Linen Inventory Management

A Practical Approach

Class Objectives

- Have a basic understanding of Linen Management at the plant level.
- Learn how to determine inventory levels at your existing and new customer locations.
- Learn how to maintain customer and plant inventories.
- Learn how to control new inventory purchases.

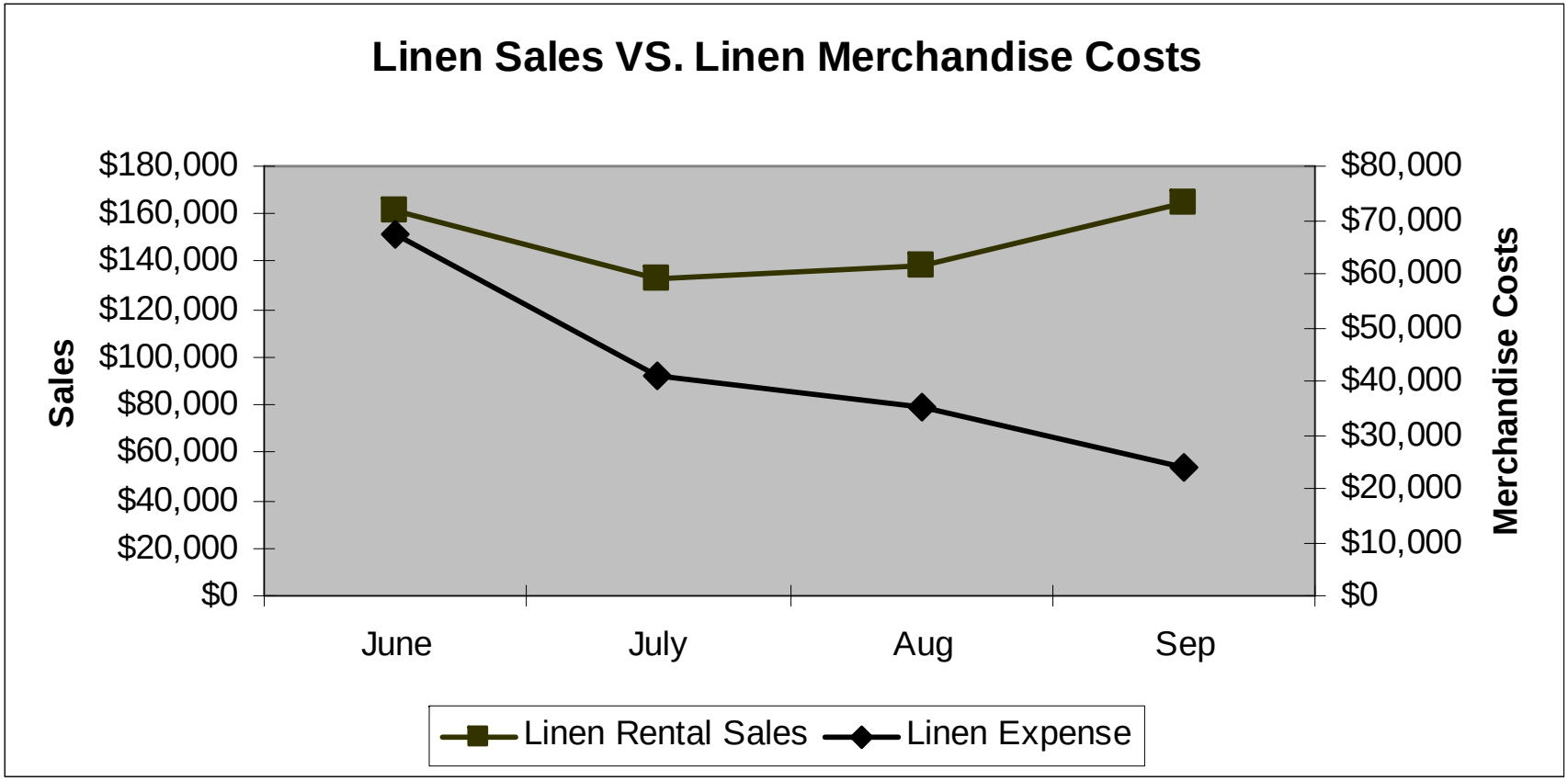
Why Do You Need to Control Inventories

- Are you experiencing shortages during load building?
- Are you working overtime or excess hours to fill shortages?
- Are your merchandise costs too high?

What Causes High Inventory Costs

- Customer inventories are not set properly.
- Procedures for maintaining inventories are not in place.
- Theft and abuse are not controlled.
- New inventory purchases are not controlled.

Results of Good Inventory Management



Where Do I Start to Control My Inventory Costs?

- Ensure an adequate working inventory for the customer.
- Have a system in place to maintain inventory levels.
- Control theft and abuse.
- Educate the service team and customer.
- Need to have a purchasing system.

Where Do I Start to Control My Inventory Costs?

- The control of linen and flat goods inventories begins with ensuring that customer inventories are accurate and adequate.
- The most profitable linen accounts are serviced once a week.
- Example: The soil picked up today is delivered clean the same day next week.

Setting Inventory Levels

- Determine average weekly usage.
- Determine number of days serviced.
- Use a 2.25 multiplier for weekly deliveries.
- Use a 1.7 multiplier for twice a week deliveries.
- Use a 1.5 multiplier for three times a week deliveries.

Setting Inventory Levels (Example)

Step 1. Determine Weekly usage

A four week audit of XYZ company indicates a weekly usage of 650 bar towels a week.

Step 2. Determine number of days delivered.

Once a week delivery

Step 3. Determine inventory level

650 (weekly usage) X 2.25 (multiplier)
= 1,463 pieces (weekly inventory).

Setting Inventory Levels (Exercise)

- XYZ company needs to set inventory levels for bar towels at one of their customers.

- Determine the bar towel inventory level. The customer is delivered once a week.

  Week 1 bar towel audit = 640 pieces
  Week 2 bar towel audit = 550 pieces
  Week 3 bar towel audit = 660 pieces
  Week 4 bar towel audit = 650 pieces

Setting Inventory Levels (Exercise)

Step 1. Determine Weekly usage

Average of four week audit

Step 2. Multiply four week average by 2.25.

Multiplier for once a week delivery.

Setting Inventory Levels (Exercise)

Week 1	640
Week 2	550
Week 3	660
Week 4	650
Total	_____

Average Weekly Usage = _____

Step 2 Determine inventory level for a once a week delivery

Average Weekly Usage X 2.25 = _____

Setting Inventory Levels (Exercise)

Step 1 **Determine average weekly usage**

	Usage
Week 1	640
Week 2	550
Week 3	660
Week 4	650
Total	2500

Average 625

Step 2 **Determine inventory level for a once a week delivery**

625 X 2.25 = 1406 Piece Inventory Level

Multiple Day Deliveries

- Multiple week deliveries cause higher delivery expenses.

- Multiple deliveries per week shorten the life of the goods by increasing the number of wash cycles.

Comparison of Merchandise Costs
Multiple Deliveries per Week

Item	Usage	#Days Delivered	Ratio	Order Quantity	Piece Cost	Total Cost
Bar Towel	400	1	2.25	900	.23	$207
Bar Towel	400	2	1.7	680	.23	$156
Bar Towel	400	3	1.5	600	.23	$138

Merchandise Costs Compared to Revenue

Rental Pc Cost	Weekly Rental Revenue	Week Payback	Product Life	Expected Servings	Gross Revenue	Merchandise Cost as a Percent of Revenue
.11	$44	4.7	23.2	20,880	$2,297	9%
.11	$44	3.5	15.3	13,770	$1,514	10.3%
.11	$44	3.1	7.7	6,890	$758	18.2%

Maintaining Inventory Levels

- Effective procedures must be implemented to make certain sufficient inventory levels are maintained.
- Inventory control must be stressed internally and with the customers.
- Under no circumstances should inventories be reduced to “save money”.
- A sound inventory policy and procedures are one of the most significant contributors to company profits.

Maintaining Inventory Levels

- The most common practice of replacing merchandise cost is to add a calculated amount of new inventory each week.
- These amounts are based on replacement ratios.
- Ratios are not set in stone but TRSA and other organizations have lists.
- As a general rule , most companies adjust these ratios based on their individual experiences.

What are Replacement Ratios and Expected Servings?

- Replacement ratio is the amount of items replaced for every one hundred issued. (not soil counted returns).
- Expected servings are arrived at dividing the ratio into one hundred pieces issued and represent product life due to usage and loss.
- Any shortages beyond the expected servings is abuse.

Example of a Replacement Ratio and Expected Serving.

- The general industry standard replacement ratio for bar towels is 4.3 replacements for every one hundred issues.
- Calculated the number of servings
- 100 issues / 4.3 replacement ratio = 23.3 servings.

How to Use Expected Servings to Determine Replacement Quantities

- Determine Weekly Circulating Inventory
  - Use Inventory quantities on Invoices
  - Computer programs
- Determine correct servings for product
  - Example 23.3 servings for bar towels
- Divide weekly circulating bar towel inventory by the number of servings for bar towels

Determine Projected Bar Towel Losses for XYZ Company

- Using the inventory level set for bar towels in the previous example (1406 pieces) calculate the weekly projected replacements.

- 1406 pieces (circulating inventory) / 23.3 servings = 60 pieces for the projected replacements per week.

Determine the Projected Loss for All Bar Towel Accounts

- Determine total weekly circulating inventory for all accounts.
- Assume for this example the total weekly circulating inventory is 10,000 pieces.
- Assume 23.3 servings for bar towels.

Determine the Projected Loss for All Bar Towel Accounts

- 10,000 pieces (weekly circulating inventory) / 23.3 servings for bar towels = 429 piece projected replacements a week.

- Projected loss for a month would be 429 pieces per week (projected replacements) X 4.33 weeks in a month = 1858 bar towels projected replacements per month.

Determine Replacement Pieces for All Bar Towel Accounts

- Add scrap counts to projected loss count.
- Add New Contract totals to projected loss count.
- Subtract ending inventory.

What is the Monthly Replacement Costs for Bar Towels at XYZ Co.

- Total bar towels required for projected losses for the month was 1858 pieces.
- There were 542 pieces scrapped during the month
- Your ending inventory was 600 pieces
- Cost of bar towels each equals $.23

What is the Monthly Replacement Costs for Bar Towels at XYZ Co

- 1,858 pieces (projected loss + 542 pieces scrapped – 600 pieces ending inventory = 1800 pieces required for the month.

- 1800 pieces (required) X $.23 (cost per piece) = $414.00 (bar towel replacement costs for the month)

How to Purchase and Distribute Goods to Maintain Inventory Levels

- To save shipping cost order all goods once a month.
- Order on the third week of the month for delivery the first week of the following month.
- Distribute 550 towels every Friday.

Periodic Maintenance Items

- Perform customer audits to verify physical inventory levels.
- Look for customer abuses during the audits.
- Be sure loss charges are being charged for abuse.
  - On invoice
- Make sure all goods are returned from cancelled Accounts

Periodic Maintenance Items

- Audit soil counters in the plant.
- Train office, service and sales personnel in the prevention of abuse and waste.
- Verify bundle counts in the plant.
- Perform route truck audits once a week for unauthorized inventories.
  - I always performed the truck audits with the Service Manager.

Periodic Maintenance Items

- Verify actual load quantities to route load sheets.
- Secure clean stock.
- Purge obsolete stock
- Conduct delivery invoice audits.

How to Determine Par Levels

- Determine your circulating inventory.
- Determine your weekly usage.
- Weekly usage / 7 days = 1 Set.
- Inventory / 1 Set = par or # sets in circulation.

How to Determine Par Levels (Example)

- Patient Gowns: total weekly usage 4,479 pieces.
- 4,479 / 7 = 640 (1 set)
- Circulating inventory: 3529 pieces
- 3,520 / 640 = 5.5 par level.

General Rule to Determine Acceptable Par Level

- 5 day operation (par level of 7)
- 6 day operation (par level of 6)
- 7 day operation (par level of 5)