

Inventory Management

Inventory Control and Cost of Goods Sold

A basic rule of business overlooked by the typical lube store manager: **Inventory is not product available for sale but a financial investment waiting for a return.**

Far too often I talk with store managers who view inventory as an inanimate object. They think of inventory as an oil filter, a quart of oil, an air filter, etc. In reality, the oil filter should be thought of in terms of \$1.68, the quart of oil as \$2.80 and the air filter as \$3.68. Once we begin thinking in these terms, it is much easier to understand the financial consequences of managing inventory. Effectively controlling inventory plays a critical role in the operation of a lube center, impacting earnings and the return on your investment.

Inventory Control

The most significant measurement in inventory management is **inventory turnover**. Inventory turns are measured by the *number of times your average inventory investment turns over on an annual basis*. Inventory turnover is calculated by dividing cost of goods by your average inventory. (Average inventory can be based on monthly, quarterly or annual inventory levels.)

To calculate average inventory using beginning and ending annual inventory, add the beginning and ending inventory, and divide by two. Using quarterly inventory levels, add each quarter ending inventory, and divide by the number of quarters used to measure the turnover. An example of average inventory based on monthly calculations is shown below.

January	\$18,447	July	\$16,576
February	17,361	August	17,170
March	18,762	September	16,586
April	15,941	October	18,198
May	17,562	November	16,163
June	16,185	December	<u>17,542</u>
			\$206,493

$\$206,493 \div 12 \text{ months} = \$17,207$ is the average monthly inventory

Cost of goods sold is calculated by adding your beginning inventory and purchases and subtracting the ending inventory. An example of December cost of goods is shown below.

Beginning Inventory	\$16,163
Purchases	<u>+12,745</u>
Total Inventory	28,908
Ending Inventory	<u>- 17,542</u>

Cost of Goods \$11,366

An evaluation must be done on a monthly basis to review the inventory turnover against the inventory investment. This can be accomplished by dividing the monthly cost of goods (from the stores P&L) by the month end inventory.

Cost of Goods Sold \$13,366 ÷ Average Inventory \$17,207 = .77 Inventory Turns/Month

Monthly inventory turns should range in the .75 to 1 turn/month. An evaluation must be done on a monthly basis to review the inventory turnover against the inventory investment. This can be accomplished by dividing the monthly cost of goods by the month end inventory. Inventory turnover goals should be 8 to 12 times per year based on the store volume. Lower volume stores should be in the lower range and higher volume stores in the upper range.

To use our previous example, we found the average monthly inventory for the past year to be \$17,207. The COGS is calculated below (\$137,761).

Yearly Cost of Goods Sold Calculation

Beginning Inventory	\$ 18,447
Purchases	+136,856
Total Inventory Available	155,303
Ending Inventory	<u>- 17,542</u>
Cost of Goods Sold	\$137,761

Cost of Goods Sold \$137,761 ÷ Average Inventory \$17,207 = 8.01 Inventory Turns

This particular example shows that the average inventory level for the year is \$17,207 yet the average monthly purchases were only 11,404 (\$136,856 Purchases/12 months). **One of the basic mistakes a lube shop manager will make is to order product based on replacing exactly what he sold since the last order, not taking into consideration current quantities on hand.** In this example let's take the cost of goods sold for the year at \$137,761 and divide it by the 12 months. The average cost of goods per month is \$11,480. If we would lower our average inventory by \$6,000 from \$17,542 what would our inventory turn ratio be?

Beginning Inventory	\$ 12,447
Purchases	+136,856
Total Inventory Available	149,303
Ending Inventory	<u>-11,542</u>
Cost of Goods Sold	\$ 137,761

Cost of Goods Sold \$137,761 ÷ Average Inventory \$11,207 = 12.29 Inventory Turns

By increasing our inventory turn ratio, we can significantly improve our cash flow. Maintaining a lower average inventory can increase your inventory turn rate.

However, if the inventory level is too low you will not have items on hand to support your sales. Buying in bulk and using volume discounts should be evaluated along with your carrying costs and cash flow considerations. Saving 5 cents per filter but adversely impacting your inventory turns and cash flow quickly will negate any cost savings.

If sales are of sufficient volume, orders should be placed on a weekly or bi-weekly basis. Monitoring your bulk oil is critical. Receiving emergency deliveries of oil that is shipped in drums or case products can cost you a 10 to 50 cent per quart premium. Your cost of goods can be severely impacted if oil is shipped in these capacities.

Cost of Goods Sold

It is also important to understand the various increments of merchandise by category, and how each will impact the overall cost of goods sold. For example, a store is achieving the following percentage of add on goods and services. The additional sales generate a ticket average of \$23.75 over the base full price. (Assuming a sample of 100 cars serviced).

	Retail	% of Sales	\$\$ Generated
Air Filter	\$ 23.01	18.0	\$414.18
Cabin Air Filters	49.72	2.2	109.38
Fuel Filters	46.96	2.7	126.79
Wiper Blades	19.33	15.8	305.41
Additives/FIC	40.18	2.3	92.41
Light Bulbs	15.76	8.8	138.69
Gear Box Services	54.37	3.7	201.17
Auto Trans Services	86.76	3.8	329.69
Radiator Services	89.99	0.9	80.99
Serpentine Belts	58.40	2.0	116.80
Batteries/Tire Rotation	54.07	8.5	<u>459.60</u>
			\$2375.11

\$2375.11 equals \$23.75 over base price.

(Note: I took a look at 10 different stores in 10 different markets areas across the country and averaged out their retail and % of services to calculate these numbers. These are real numbers from real stores.)

A comparison of ticket average and cost of goods sold variances by merchandise category is shown below:

	<u>Store A:</u>	<u>%</u>	<u>Store B:</u>	<u>%</u>
Base Price	\$42.99		\$37.99	
Over Base	<u>23.75</u>		<u>20.75</u>	
Total	\$66.74		\$58.74	
Oil Cost	\$11.33*	16.98	11.33	19.29
Avg. Oil Filter	1.75	2.62	1.75	2.98
Avg. Air Filter Cost \$4.85	.87	1.30	.87	1.48
Avg. Cabin Filter Cost 7.44	.16	.24	.16	.27
Fuel Filter 7.52	.20	.30	.20	.34
Wiper Blades 4.04	.64	.96	.64	.96
Additives/FIC 8.32	.19	.28	.19	.32
Light Bulbs 3.20	.28	.41	.28	.48
Gear Oil/Lube 5.02	.33	.49	.33	.56
ATF 27.00	1.02	1.53	1.02	1.02
AFC 9.7	.09	.13	.09	.15
Serpentine Belts 8.97	.18	.27	.18	.31
	\$17.04	25.53%	\$17.04	29.01%

**Oil cost is based on bulk oil at \$10.12 per gallon and average of 4.48 quarts per vehicle.*

Slight adjustments to the increments of merchandise can have major effects on your cost of goods sold, and thereby on your inventory turns. Management of your cost of goods and inventory turns can make the difference in whether a store is profitable or not. Since inventory costs are second only to salaries as a percentage of sales, effective management is crucial to running a profitable business.