.80                        | ÷ | 1.10                             | = | <input type="text"/> |
| R&R Headlight unit (1)    | \$ 108.00                        | ÷ | 0.90                             | = | <input type="text"/> |
|                           | Total Price <input type="text"/> |   | Total Units <input type="text"/> |   |                      |
|                           | ↓                                |   | ↓                                |   |                      |
|                           | Total Price                      | ÷ | Total Units                      | = | \$0.00               |
|                           |                                  |   |                                  | = | Effective Labor Rate |

(For This R.O.)

## 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 | 112             | <input type="text"/>                           |
| Filter #2   | \$4.01 | 56              | <input type="text"/>                           |
| Filter #3   | \$3.56 | 85              | <input type="text"/>                           |
| Filter #4   | \$3.86 | 202             | <input type="text"/>                           |
| Filter #5   | \$3.51 | 36              | <input type="text"/>                           |
| Total Items |        | 491             | Total Cost <input type="text" value="\$0.00"/> |

$$\frac{\$ -}{\text{Total Cost}} \div \frac{491}{\text{Total Items}} = \frac{\$ -}{\text{Weighted Average Cost}}$$

$$\frac{\$ -}{\text{Weighted Average Cost}} \times \frac{\text{Mark-Up Factor}}{\text{Mark-Up Factor}} = \frac{\$ -}{\text{Weighted Average Price}}$$

## Cost Of A Come-Back

|                        |   |  |                                                                                                         |
|------------------------|---|--|---------------------------------------------------------------------------------------------------------|
| Lost Customers         |   |  | <input style="width: 90%;" type="text"/>                                                                |
| Average Hours per R.O. | X |  | <input style="width: 90%;" type="text"/>                                                                |
|                        | = |  | <input style="width: 90%; background-color: yellow;" type="text" value="0.0"/>                          |
| Effective Labor Rate   | X |  | <input style="width: 90%; background-color: yellow;" type="text" value="\$ 99.64"/>                     |
|                        | = |  | <input style="width: 90%; background-color: yellow;" type="text" value="\$ -"/> (A) Service Labor Sales |

|                                                         |   |  |                                                                                                         |
|---------------------------------------------------------|---|--|---------------------------------------------------------------------------------------------------------|
| Service Department Gross Profit %<br>(Excluding Sublet) | X |  | <input style="width: 90%; background-color: yellow;" type="text" value="65.90%"/>                       |
|                                                         | = |  | <input style="width: 90%; background-color: yellow;" type="text" value="\$ -"/> (B) Service Labor Gross |

|                                        |   |  |                                                                                                         |
|----------------------------------------|---|--|---------------------------------------------------------------------------------------------------------|
| Service Labor Sales (A)                |   |  | <input style="width: 90%; background-color: yellow;" type="text" value="\$ -"/>                         |
| Parts / Labor Ratio                    | X |  | <input style="width: 90%; background-color: yellow;" type="text" value="1.00"/>                         |
|                                        | = |  | <input style="width: 90%; background-color: yellow;" type="text" value="\$ -"/>                         |
| Parts Dept Gross Profit %<br>R.O.Sales | X |  | <input style="width: 90%;" type="text"/>                                                                |
|                                        | = |  | <input style="width: 90%; background-color: yellow;" type="text" value="\$ -"/> (C) Service Parts Gross |

|                         |   |  |                                                                                 |
|-------------------------|---|--|---------------------------------------------------------------------------------|
| (B) Service Labor Gross |   |  | <input style="width: 90%; background-color: yellow;" type="text" value="\$ -"/> |
| (C) Service Parts Gross | + |  | <input style="width: 90%; background-color: yellow;" type="text" value="\$ -"/> |
| Lost Gross              | = |  | <input style="width: 90%; background-color: yellow;" type="text" value="\$ -"/> |