



PARTS PRO SALESMAN



CLASSIC EDITION #6



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Professional Parts Salesman

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Part

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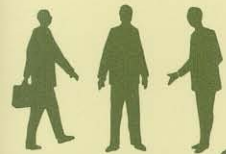
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Inventory Control



FOREWORD

This program has been developed to help both the novice and veteran partsman achieve a better understanding of inventory control.

The purpose of the program is to help you, as a professional partsman, to become more familiar with the facets of inventory control. We have created this program to acquaint you with the various subject matter that is required to keep an accurate and smooth flowing inventory and to show you, the partsman, how you can play an active role in conjunction with your company's inventory procedures.

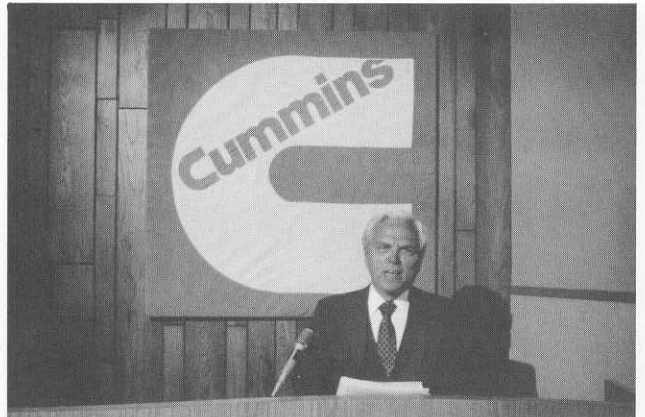
1. Basic Inventory Control



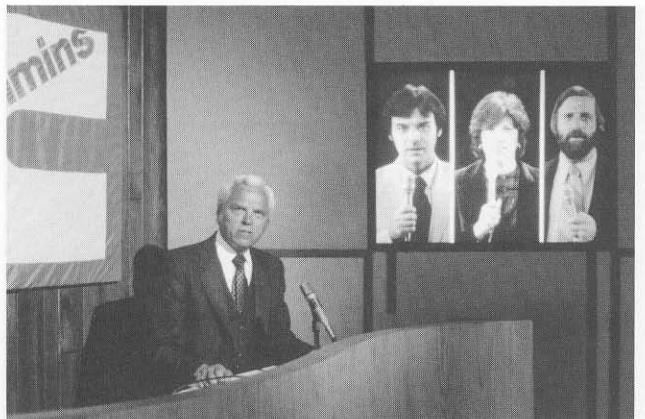
2. **Walter Nator:** Hello, I'm Walter Nator, and this is the Cummins Report.

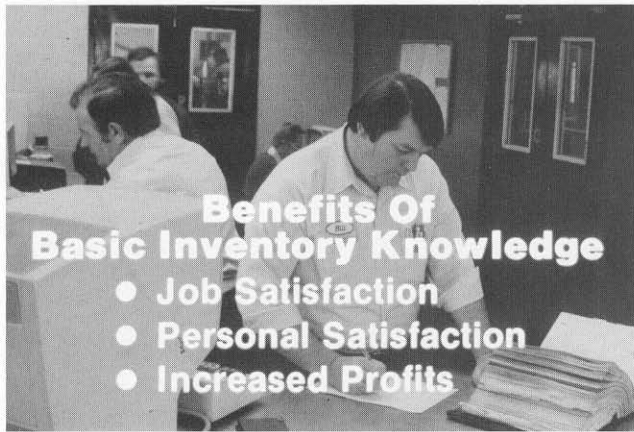


3. Today's top story is about basic inventory control, a subject that is a concern of every Cummins Distributor and Dealer worldwide.

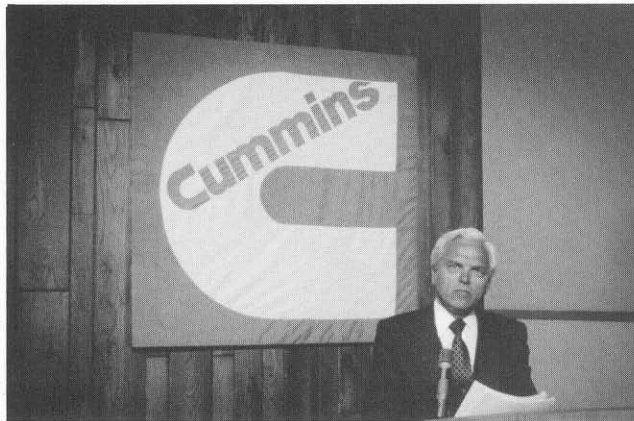


4. Standing by to help cover the story are Cummins' inventory control experts, Van Belt, Fran Mission and Frank Shaft.





5. We're going to show you that, by taking an active role in inventory control procedures, you can gain valuable knowledge and experience about your job. At the same time, by knowing the basic procedures, you will be helping to maximize profits for your company, which in turn will benefit you as an individual.



6. The only reason for an inventory lies in the anticipation of sales.

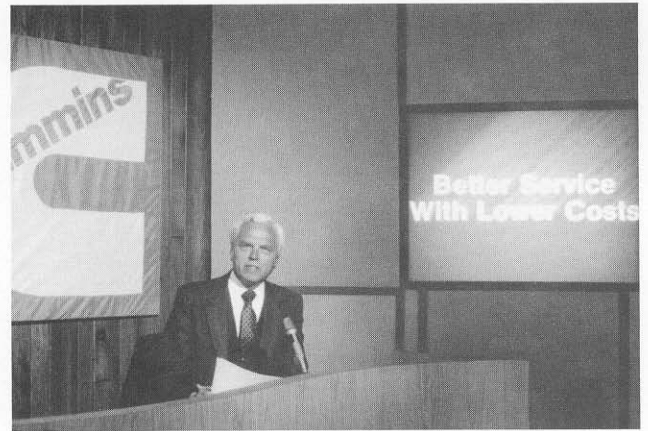


7. The basic objective of any inventory control system is to supply the customer with the right part at the right time, and in the quantity desired. By doing this, you've opened the door for repeat business.

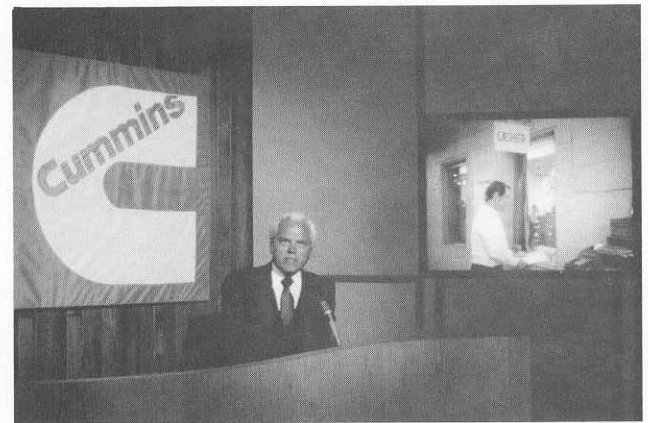


8. The average Cummins Distributor inventories about 5000 parts out of a total of nearly 30,000 active parts. It's apparent that there'll be times when some of the parts requested will not be available from inventory... it's financially impractical to carry all the parts required to provide 100% availability from inventory.

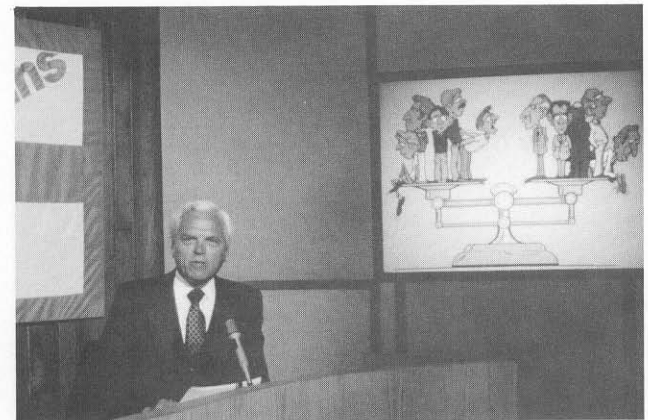
9. The objective of inventory control then becomes somewhat of a compromise, which can be expressed as better service with lower costs.



10. Effective inventory control should control costs so that the business is profitable and provides a fair return to the owners of your company.



11. Customers and Distributor/Owners are the two groups we must satisfy, but one group should not be favored over the other. Good inventory control seeks to **balance** the requirements of both groups at the optimum level.



12. For more on our story, here's Cummins' inventory expert in London, Van Belt.





13. **Van Belt:** Thanks Walter. Here in England, as in other parts of the world, inventory practices and procedures concern everyone involved with the Cummins Distribution network.



14. Earlier today, I visited a Cummins Distributorship. It's probably much like the one you work in. I found that management, salespeople, clerical personnel, partspeople, and mechanics are all involved in the many facets of inventory control.



15. Inventory usually represents a Distributor's largest single asset, amounting to as much as 50 to 60% of the total assets of the business...



16. ...and a handful of people in the parts department are charged with the responsibility of maintaining and controlling this inventory. Whether it be new parts, Cummins ReCon parts, Distributor exchange parts, Fleetguard products, service tools, or related products, it's your duty to see that the inventory is maintained according to the company's policies.

17. Maintenance of inventories is called inventory control. It involves a wide variety of activities such as ordering, receiving, stocking and disbursing.

Inventory Control Activities

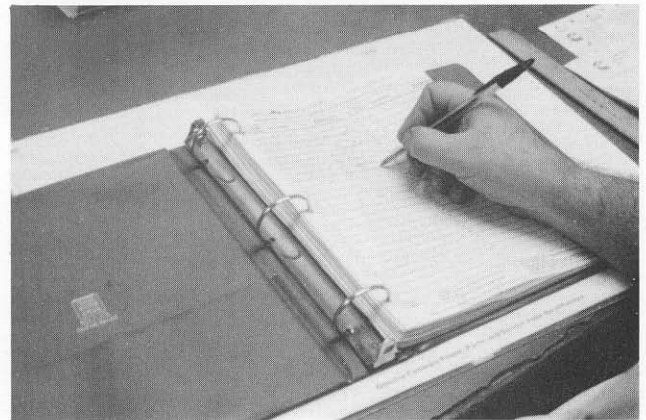
- Ordering
- Receiving
- Stocking
- Disbursing

18. Before you can effectively order parts, you must determine your customers' needs. Keep up-to-date histories of sales lost, and parts demanded which aren't normally carried in stock. Such record keeping will help you a great deal.

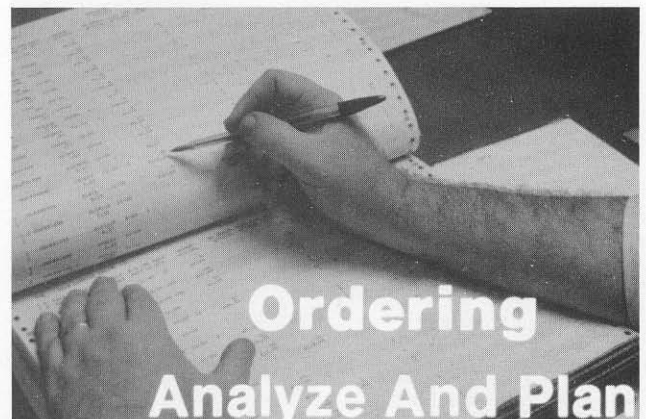
Determine Customer's Needs

- Lost Sales History
- Demand Sales History

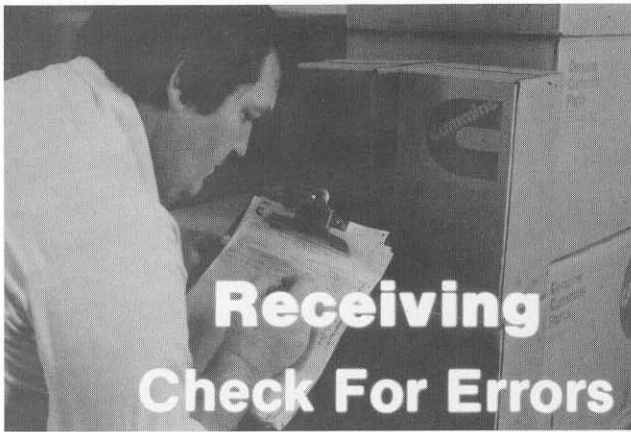
19. It's also important to keep track of all customer demand, so you can more accurately determine the customers' future needs. It requires discipline to make this system of recording and tracking lost sales work. It can be done daily, weekly, or monthly, based on the system that the parts manager uses.



20. Management should review all recorded lost sales, along with demand history on other items, to determine which parts should be ordered for restocking inventory.

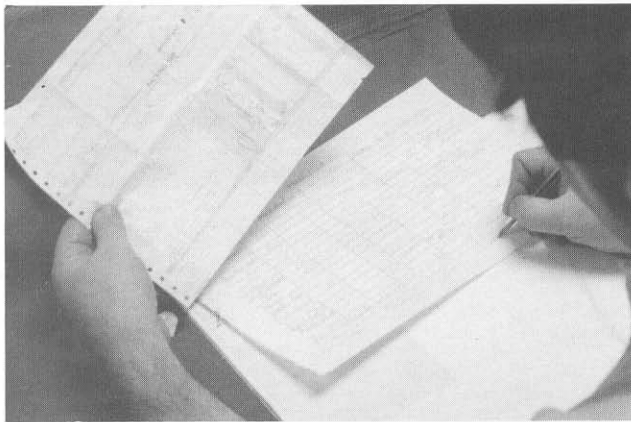


Ordering Analyze And Plan



21. When you receive a parts shipment, some very important paperwork must be completed before you transfer the parts to inventory.

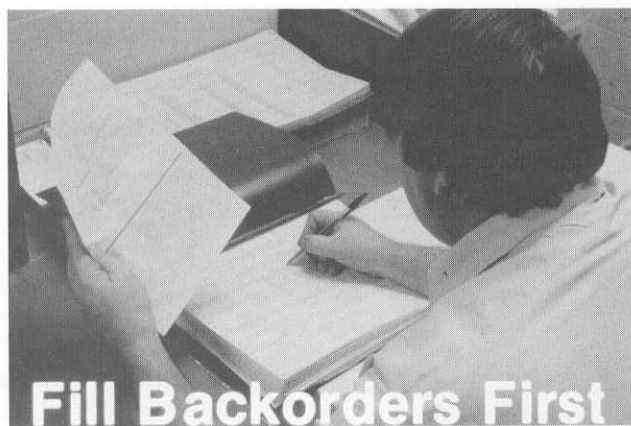
First, check all parts received against the packing slip. Make a note of any errors. If this isn't done, no one will know if the parts were actually received.



22. Next, post all shipments received to the proper inventory control documents to ensure accuracy of the inventory.



23. **Never** take a part that has just come in without first properly receiving it into inventory. If this happens, your inventory becomes out of balance, and your support documents are incorrect. This situation can lead to serious inventory problems.



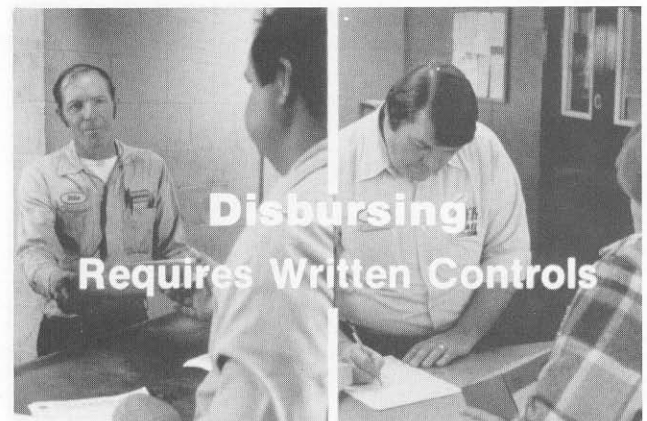
24. Apply backorder parts directly to customer orders before placing stock in bins. These parts could be tying up expensive equipment. Placing them in the bins first creates additional delay and customer aggravation and, worst of all, they could be sold to someone other than for whom they were ordered.

25. When stocking, remember to double check the bin label to see that it matches the part. Also, check your records for superseding part numbers.

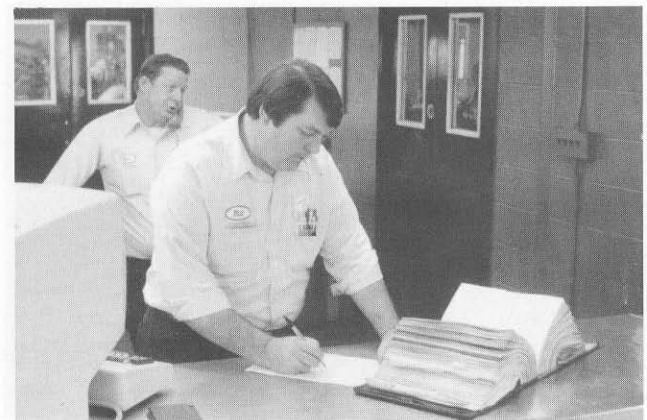


26. All inventory control practices and procedures require some form of written controls for disbursing parts. Whether it's a mechanic's repair order...

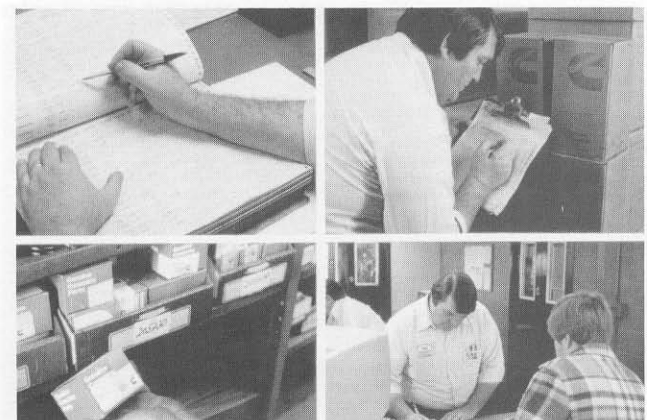
...or a direct sale to a customer, be sure to use the correct forms for recording sales.

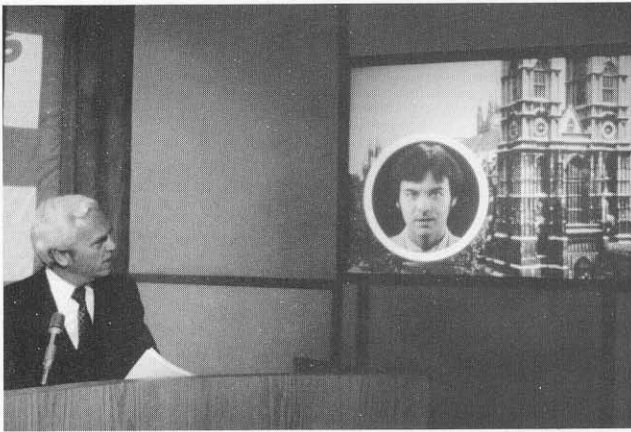


27. Every person who works in the parts department is part of the team and, regardless of duties, has an impact on inventory control...



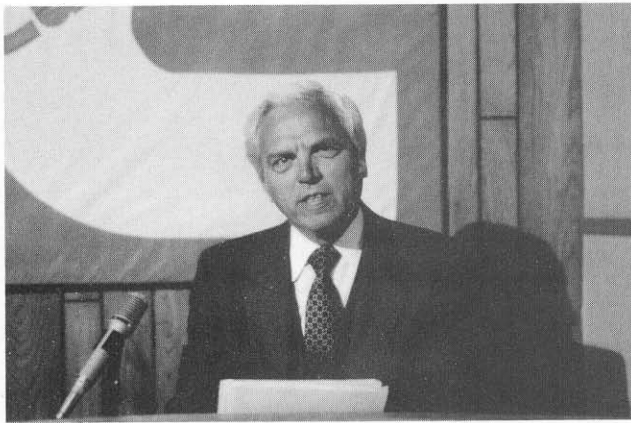
28. ...it's important that you, as a parts department employee, understand the procedures associated with the ordering, receiving, stocking and disbursing of inventory.



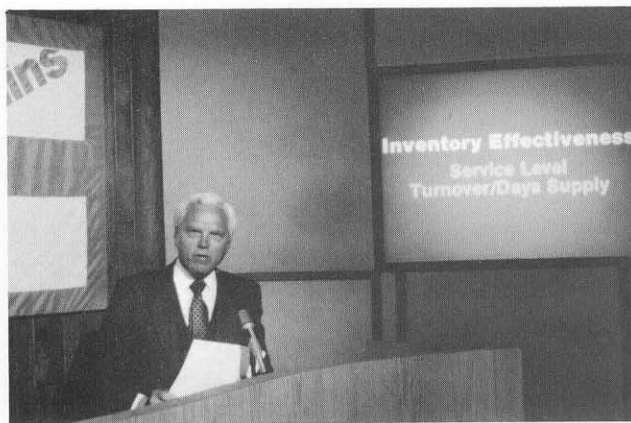


29. From London, this has been Van Belt reporting. For further details stay tuned, as we return you now, to Walter Nator.

Walter Nator: Thanks Van.



30. The importance of the **basics** cannot be over-emphasized. There's more to controlling inventory than meets the eye.



31. To judge the effectiveness of an inventory control system, the results may be measured in two ways: by service level and by turnover/days supply.



32. For a further look at these objectives, here's my colleague, Fran Mission, in Singapore.

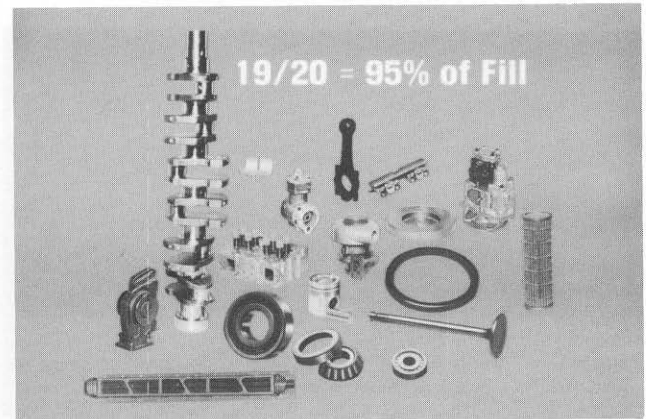
33. **Fran Mission:** Thanks Walter. The analysis of basic inventory control would not be complete if we didn't look at service level and turnover/days supply.



34. First pass fill of an order is one method of measuring service level. This determines how well you're meeting your customers' needs. Time and quality are also important elements of your customer's service level. Service level is the percentage of line items demanded filled from stock on the first pass.

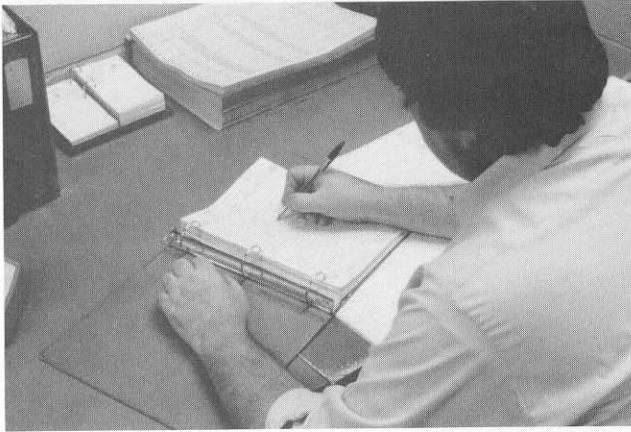
$$\% \text{ of First Pass Fill} = \frac{\text{Line Items Demanded Filled From Stock}}{\text{Line Items Demanded}}$$

35. For example, if a customer needs 20 different line items to complete a repair, and you have only 19 of them in stock, your percent of fill for that order would be 95%. The one item that is missing might delay the entire repair, which could result in a dissatisfied customer. To do a thorough and accurate job of measuring service level, it's important that **all** demand be recorded, whether or not an order results. Some customers don't backorder; others don't place an order if the part is not available.



36. The service level objective is normally established by distributor management. The service level is usually around 95% of fill, but will vary depending on your location. Management will also determine the procedures to be followed in recording service level data.



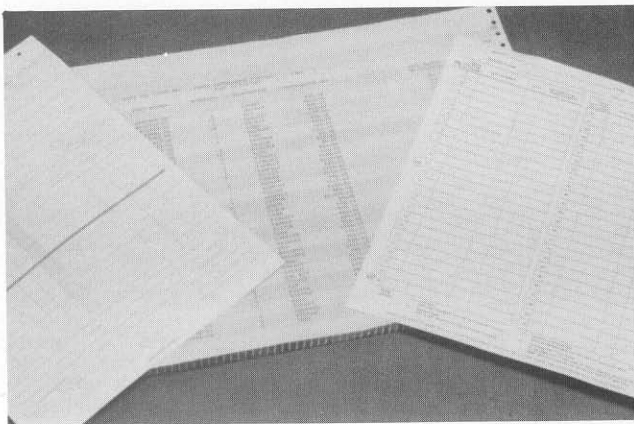


37. To accurately measure service level, it is more important to know which parts could **not** be supplied, than to know the percentage of total demand which **was** supplied. Management analysis of unfilled demand will lead to improved customer service and better inventory control.

Sales Excluded

- Intrabranch
- Courtesy
- Interchange
- Backorder

38. Sales excluded from service level measurement are: intrabranch, courtesy, interchange and backorder sales.

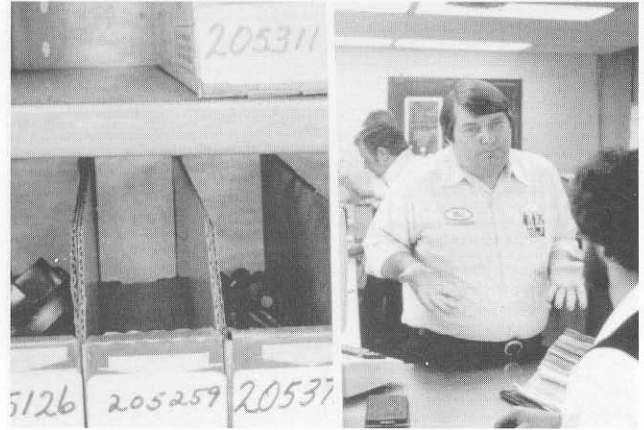


39. Parts department employees are responsible for recording demand on various documents. It is important that each individual discipline himself to insure that all demand is recorded in accordance with management instruction.

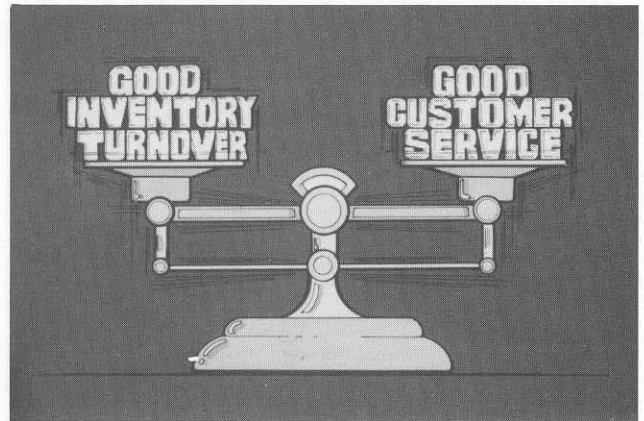


40. A second principle affecting inventory control is turnover or days supply. A high turnover and/or low days supply is supposed to indicate good inventory management. But don't be misled...

41. ...turnover is primarily a financial measure and does not consider customer service level. A high turnover can cause inventory shortages, poor customer service and a subsequent loss of business. A low turnover will not insure a high customer service level.



42. While good inventory turnover is essential, customer service is equally important. Over-emphasis on either aspect leads to imbalance. You, the partsman, should strive to achieve the optimum of inventory turnover and customer service.



43. Inventory turnover is calculated by dividing the cost of goods sold by the average monthly inventory, as shown here... this means that the average inventory investment was sold or turned over 3.6 times during the year.

$$\frac{\text{Cost Of Sales}}{\text{Inventory}} = \frac{1,575,000}{430,000} = 3.6 \text{ Turns}$$

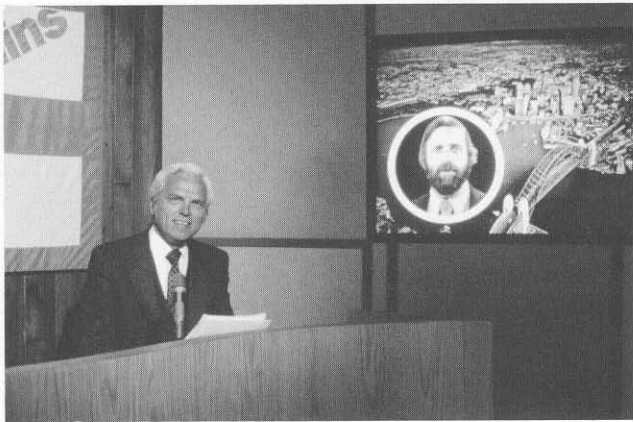
44. Let's continue the preceding example. To determine days supply, divide the number of days in the year by the inventory turn rate. This means the average monthly inventory on hand amounted to 100 days of sales.

$$\frac{\text{Days In Year}}{\text{Inventory Turns}} = \frac{360}{3.6} = 100 \text{ Days}$$



45. Service level and turnover/days supply are just two important measuring aspects of inventory control in any Cummins Distributorship. From Singapore, this is Fran Mission reporting for the Cummins network.

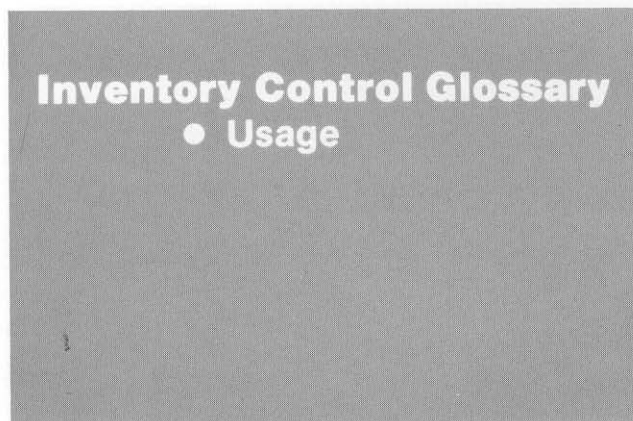
Walter Nator: Thank you, Fran, for adding those facts and figures to our story.



46. In addition to service level and turnover/days supply, there are other terms used in inventory control with which you need to be familiar. For more on our feature, here's Cummins' correspondent, Frank Shaft, in Sydney, Australia.



47. **Frank Shaft:** Thanks Walter. I know my co-reporters around the world have been reporting on various inventory control objectives. In the next few minutes, I hope to bring you up-to-date on some of the more common inventory terminology.



48. Let's begin with a brief definition of some of the more common terms. Usage...or parts drawn from stock. Such items as courtesy, intrabranch and interchange are excluded from parts usage.

49. Next, is lead time...the total time required from the time you should order until the replenishment material is in stock.

Inventory Control Glossary

- Usage
- Lead Time

50. Safety stock... is a quantity of inventory set aside to protect against unusual variations in demand or lead time.

Inventory Control Glossary

- Usage
- Lead Time
- Safety Stock

51. Set-up cost... is the cost of getting ready to replenish stock. It is a compilation of inventory control, purchasing, receiving and physical inventory costs incurred **before** the material is placed in stock.

Inventory Control Glossary

- Usage
- Lead Time
- Safety Stock
- Set Up Cost

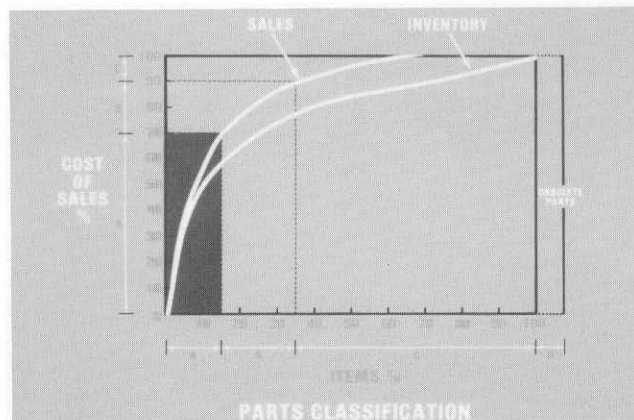
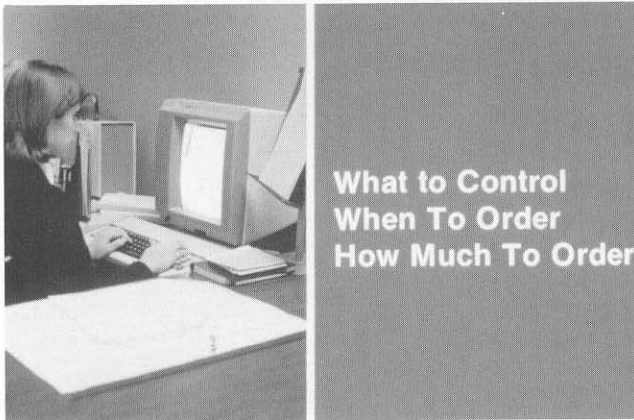
52. Carrying cost usually indicated by the letter K is a compilation of the costs associated with holding inventory such as insurance, taxes, spare parts, obsolescence, etc, incurred after inventory is placed in stock.

Inventory Control Glossary

- Usage
- Lead Time
- Safety Stock
- Set Up Cost
- Carrying Cost

Inventory Control Glossary

- Usage
- Lead Time
- Safety Stock
- Set Up Cost
- Carrying Cost
- Systems



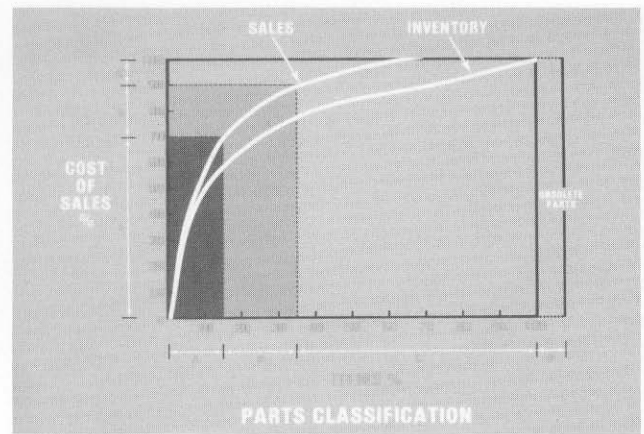
53. Systems...is the arrangement of facts into some rational order. Cummins Distributors utilize numerous types of inventory control systems, ranging from very sophisticated computer systems to very basic "eyeball" or "deadreckoning" systems.

54. Regardless of the system used, whether it's computer or file card, certain basic questions must be answered: what to control, when to order and how **much** to order.

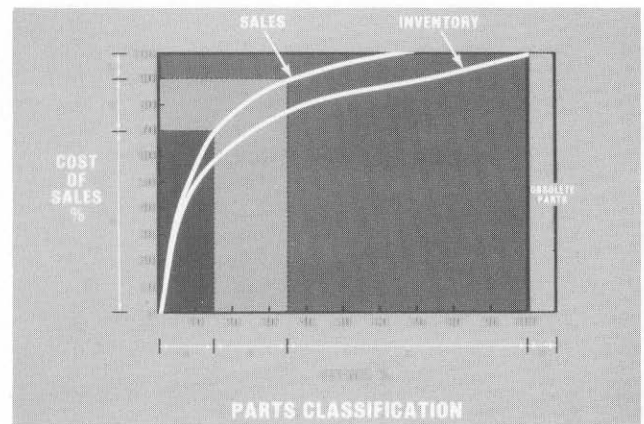
55. What we control is best determined by classifying materials on the basis of usage/value. Usage/value is determined by multiplying annual demand or units times distributor net prices. The benefits of inventory classification include better inventory turnover, more exact sales coverage and lower control costs.

56. The best-known classification system is called the "ABC" system. Graphically the cost of sales is shown on the vertical axis, and the inventory line items on the horizontal axis. 5 to 15% of the inventory line items represent over 70% of the total usage/value. These are classified as "A" items.

57. "B" items represent approximately 20% of inventory line items and 20% of sales.



58. It's also normal to find that 60-70% of the total number of items in the inventory represent less than 10% of the total usage/value. These are classified as "C" items. The "D" category is for slow-moving or obsolete items.



59. The "ABC" system classifies all items into usage/value categories, so that each item may more nearly receive attention relative to its importance.



60. The high usage/value class, "A," is for closely-controlled parts and must be reviewed quarterly by the parts manager.

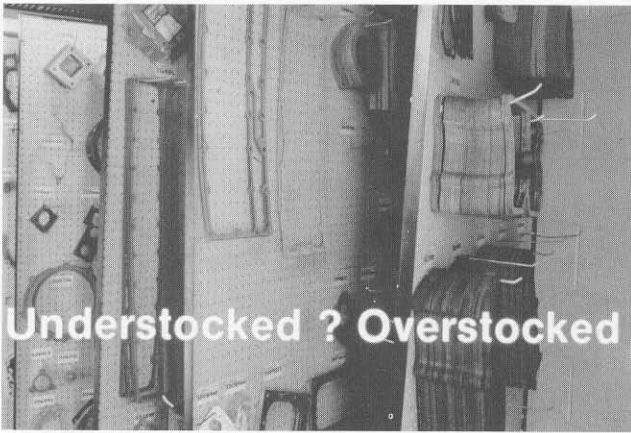
"B" class parts are reviewed twice a year by the ordering clerk.

The low usage/value class, "C," is maintained by spot checking at the order point, requiring a minimum of time and effort.

The "D" category is for obsolete or slow-moving items. Don't forget that you must control and manage your complete inventory, whether it's an "A," "B," "C," or "D" item.

Items	Usage/Value	Review	By
A. 15%	70%	Quarterly	Parts Manager
B. 20%	20%	Twice Yr.	Ordering Clerk for Parts Manager
C. 65%	10%	Spot Check at Order Point	Ordering Clerk for Parts Manager
D. *	0%	-----	-----

*Items with no usage in 12 months.
Items with less than \$10 annual value.



Understocked ? Overstocked

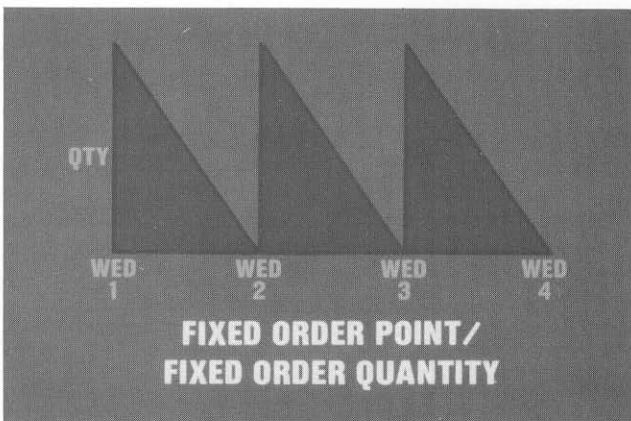
61. You might be asking yourself, "How do I keep inventory properly balanced, so as not to create an understocked or overstocked situation?"

Excess Inventory = Replenishment Order Placed Too Soon
 Depleted Stocks = Replenishment Order Placed Too Late

62. True inventory control begins when an order for material is entered. Excess inventory is the result of a replenishment order placed too soon. Depleted stocks are the result of a replenishment order placed too late. Either situation is unnecessary and expensive. **Perfect** inventory control provides for the receipt of new material on the day the last of the old material is used up.

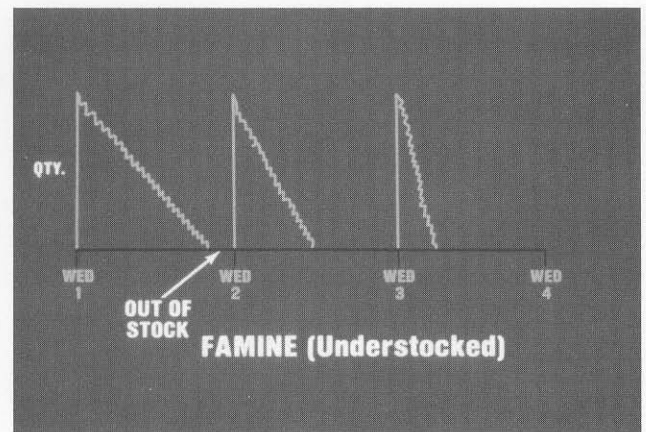
Order Point = Better Customer Service At A Lower Cost

63. An order point will help by alerting you to review the items for reorder. Good inventory control concerns itself with "Better Customer Service at a Lower Cost." Look to your order points to maintain the "Better Customer Service" - your first basic goal in inventory.

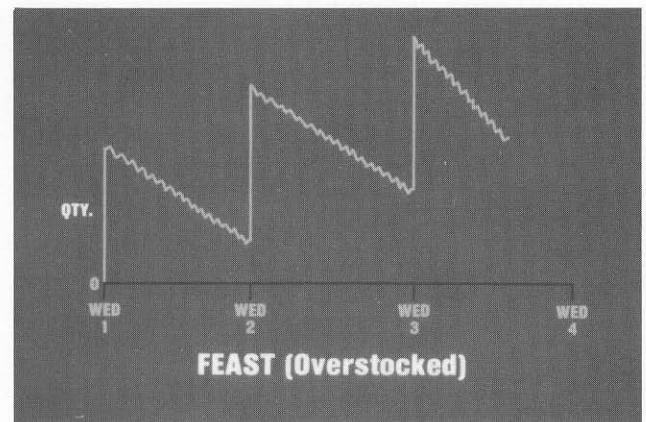


64. Since usage and lead times are erratic, an order for replacement material is initiated when there is just enough material on hand to last until replacement material is received. For example: Let's assume we live in the perfect world, and on the first Wednesday of the month, we place an order for 4 turbochargers, knowing we will sell 4 turbos in the following week and every week thereafter for the month. If we knew this to be fact, we could order 4 turbos every Wednesday, meet our customers' needs, and solve our usage and lead time problem.

65. Now, let's look at a real-world situation. If we order 4 turbos on the first Wednesday of the month and then have a request for 5 turbos in the next week, we will be out of stock before the scheduled Wednesday order point.



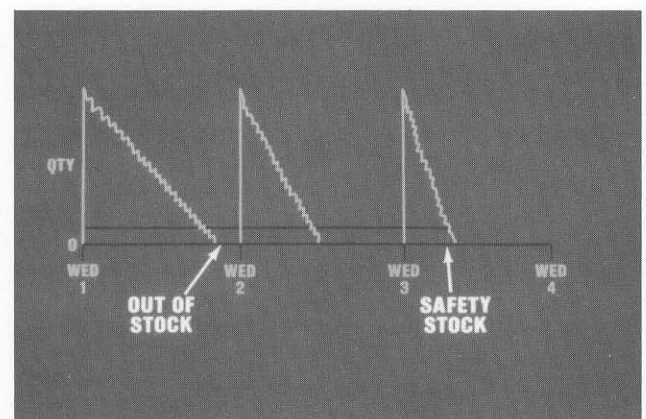
66. Just the reverse can also happen. Using the same example, we order 4 turbos on the first Wednesday, but we only sell 2 turbos. In the following week, we find ourselves overstocked. Immediately, you see that the real world becomes a feast or famine in terms of order points, usage and lead times.

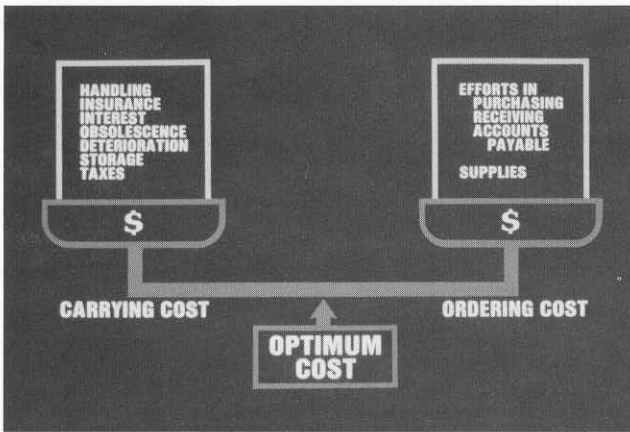


67. To help eliminate the feast or famine situation, our order point signal should include a buffer stock, which we refer to as Safety Stock.

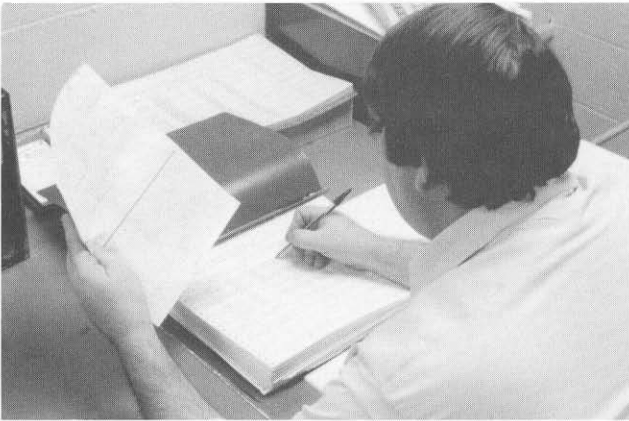


68. The order point now consists of demand, times lead time, plus safety stock, which is just enough inventory on hand to pull you through to your scheduled order point. Safety stock helps assure good customer service. There are many methods of calculating safety stock.

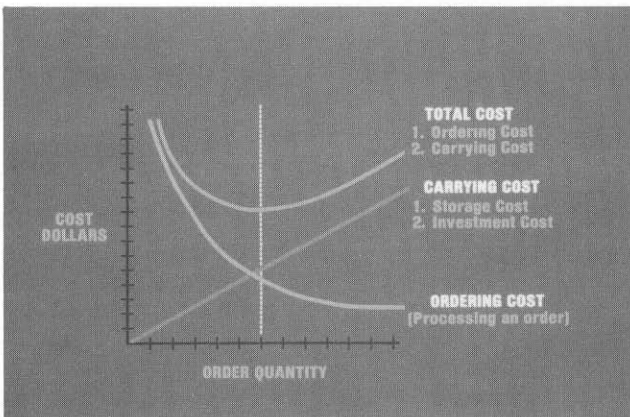




69. Once we have reached our order point, and determined that an order is necessary, the next step is to decide the quantity to be ordered. In order to reach that decision, we must weigh the various carrying costs and ordering costs to achieve the optimum cost. All of the variables shown must be considered in controlling your company's inventory control costs.



70. For example...it costs the same amount to place an order for a cylinder block as it does for a gasket. The actual cost of the parts is very different, as is the cost of storing them. In order to make better use of your company's time, money and inventory facilities, order the gasket in larger quantities, but not as often. On the other hand, order the block in **smaller** quantities, but **more often**. Fortunately, there is a formula which can be used to balance these inventory cost facts and calculate the most desirable order quantity. The formula is called...Economic Order Quantity...better known as EOQ.



71. Graphically depicted, the "EOQ" formula shows that as the quantity ordered increases, the set up cost decreases, since the ordering is spread over a larger quantity. The carrying cost, however, increases as the order quantity increases because as the inventory grows larger, additional costs are incurred.

THE FORMULA FOR EOQ IS:

$$EOQ = \sqrt{\frac{24 \times SU \times MU}{K \times \text{UNIT COST}}}$$

72. The formula for figuring EOQ is the square root of 24 (which is a fixed number by Cummins) times the set-up cost (SU), times the monthly usage (MU), divided by the carrying costs (K) times the unit cost.

73. This example illustrates the use of EOQ. Let's say the set-up cost equals \$2.00, and the monthly usage is 250. The carrying costs (K) is 25% and the unit cost is \$2.40. By using the formula, we find that the EOQ is 141 units.

SET-UP COST	=	2.00
MONTHLY USAGE	=	250
K	=	25%
UNIT COST	=	\$2.40

$$EOQ = \sqrt{\frac{24 \times 2 \times 250}{.25 \times 2.40}}$$

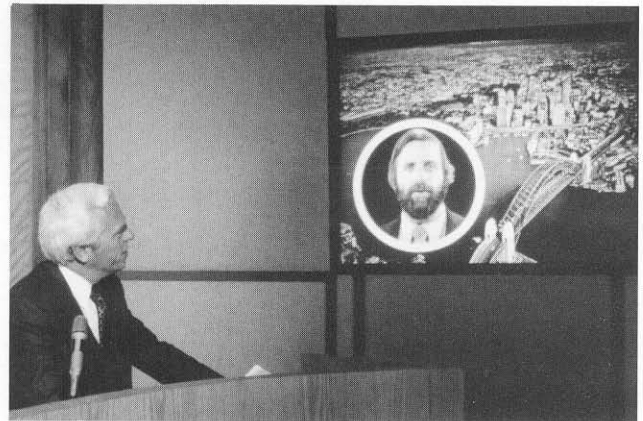
$$EOQ = \sqrt{\frac{12000}{.6}}$$

$$EOQ = \sqrt{20,000}$$

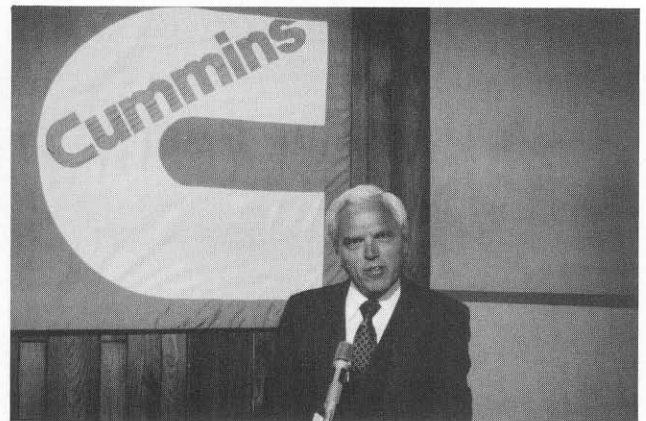
$$EOQ = 141.42 \text{ OR } 141$$

74. You have just seen some of the key elements of inventory control. Many of you may not work directly with these inventory elements, but we feel that you should be aware of them. From Sydney, Australia...this is Frank Shaft returning you to Walter Nator.

Walter Nator:
Thank you Frank.



75. During our investigation, we discussed many necessary concepts and actions that require some thought from you, the partsman. Topics such as...



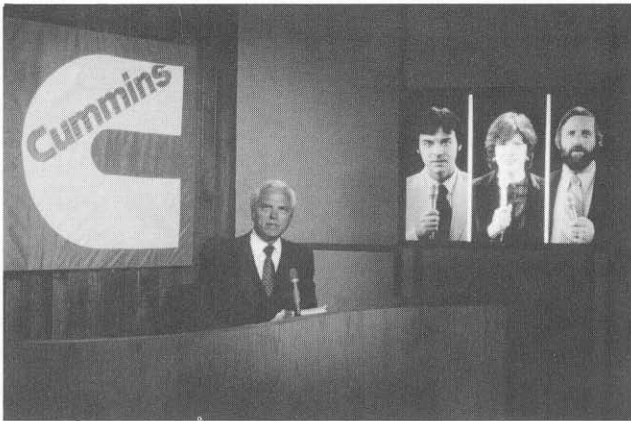
76. ...inventory investments, parts department responsibilities, cost of maintaining an inventory, customer demand, systems used, classifications and order points.

- ### Basic Inventory Control
- Inventory Investment
 - Responsibilities
 - Maintenance
 - Demand
 - Systems
 - Classifications
 - Order Points

Insuring Proper Inventory Control

- Write/Enter Part Number Information Accurately
- Follow Established Procedures
- Receive Properly, Accurately
- Stock In Proper Location
- Report Discrepancies
- Maintain Department Security

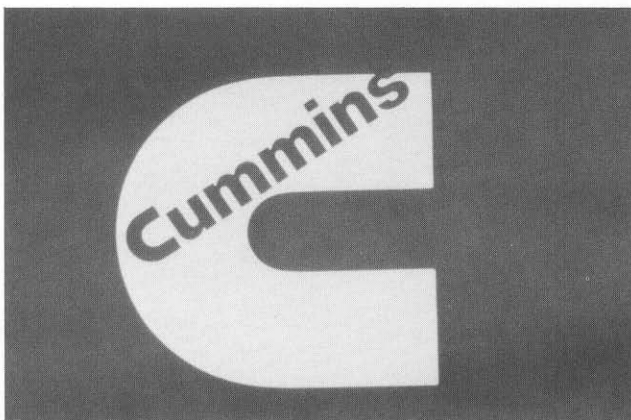
77. Things that you can do to insure proper inventory control in your company include write or enter part number information accurately, follow established procedures, receive inventory properly and accurately, stock items in their proper location, report discrepancies, and maintain parts department security. In inventory control, accuracy is more important than speed. A simple part number transposition can result in a double error.



78. With our worldwide correspondents, we pointed out concepts that will enable you to become better at your job. The knowledge you have gained from this program should enable you to make the correct decisions about your company inventory. It's a big responsibility, but one we know you can handle...



79. ...and that's the way it is. For Van Belt, Fran Mission, Frank Shaft and the entire Cummins Network, this is Walter Nator. Have a good day.



80. Cummins Logo

BASIC INVENTORY CONTROL - REVIEW

Supplying needed parts to your customers is an important facet of the parts department.

Controlling your parts inventory requires individual effort, as well as teamwork.

Basic Inventory Control is built upon these two principles - supplying parts and controlling parts.

There are many items that make up an inventory and the systems used to control it.

- Inventory Investment
Inventory usually represents the largest single asset of the company.
- Responsibilities
Parts department is in charge of the care and maintenance of inventories.
- Demand
Service Level and Turnover/Days Supply are key indicators that may be used in measuring customer service.
Inventory Turnover can be calculated by dividing the cost of goods sold by the average monthly inventory. Days Supply can be determined by dividing the number of days in the year by the inventory turn rate. 100 days supply is considered to be a good average in the parts business.
- Systems
Inventory Control Systems range from very basic (file cards) to very sophisticated (computer).
- Classifications
Classify inventory into usage/value categories to maintain an orderly and smooth flow of parts.
- Order Points
Usage and lead times are important variables when considering when to order inventory. The Economical Order Quantity is one way of analyzing order points. The formula for "EOQ" is:

$$\sqrt{\frac{24 \times \text{Set-up Cost} \times \text{Monthly Usage}}{.25 \times \text{Unit Cost}}}$$

BASIC INVENTORY CONTROL - QUIZ

	True	False
1. By knowing basic inventory control procedures, you help to maximize profits for your company.	_____	_____
2. The average Cummins Distributor provides 100% availability of parts from inventory.	_____	_____
3. Management, salespeople, clerical personnel, partspeople and mechanics are involved in controlling inventory.	_____	_____
4. Controlling your inventory involves ordering, receiving, stocking, and lending.	_____	_____
5. When you receive a parts shipment, immediately begin restocking the parts shelves.	_____	_____
6. All inventory control practices and procedures require some form of written controls.	_____	_____
7. First pass fill of an order is one method of measuring service level.	_____	_____
8. The service level objective is usually established by your company's parts salespeople.	_____	_____
9. Parts department employees are responsible for recording demand on various documents.	_____	_____
10. Low turnover of inventory insures a high customer service level.	_____	_____
11. Usage is the amount of parts drawn from stock.	_____	_____
12. Usage/Value is determined by multiplying annual demand times distributor net prices.	_____	_____
13. 5-15% of inventory accounts for more than 80% of usage/value.	_____	_____
14. An order point will help you to review inventory items for reorder.	_____	_____
15. The formula for figuring EOQ is:	_____	_____

$$\sqrt{\frac{24 \times \text{Set-up Cost} \times \text{Monthly Usage}}{.25 \times \text{Unit Cost}}}$$

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