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AIR FORCE LOGISTICS MANAGEMENT CENTER

STREAMLINING LOCAL PURCHASE PROCEDURES

By

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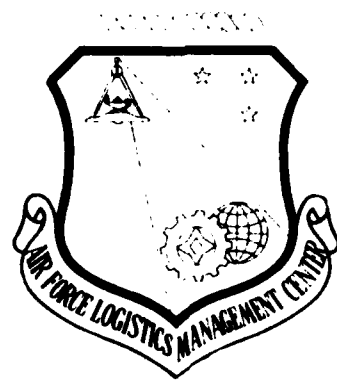Major Douglas Blazer, LGS
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ABSTRACT

This report identifies improvements the Air Force can make in the supply system's local purchase (LP) procedures to reduce the time and cost to process an LP request. We found a number of areas to improve mission support by increasing stockage of LP items and reducing processing time and costs. For example, we recommend use of more expeditious contracting methods to shorten leadtime, a method to determine if price discounts are advantageous to the Air Force at base level, and a method to determine what items to buy for a minimum order amount purchase. In addition, we recommend expanding Phase IV capabilities or using a microcomputer interface for item descriptive data, synchronizing supply and contracting time tables, and direct customer to buyer contact when appropriate.

EXECUTIVE SUMMARY

The purpose of this study was to identify improvements to Supply's local purchase (LP) system which would improve stockage effectiveness and reduce the time and cost to process LP requests. We developed this study from a briefing given to the AFLMC Board of Advisors. In that briefing, Contracting pointed out the cost to process an LP requisition was much too high and the time to process this requisition was excessive. Based on our study we found a number of factors impacting both the cost and time to process an LP request. Our current local purchase system is ineffective. It relies heavily on manual processing methods, makes erroneous assumptions in ordering items, and creates an environment of counterproductivity.

Our study revealed Contracting does not have the data necessary to take advantage of short leadtime contracting methods such as Blanket Purchase Agreements or Automated Purchase Orders. The current system does not consider quantity discounts and, therefore, would rather buy 100 at $1 each than purchase 110 at $.90 each. The data bases of Contracting and Supply do not agree. This causes excessive workloads and delays in procuring required items. Common items such as rubber stamps take six months or more to procure. The current local purchase system generates more lost paperwork, more requests for additional data, and more cancellations than all the other sources of supply combined. Significant improvements are required to streamline our local purchase procedures.

We recommend identifying recurring demand items to Contracting to reduce leadtimes. We also recommend ways of increasing the use of quantity discounts at base level and how to improve purchasing of minimum order amount items. We recommend a Supply-Contracting electronic interface for a single item description data base, retention of active item records, and reconciliation or processing of exceptions to eliminate workload duplication and decrease paperwork processing. We also propose direct customer-to-buyer contact when additional descriptive data is needed. We recommend more effective ways to make one-time (wash post) and sole source/brand name purchases. Finally, we recommend reevaluation of Supply's and Contracting's time standards for order and ship time (O&ST) according to contracting method and the mandatory use of required delivery dates (RDDs).

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CHAPTER 1

THE PROBLEM

PROBLEM STATEMENT. Inefficiencies in the local purchase (LP) system make the time and cost to process an LP request excessive. These inefficiencies also result in ineffective stockage policies.

BACKGROUND.

1. Scope. The purpose of this study is to improve LP stockage effectiveness and reduce the time and cost of buying LP items. The Air Force has nearly 600,000 LP line items [15], with an average Air Force-wide requisitioning objective dollar value of approximately $350 million and a demand level dollar value of approximately $59 million. (AFLC Stock Fund Report, 31 Dec 83.) Table 1 provides some average statistics for base-level LP items [15].

Base-Level LP Statistics

	All LP Items	LP Items With Demand Level >0
Average Unit Price:	$52.21	$ 23.97
Average Units Demanded Per Line Item Per Year:	77	357
Average Number of Line Items Per Base	5,155	635

Table 1-1

We estimate 65% of the average 635 items with a demand level, or 412 items on a base, fall in "heavy use" commodity groups such as hand tools, hardware, electronic components, lighting hardware, chemicals, or camera supplies. The approximate Air Force-wide dollar value of the demand level of these items is $38.4 million, with an estimated annual Air Force usage of 11 million units. The 14 commodity (Federal Supply) groups, are:

    51   Hand Tools
    53   Hardware
    59   Electronic Components
    62   Lighting Hardware
    66   Navigational & Flight Supplies
    67   Camera Supplies
    68   Chemicals
    72   Floor Coverings
    73   Kitchen Supplies
    75   Administrative Supplies
    78   Recreational Supplies
    80   Paints
    84   Clothing
    99   Miscellaneous

The Air Force's local purchase system is big business and must be managed effectively. Controlling the resources of that system (the people, the property, and the money) is a base-level responsibility. This source of supply must react quickly and responsively to Air Force needs.

CURRENTLY, THE BASE-LEVEL LOCAL PURCHASE SYSTEM IS A CUMBERSOME, HIGHLY MANUAL OPERATION.

To illustrate, we conducted an analysis of the stockage effectiveness of LP items. We found LP items have the highest percentage of items with a demand level and no stock on hand. From 16 to 31 percent of LP items with a demand level are out of stock [18] as compared to the overall AF average of 11% for items from all sources of supply.

In this study we analyze the local purchase system from a Supply perspective. The Air Force Logistics Management Center's (AFLMC) Contracting Directorate is conducting a study from the contracting perspective. Both studies are coordinated efforts. Prior to explaining our analysis, we provide a short description of Contracting's automated base-level system.

The contracting side of the LP system is currently a batch-processing system using punch cards. However, a new on-line system is being tested. The four principal functions within base contracting are as follows: (1) Supplies - to purchase items of supplies and equipment authorized at base level; (2) Services - to acquire services, construction, and utilities using formal advertising or negotiation procedures; (3) Systems - to implement Customer Integrated Automated Purchasing System (CIAPS)/Base Contracting and Acquisition System (BCAS) policies and procedures; and (4) Contract Administration - to administer contracts for supplies and services [3]. The operation of a base contracting office is conducted on one of two systems, CIAPS, a punch-card, batch-processed system which is presently implemented on a Burroughs 3500 computer, or BCAS, an on-line system presently being tested on a Wang computer. The interfaces of CIAPS/BCAS with other base organizations include requests from customers (both automated and manual), receipt notices, and authority for Finance to make payments. Only requests from Base Supply and Medical Supply are received in punch-card format; all other interfaces are by paper document. An additional function of CIAPS/BCAS is to provide a variety of daily, monthly, and "as-required" reports to identify problem areas and brief management personnel. The present structure of CIAPS applies better to purchasing supplies rather than services because of the frequent non-repeatability of service contract conditions; CIAPS also has little provision for contract administration functions.

2. Literature Review. There have been a number of studies analyzing the Air Force's local purchase system. Most of them have highlighted problem areas that still exist.

Three of these studies [4] [9] [14] identified differences in Supply's and Contracting's processing times as a problem area. An AFIT study evaluated alternative LP order and ship time (O&ST) computational methods, as well as describing the impact of conflicting time frames for Supply and Contracting [4].

3. The AFLMC recently briefed our Board of Advisors (BOA) that the cost to process an LP request in contracting is too high. The results of our study,

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"Streamlining Local Purchase Procedures" (AFLMC/LGS), and a similar study, "COPPER Small Purchase Initiatives," (AFLMC/LGC), identified potential areas of improvement and economical ways to handle LP requests.

4. The Air Force Management Analysis Group (AFMAG) "Spare Parts Acquisition" report, Vol II, October 1983, [2] recommended purchase requests for EOQ items be initiated for quantity options at the wholesale level.

5. An Air Force Logistics Management Center report, "Local Purchase Order and Ship Time," [5] stated the Air Force is currently underestimating O&ST for 45% of our LP items, with consequent inadequate stockage. That study recommended improvements in computing LP O&ST to increase the LP fill rate by 6%. This report was distributed in September 1984. The Data Systems Design Office is currently preparing a Functional Description (FD) to document the system changes necessary to implement our recommendations. The FD will be prioritized at the next SBSS master planning workgroup.

CHAPTER 2

ANALYSIS

OVERVIEW. We analyzed LP procedures beginning with the request and ending with receipt of the property. To do this, we prepared flow charts to trace the flow and interaction of all records and documents handled in the LP system. Separate charts were prepared for an issue request, requisition to contracting, price and quantity adjustments, periodic reconciliations, contracting transactions, sole source/brand name procurements, and walk-throughs. The purpose and function of each were evaluated. We detail our findings, impacts, solutions, and recommendations in the following paragraphs. Our report format is to first state the findings, then the impact and potential solutions, and finally, our recommendations.

LP STOCKAGE.

1. Findings:

    a. CONTRACTING DOES NOT HAVE THE ANNUAL REQUIREMENTS DATA NECESSARY TO TAKE ADVANTAGE OF SHORT LEADTIME CONTRACTING METHODS. Currently, Contracting uses a holdover demand file for 0-9 days to consolidate requirements and to add item records. Then the contracting system keeps a record of the transaction for 90 days, so if a second request is made within 99 days, an automated purchase order may be issued. The assumption is, if the demand is recurring, it will be requisitioned within 99 days. If it is not, Contracting no longer gives a requisition special handling for expedited contracting methods. However, if Contracting had the annual requirement, or demand data, they could take advantage of contracting methods which offer shorter delivery dates [6]. Some contracting methods have less administrative lead time than others. For example, either a Blanket Purchase Agreement (BPA), or an Automated Purchase Order has a shorter lead time than a manual purchase order. Reduced lead time means lower inventory investment and higher stockage effectiveness. We show in Table 2-1 average leadtimes by contracting method at Little Rock AFB and England AFB for 1982-83 extracted from monthly transaction records in the Supply Data Bank (SDB) and CIAPS data.

AVERAGE ORDER & SHIP TIME (O&ST) DAYS BY CONTRACTING METHOD

Contracting Method	England AFB	Little Rock AFB
Manual Purchase Order	59	64
Automated Purchase Order	48	34
Blanket Purchase Agreement	8	—
Delivery Orders, with or through		
Government Dept/Agency	60	51
Indefinite Delivery Contract	125	—

Note: Automated Purchase Orders and Blanket Purchase Agreements require shorter lead times than other methods according to data extracted.

TABLE 2-1

b. CONTRACTING IS UNABLE TO TAKE ADVANTAGE OF QUANTITY DISCOUNTS, because they do not know if an item has stable demand or if larger quantities are economically feasible to purchase. Contracting's holdover file, described above, does not meet this need because most stable demand LP items are not repetitively ordered during the 99-day period. In fact, LP items have a high cost to order, which means we order less frequently than for items from other sources [11]. Most of the time there are more than 99 days between requisitions for LP items.

c. MINIMUM ORDER AMOUNT (MOA) PURCHASES CREATE CUSTOMER SUPPORT AND EXCESS PROBLEMS. Some vendors will not fill an order unless the dollar amount of the order is above a minimum order amount. Contracting flags these minimum order amount items in their system. If less than the MOA is ordered, the vendor is contacted. If the vendor refuses to provide the item at the lower dollar amount, Contracting must make the purchase from another source; however, this causes a delay. Some items are not flagged, so when Contracting orders the item, the vendor returns the order, causing an additional delay. Contracting's holdover file is designed to consolidate requests, but it is not effective. Supply and Contracting need to work together to consolidate these requests.

2. Impact and Solutions

a. When contracting methods with shorter leadtimes (such as a Blanket Purchase Agreement (BPA) or Automated Purchase Order) are not used, Supply's customer support is affected. The effect of longer leadtimes is inefficient and ineffective stockage policy. Because Contracting does not know the frequency of purchase and quantity per year for stable demand items, they are unable to use shorter leadtime methods. We recommend contracting methods that shorten leadtime like Blanket Purchase Agreements (BPAs) or Automated Purchase Orders for common groups of recurring demand items. Typically, local purchase items fall into a relatively few groups — hand tools, office supplies, small hardware, and civil engineering supplies. A short leadtime contracting method could be established guaranteeing a certain dollar value of business with a given vendor. Requisitions to be filled could be satisfied by simply forwarding the demand card to the vendor. Contracting would select the local

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vendor for a commodity group, negotiate procedures with the vendor, then Supply would mail the demand card to him. In return, the Air Force would receive prompt delivery and, perhaps, quantity discounts. In Appendix B we discuss a suggested procedure and show a sample data format for providing the annual requirements necessary for Contracting to establish shorter leadtime methods.

Significant savings can result from reduced O&ST through use of shorter leadtime contracting methods. As an example, we examined the impact of shorter leadtimes for office supplies, Federal Supply Group (FSG) 75, at Little Rock AFB and hand tools, FSG 51, at England AFB. The demand level is the amount we stock based on past demands for a specific item. We show the results below in Table 2-2 [15].

AVERAGE $ VALUE DEMAND LEVEL [15]

Base	Category	FSG	No. Items	Demand Level$ For Manual P.O.	Demand Level$ For BPA	Demand Level$ Automated P.O.	Average $ Value Reduction	Percent Reduction
Little Rock	Office Supplies	75	91	$919	--	$731	$188	20%
England	Hand Tools	51	20	$406	$269	--	$137	34%

TABLE 2-2

Since Table 2-2 was based on a limited sample, we expanded our sample by using O&ST for manual purchase orders versus Automated Purchase Orders from [4]. We examined the changes in the demand resulting from differing Order and Ship Times for 3,233 LP items in the major commodity groups at six bases, including England and Little Rock. We show the results in Table 2-3. We found the reduction in dollar value of demand level to be consistent across all items at the six bases. Therefore, we extrapolate the reduction in demand level dollars across the Air Force.

ANNUAL SAVINGS

Base	Demand Level$ For Manual P.O.	Demand Level$ For Auto. P.O.	Demand Level$ For BPA	Average $ Value Reduction	Percent Reduction
England	$246.69	-	$186.98	$ 62.64	25%
Little Rock	836.75	$661.18	-	175.57	21%
Maxwell	973.46	741.27	-	232.19	24%
Offutt	870.80	702.86	-	167.94	20%
Edwards	920.77	679.61	-	241.16	26%
Tyndall	819.23	577.01	-	242.22	30%

Table 2-3

Annual Air Force savings are estimated by multiplying the average percent reduction, 25%, times $38.4 million which is the Air Force-wide dollar value of the demand level for heavy-use commodity groups. Thus, we could reduce stock levels approximately $10 million for the major LP Federal Supply Groups Air Force-wide. Reducing leadtime also increases effectiveness. So we can improve stockage effectiveness and reduce stock levels.

b. LP items are being purchased at potentially higher cost than necessary. Because Contracting cannot identify stable demand items which might be eligible for quantity discounts, they may not request quantity discounts from the vendor. The AFMAG "Spare Parts Acquisition" report, Vol II, October 1983, under the "Requirements" area states:

The AFLC has established a program for nonreparable items to pursue the economics of larger quantity buys. The Quantity Discount Program authorizes the Inventory Manager to request bids for expanded support periods. Only high annual demand, stable configuration items are considered. Higher quantities are bought where it makes economic sense.

Based on the results of this program, the AFMAG recommended purchase requests be initiated on all stable demand and configuration nonreparable items for quantity options. Wholesale stockage policy (both at HQ AFLC and HQ DLA) includes quantity discount procedures. AFLCR 57-6 states, "Experience has shown that AFLC can save money by asking for and taking advantage of (when cost effective) quantity discounts which contractors may offer." A HQ DLA directive (DLAM 4140.2, Vol II, Part 3) gives procedures to evaluate quantity discount stock buys. The AFMAG study recommends quantity discounts at the wholesale level. Certainly, if money can be saved at the wholesale level by using quantity discount procedures, it can also be saved at base level. In Appendix A we discuss a model which applies to price discounts.

c. Minimum amount orders can cause a customer's waiting time to be extended. Requests are held in the holdover file to see if the minimum amount will accumulate over a specified time. Typically two actions are possible. First, we may cancel the order because the minimum amount is not achieved. Second we may increase quantities to achieve the minimum order amount. This generates excesses. For example, if a customer needs a $5 filter, and the minimum order amount is $50, supply should requisition other stocked items supplied by that vendor to make up the difference. To do this, Contracting could furnish Supply minimum order amount data on vendors as they occur. Supply could then review this data, along with an SBSS annual requirements listing like the one suggested for Contracting in Appendix B, to determine how many and how often these items are furnished by the vendor. Then, different stable demand items to make up the minimum order amount of $50 could be requested. This supplementary stockage policy for minimum order amount items should be established in order to purchase and stock these items efficiently.

3. Recommendations:

   a. Furnish annual requirements, or demand data, for recurring demand items to contracting.

   b. Take advantage of quantity discounts at base level by using a price-break EOQ model for stable demand LP items.

   c. Establish a procedure for Contracting to furnish minimum order amount data on vendors to Supply. Supply would then match these vendors with demand data, extracted in a listing similar to the annual requirements listing to be furnished Contracting in Appendix B. Supply would select appropriate items to meet the minimum order amount, requisition the items, and adjust SBSS records.

ITEM DESCRIPTIVE DATA

1. Findings:

   a. SUPPLY DESCRIPTIVE DATA IS LIMITED, WHICH CAUSES CONTRACTING TO REQUEST ADDITIONAL DESCRIPTIVE DATA. The Standard Base Supply System limits item descriptions to 24 characters. CIAPS descriptive data can be as long as 1680 characters (48 lines); BCAS has an even larger item description. As a result, Supply's descriptive data differs from Contracting's descriptive data and does not always include the necessary characteristics required by contracting to purchase the item. For a typewriter, for example, the model number, color, kind of type, and special features should be specified.

   b. SUPPLY'S MANUAL NON-NSN CONTROL FILE CONTAINS DD FORMS 1348-6 IN PART NUMBER, STOCK NUMBER SEQUENCE WHICH ARE EXTREMELY DIFFICULT TO SCREEN FOR PREVIOUS REQUESTS. While maintenance of a DD Form 1348-6 file is a MAJCOM option, there is a real need for such a file to make the data readily accessible. Many times second, third, or fourth requests are not matched to a previous item record because Supply does not know the two items are the same. If, for example, the same item has been ordered by two customers under different part numbers or from different commercial catalogs, Supply is unable to combine the two requests. A February 1984 AF Inspector General (IG) report states, in part:

Many part numbers lacked adequate descriptions and identification of the original requisitioner.... Part number 6350P250-012 and 6350P709-008-0001 were both identified as break rods for Monaco fire alarm boxes. Review of the DD Form 1348-6 for these items showed one part number cross-referenced to the other, but the relationship had not been established in supply records. Instead of issuing assets on hand under 6350P250-012, a new order for eight was made. Both part numbers were reported as excess.

For the short term, if this is approved, AFLMC/LGS could develop a single data base file on a microcomputer such as the Z-100. The contracting BCAS system plans a single item descriptive data file at some point in the future. Regardless of which system is used, a single item descriptive data base must be developed.

2. Impact and Solutions.

a. Because the two data bases do not agree, unnecessary workload is created. SBSS item descriptions are too short for contracting to make the purchase. Contracting prepares and forwards a request for additional data. Then Supply must locate the DD Form 1348-6 request and contact the customer for the additional data and resubmit the description. Lack of any of the descriptive data elements on the DD Form 1348-6 may cause a request for additional data. Contracting also adds to the description, and then it is hard for Supply to identify and verify property received. Supply must match the DD 1348-1 description provided by the SBSS with the contract description provided by Contracting. For the long term, we should use the electronic interface capability provided by Phase IV; in the short term, we should develop a microcomputer file of standard characteristics for descriptive data that contains the necessary data. (A single data base established in Supply is a part of Contracting's BCAS plan also. Logic for establishing it in Supply is that supply originates the requisition.) By establishing a single data base on a microcomputer or Phase IV hardware, we can expand the currently limited SBSS size of descriptive data. The descriptive data would be accessible to demand processing, research, requisitioning, receiving, and Contracting. With one item description data file, accessed by both Supply and Contracting, additional data could be input by Contracting, interfaced with the SBSS, and both Contracting's purchase order and the Supply receipt document, printed out in receiving, would contain the updated description. Such a system is established at General Motors, Detroit, with good results. The customer enters "screwdriver," for example, and a menu appears to determine the size, type, etc. We should train research personnel to screen each DD Form 1348-6 against this electronic file. Excesses will be reduced, because requests will be matched if there is a previous item record. Standard characteristics needed by contracting will be electronically available.

b. Improper identification can cause two item records to be set up for the same item. Because the requests are not combined, demand data is insufficient to stock, or given sufficient demand data, both items are stocked. Unnecessary purchasing and stockage results. Thus we duplicate order and holding costs. Excesses are also created. Currently, multiple "L" or "P" numbers are assigned to the same items, and the customer does not know the item is in stock or that a substitutable/interchangeable item is available to satisfy the need.

3. Recommendation.

Build an electronic file containing the DD Form 1348-6 image with graphic illustration, by noun and stock number interfaced with the contracting system. Develop the file on a microcomputer now; plan to use Phase IV capabilities in the future. The file will be accessed by demand processing, research, requisitioning, receiving, and Contracting. Include additional research training for this operation.

SUPPLY-CONTRACTING ACTIVE ITEMS.

1. Finding: ITEM RECORDS ARE REMOVED FROM THE CONTRACTING SYSTEM WHILE THEY ARE STILL ACTIVE IN THE SUPPLY SYSTEM. Contracting purges an item from the CIAPS/BCAS system 365 days after the Estimated Delivery Date (EDD). Supply deletes a computer item record from the system if there has been no transaction within the last 365 days and no on-hand balance. (Technically, if there is a zero requisitioning objective, the date of last demand (DOLD)/date of last adjustment (DOLA) is greater than 365 days, no on-hand balance and there is no special level detail containing life of system stock requirements.) Since the EDD varies with the vendor, item records remain in the contracting system for varying periods of time. If for example, the EDD is 30 days, but the receipt is processed by Supply after 90 days, an item record will automatically be active in the SBSS at least two months longer than it will be in Contracting's system. An item record is active in the SBSS if there have been receipts or issues or other transactions, even though no requisition is sent to Contracting. Thus the time table for deleting an item record from the SBSS is different from that for Contracting's system. This can result in needless paperwork. For example, an item is requisitioned by Supply without a DD Form 1348-6, because if it is an active SBSS item, no DD Form 1348-6 is required. However, an active item in Supply may have been purged from the Contracting system. Therefore, Supply must recreate a DD Form 1348-6. Because the time tables in the two systems are different, duplicate workload is created.

As a workaround, current procedures require a monthly purge list be screened by Supply. This requires that Supply create an inquiry for each item on the list, and should the item be active, a DD Form 1348-6 must be recreated. AFM 67-1, Chapter 17, Vol II, Part Two, makes this screening optional. However, if there is a detail on the item, an on-hand balance, or it is a bench stock item, experience dictates the item should be retained in Contracting's system for future purchases rather than wait for a rejected requisition. In addition to the purge list, the BCAS Automated Customer Transaction list (in CIAPS, the Holdover list) must be screened daily for items which have not been loaded in Contracting's system. Those for which Contracting has no DD Form 1348-6 must be duplicated or recreated by Supply.

2. Impact and Solutions.

Recreation of DD Form 1348-6s is duplicative and unnecessary. Many times this form must be reaccomplished as a result of a customer demand. It must be reprocessed through requisitioning, and if base contracting time limits are exceeded, the requisition is cancelled. At one base we examined, an average of 48 DD Form 1348-6s are recreated per month out of an average 451 purges per month.

3. Recommendations.

a. Retain item records in Contracting's system until notified by Supply that the item record has been deleted from Supply files. Electronic interface must be established so Supply can notify Contracting when to delete an item record. The interface will also cut down excessive handling and update item descriptive data. We recommend a reconciliation annually, and if an LP item is loaded in the SBSS, retain it in CIAPS/BCAS. If it is not loaded in the SBSS, delete it from CIAPS/BCAS.

EXCESSIVE HANDLING.

a. Finding: LOCAL PURCHASE PROCESSING INVOLVES TOO MANY PEOPLE. Local Purchase requisitions flow through many offices and individuals. . .from the customer to demand processing to research, to stock control, to Purchase Request (PR) control, and finally to the buyer. If additional data is needed, the flow is reversed. Contracting requests additional descriptive data if the vendor needs it or if they are unable to purchase the item with the description provided. In some cases, by the time the customer gets the item (2 1/2 to 3 months later) any resemblance to what he requested may be purely coincidental. Average time for LP procurements from the requisition date to estimated delivery date shown in DSDO/LGC Semiannual Leadtime Report for March 1981 ranges from a minimum of 67.3 days to a maximum of 75.1 days. At one base, approximately 3 to 5% of the LP items inspected in the receiving area are not acceptable to the customer.

2. Impact and Solutions. When Contracting requests additional data and Supply is unable to get the data in the prescribed time frame (differs according to local option, 3 to 10 days), the requisition is cancelled by Contracting's system. Approximately 20 requisitions are returned each month for additional data according to CIAPS data collected from Goodfellow, Little Rock, and England AFBs. This means paperwork is constantly flowing back and forth between Supply and Contracting. Customers do not get the items they want. WE BELIEVE THE CUSTOMER AND THE BUYER MUST INTERFACE DIRECTLY. When they do not, an item entirely different from that requested may be purchased. For example, take a look at the chart on the next page. The customer describes the item on the DD Form 1348-6, leaving one or two items of information blank. Research enters a limited description into the SBSS for verification purposes. Requisitioning forwards a barely legible DD Form 1348-6, with a demand card to contracting, where an attempt to find the item at its lowest cost is made. The vendor agrees to furnish a modified version, and the Air Force finally gets an entirely different item.
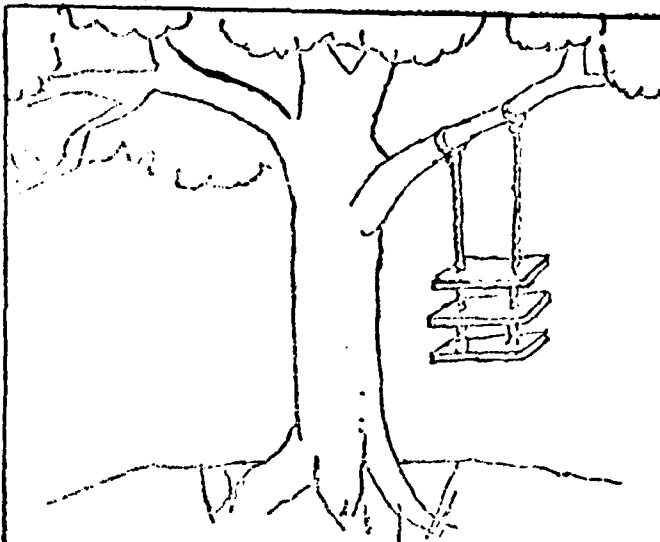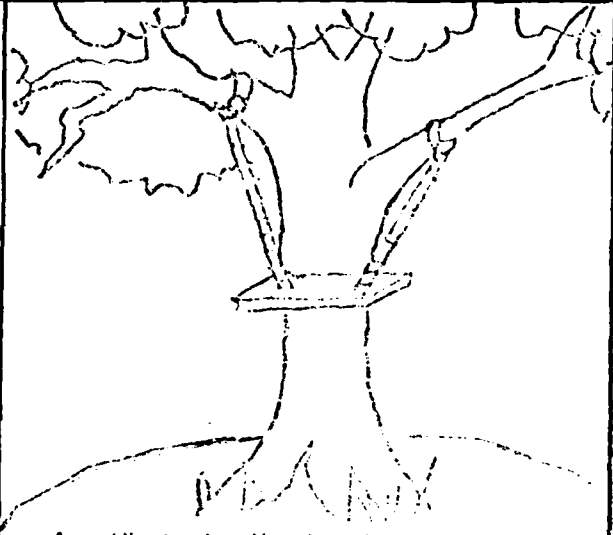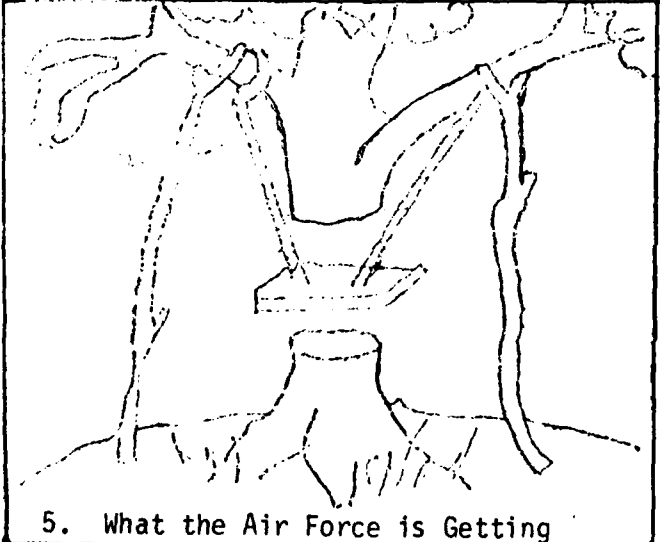
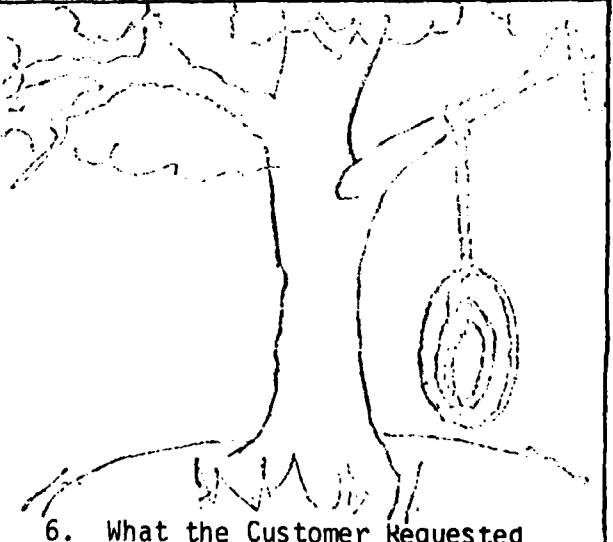1. As Research Saw It
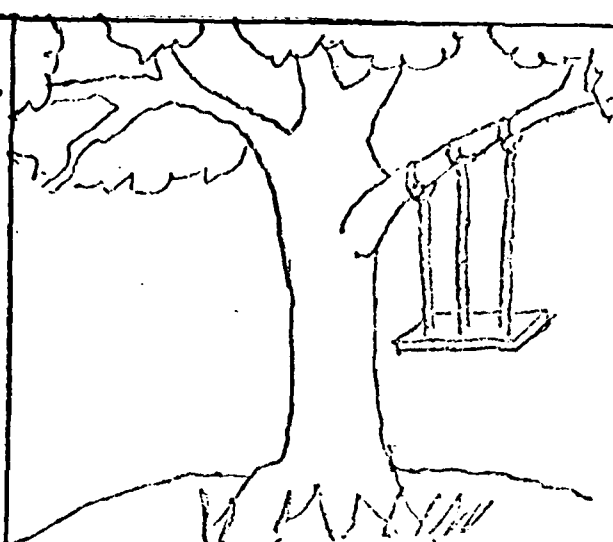
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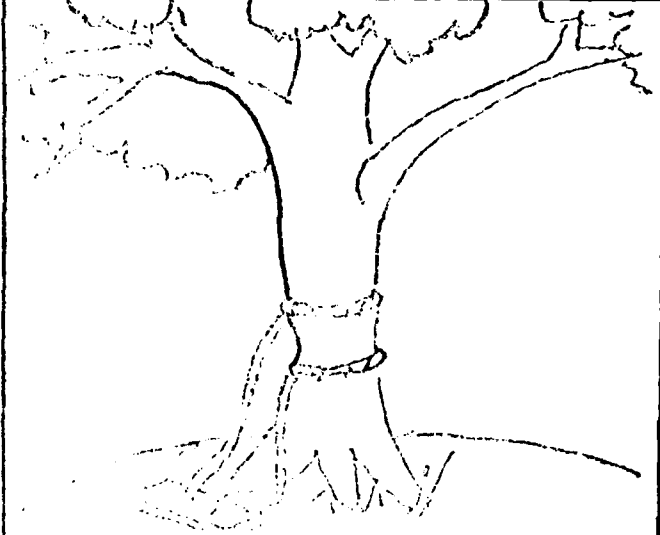
3. As Contracting Negotiated It

4. What the Vendor Agreed to Provide

5. What the Air Force is Getting

6. What the Customer Requested

After processing the request through Supply, Contracting's buyer may need additional information. At that point, direct customer-buyer contact should take place. We have removed Supply as the middleman in a number of applications: civil engineering, transportation, and medical materiel. Base funded non-medical items for the Medical Equipment Management Officer (MEMO) are no longer processed through Supply, unless assets are available in the warehouse. AFM 67-1, Vol II, Part Two, Chapter 8 states, "Duplicate handling of requisitions from the medical supply account to base supply and then to base contracting for local purchase of items not available in base supply or through the wholesale supply system will be avoided. The medical supply activity will forward these requisitions directly to base contracting."

3. Recommendations:

WE ARE NOT ADVOCATING customers forward requisitions directly to Contracting; however, direct customer-buyer contact when additional information is required by the buyer would reduce leadtime as well as provide more accurate information. If our recommendation for a single data base for item descriptive data is approved, requests for additional information should decrease. When there is such a request, the additional data could be added to the file when Contracting gets it from the customer.

WASH POST PURCHASES.

1. Findings:

a. WASH POST PROCUREMENTS, WHICH ARE ONE-TIME LESS THAN $200 PURCHASES, TAKE TOO MUCH TIME. The dollar limitation for wash post procurements is reviewed and adjusted periodically. To establish it is a one-time request, it is processed through the SBSS first. Typically, wash post requests are for items like rubber stamps, softball uniforms, or plants. Current procedures are burdened by excessive leadtimes. From March 1982 until April 1983 there were an estimated 659 wash post transactions at England AFB; average O&ST was 75 days, with a maximum time of 289 days. From March 1982 until November 1983, there were an estimated 288 wash post transactions at Little Rock AFB; average O&ST was 86 days, with a maximum time of 382 days [15]. During February 1984 there were 34,478 wash post requests Air Force-wide [10]. In at least one case, it took as long as 382 days to buy a rubber stamp through the current system; whereas a customer could buy it in a couple of days.

b. QUANTITY VARIANCE IS NOT AUTHORIZED FOR WASH POST PURCHASES. If the customer wants 10, and the vendor furnishes a minimum quantity of 12, the requisition is cancelled and must be redone.

2. Impact and Solutions.

a. Use innovative contracting methods such as imprest funds/ organizational checking accounts or credit cards to let the customer make their own one-time purchases. With imprest funds, the organization manages a cash fund for LP purchases. With a checking account, purchases would be made using checks having authorized signatures. A credit card would be used just like personal credit cards are used, with appropriate organizational controls and approval.

b. Extended delays occur for wash post items with a quantity variance. The customer must wait an additional 3 months to one year to get an item.

Allow the customer to accept or reject the quantity according to their need, provided the dollar limitation of $200, imposed by AFM 67-1, is not exceeded.

3. **Recommendations:**

    a. Authorize the customer to make wash post purchases.

    b. Allow the customer to approve quantity variance, provided the dollar limitation is not exceeded.

SOLE SOURCE/BRAND NAME PURCHASES.

1. **Finding:** For sole source/brand name procurements, Supply is certifying "No Other Source" for the customer, when there is no way for Supply to identify LP sources. After the request is processed through Supply and there is no wholesale source, then a local source must be found. FINDING LOCAL SOURCES IS NOT A SUPPLY TASK.

2. **Impact and Solutions.** Supply has been given a responsibility which it cannot accomplish. After processing the request through Supply, the customer should deal directly with Contracting. The decision to make a sole source or brand name purchase is a determination made by the customer and Contracting. Supply should have no involvement; the customer and Contracting should work this certification out together. Contracting customarily deals with local sources of supply.

3. **Recommendation:** Change AFM 67-1, Chapter 6, para 7, "Local Purchase Requisitions" from "the responsibility of validating sources rests with supply. . ." to "The responsibility of validating sources rests with contracting."

SUPPLY - CONTRACTING QUANTITY ADJUSTMENTS.

1. **Finding:** CONTRACTING LOCAL PURCHASE ADJUSTMENTS (LPA) ARE NOT ACCEPTED BY THE SBSS. The CIAPS/BCAS and SBSS program logic is different.

2. **Impact and Solutions.** At one Air Force base, the LPA with Quantity Purchase Variation Code "Q" caused the quantity to be reordered without supply submitting a new requisition. Supply received twice the quantity required. The Data Systems Design Office (DSDO) is working to resolve this problem.

3. **Recommendation:** Ensure SBSS and Contracting data systems treat Local Purchase Adjustments the same.

LP RECONCILIATION.

1. **Finding:** THERE ARE MORE EXCEPTIONS TO PROCESS USING LP THAN FROM OTHER SOURCES OF SUPPLY. Supply receives exceptions on the LP Reconciliation List, which must be researched. The Reconciliation Monitor, Stock Control Supervisor, Material Management Officer, and the Base Contracting Officer must review and sign the list monthly. Exceptions consist of revised Estimated Delivery Date (EDD), incorrect status, or other unmatched transactions. For example, for an estimated 3,000 LP requisitions per month, an average of 152 "BF" (no record of the document) exceptions are received at one base each month. For comparison, a smaller number of "BF" exceptions were received at

that base for all requisitions from the five Air Force depots [12]. There were from 3 to 10 times as many local "BF" exceptions for requisitions which did not leave the base than for requisitions going to Air Force depots all over the country. In an attempt to control the "BF" problem, one base required both Supply and Contracting to initial on a log thus creating additional workload and delays.

2. Impact and Solutions. When Supply receives a cancellation due to "no record of document," the item must be reordered if the request is still pending. Because we have to process exceptions, we increase the replenishment pipeline, thus lowering stockage effectiveness. An electronic interface between Supply and Contracting recommending retention/deletion of active items, item descriptive data, and annual requirements would simplify and expedite this workload.

3. Recommendation: Establish an electronic interface between Supply and Contracting. Process and reconcile exceptions electronically.

SUPPLY - CONTRACTING LEADTIME.

1. Findings:

a. THE SUPPLY STANDARDS REQUIRE RECEIPT OF THE LOCAL PURCHASE ITEM IN LESS TIME THAN THE CONTRACTING STANDARD ALLOWS FOR CONTRACTING TO PROCESS THE PURCHASE. Supply is required to deliver Priority Group 3 items obtained through the LP system within 31 days according to the Uniform Materiel Movement and Issue Priority System (UMMIPS). Contracting allows 40 days for Priority Group 3 for the administrative leadtime alone. Obviously, Supply cannot process the requisition, the vendor provide the item, and Supply receive the item in 31 days when Contracting takes 40 days. This is not realistic. Our research indicates almost half the LP requisitions exceed 175% of the time standard [5], and are not included in the order and ship time (O&ST) computation.

b. LP ORDER AND SHIP TIME (O&ST) USED IN SBSS STOCKAGE POLICY IS NOT EFFECTIVE. At some bases, only 55% of the requisitions are included in the computation [5].

c. CONTRACTING NEEDS A REQUIRED DELIVERY DATE (RDD) FOR LP PROCUREMENTS. The RDD is not always furnished to Contracting by Supply. In fact, only about 1 in 5 demands contain the date when the customer needs the item [9]. A customer might need an item in a shorter time than his organizational priority designator (PD) time frame. Contracting needs the RDD to deal with the vendor and follow up when necessary. If the vendor cannot provide the item within the time specified, Contracting should find a new vendor.

2. Impacts and Solutions.

a. Customers are frustrated because their property is not received when they need it. Supply and Contracting should set up time standards based on the method used to procure the item. The purpose of time standards is to establish a time frame when the item should be received. Responsiveness of the system is measured according to receipt of items within the time standards set. We should measure responsiveness according to replenishment times associated with realistic time standards for each contracting method. The

AFLMC will develop time standards according to contracting method when the Air Staff approves this policy.

b. If we stock an item based on 54 days O&ST, yet O&ST is really 90 days, the reorder point is too small. This creates a higher probability of stockout. We should stock LP items according to O&ST by contracting method.

c. The required date of delivery should be part of the criteria for selecting a vendor. If a customer has an urgent need for the item, a vendor that can meet the required date should be selected over one that cannot meet the delivery timeframe. This is true even if premium shipping charges must be paid. A similar situation exists for stock replenishment requisitions. A prolonged delivery can significantly cost the Air Force by inflating demand levels. Each LP requisition, including stock replenishment requisitions, should contain an RDD to tell Contracting when an item is actually needed. The required delivery date should be programmatically assigned based on Supply's and Contracting's time standards, unless overridden by the customer.

3. Recommendations:

a. Set realistic time standards by contracting method. Make Supply's and Contracting's standards agree.

b. Implement LP O&ST by contracting method as described in the AFLMC study entitled, "Local Purchase Order and Ship Time."

c. Make provision of an RDD mandatory for LP procurements, including stock replenishment requisitions.

CHAPTER 3

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS:

THE CURRENT LOCAL PURCHASING SYSTEM IS INEFFECTIVE AND INEFFICIENT. The current system lags today's technology, makes erroneous assumptions, and is wasting Air Force resources. To illustrate the failings of the current system, we summarize some of our findings.

The current system makes provisions for automating purchase orders and then restricts the criteria so much that few items qualify for automation.

The current system does not consider quantity discounts and, therefore, for example, would buy 100 items at $1 each rather than 110 items at $.90 each.

According to data extracted from the Supply Data Bank, the current system sometimes takes 6 months to purchase wash post items when they can be bought for the same price in one day.

The current local purchase system has more lost paperwork, more cancellations, and more requests for additional data than all the other sources of supply combined.

Significant improvements can be made to streamline local purchase procedures. Most of these improvements are simple, easy to implement and are long overdue.

RECOMMENDATIONS

To improve the local purchase system, we recommend a task group be formed to monitor implementation of our recommendations. The team would be composed of personnel from AFLMC/LGS and LGC, DSDO/LGS and LGC, and HQ USAF/LEYS and RDCL.

a. Establish policy to reduce contracting leadtimes by using shorter leadtime contracting methods whenever they can be applied. (OPR: HQ USAF/RDC; OCR: HQ USAF/LEY)

b. Establish procedures for annual requirements interface to take advantage of contracting methods with shorter leadtimes. (OPR: DSDO/CC; OCR: AFLMC/CC)

c. Establish policy to pursue quantity discounts and select the most economical order quantity. (OPR: HQ USAF/LEY; OCR: HQ USAF/RDC)

d. Provide the EOQ price break model to base-level users. (OPR: AFLMC/CC; OCR: DSDO/CC)

e. Establish policy and publish procedures for Contracting to provide minimum order amount (MOA) vendors and items to Supply as they occur to make minimum order amount purchases. (OPR: HQ USAF/RDC; OCR: DSDO/LGC)

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f. Establish procedures in AFM 67-1 for supply to review MOA vendors along with yearly requirements to consolidate orders. (OPR: DSDO/CC)

g. Develop a single descriptive data file of necessary characteristics accessible to both Supply and Contracting on a microcomputer such as the Z-100. When Phase IV interface capabilities are available consider putting the file on the Sperry 1100. (OPR: AFLMC/CC; OCR: DSDO/LGS)

h. Retain LP active item records in the SBSS in Contracting's files. Only delete item records from CIAPS or BCAS which have been deleted from the SBSS. (OPR: DSDO/CC)

i. Establish a procedure for direct customer-to-buyer contact after processing the request through Supply. (OPR: HQ USAF/RDC; OCR: HQ USAF/LEY)

j. Authorize the customer to make one-time purchases using imprest funds, organizational checking accounts or credit cards for wash post items. (OPR: HQ USAF/RDC; OCR: HQ USAF/LEY)

k. Change the responsibility for certifying sole source and brand name purchases from Supply to Contracting based upon customer justification. (OPR: HQ USAF/LEY; OCR: HQ USAF/RDC)

l. Synchronize SBSS and Contracting system logic. (OPR: DSDO/CC)

m. Establish an electronic Supply-Contracting interface for item descriptive data, exception data, item retention data and demand data. (OPR: DSDO/CC)

n. Establish policy to consider the Required Delivery Date as one of the factors in vendor selection. (OPR: HQ USAF/RDC)

o. Establish O&ST time standards according to contracting method. Make the use of Required Delivery Dates (RDDs) mandatory for LP requisitions, including stock replenishment requisitions. (OPR: HQ USAF/LEY; HQ USAF/RDC OCR: DSDO/LGS; AFLMC/LGS/LGC)

APPENDIX A

PART 1.   EOQ PRICE BREAK MODEL

PART 2.   IMPLEMENTATION PROCEDURE

APPENDIX A

PART 1

EOQ PRICE BREAK MODEL

1. The AFMAG "Spare Parts Acquisition" report estimated AFLC savings for one fiscal year using quantity discounts to be $5.3 million. While base-level savings may not approach that amount, there is potential for savings. Quantity discounts are available for larger quantity purchases, and these benefits should be applied at base level.

2. As noted above, some vendors offer price discounts for large purchases. As a hypothetical case, the price may be $5 per unit for 0 to 199 units, $4.75 for 200 to 499 units, and $4.50 per unit for 500 units or more. Assume the yearly requirement for this item is 200 units and that the "economic order quantity" computed by the SBSS is 100. The purchase cost for varying year requirement buys is shown in Table A-1.

Total Purchase Cost Number of Years Ordered	Total Purchase Cost Per Year
.5	$1000
1 or 2	$ 950
3	$ 900

Table A-1

Currently the SBSS would order, and Contracting would procure, 100, or .5 of a year's requirements. Obviously there are potential purchase cost savings if we order larger quantities. However, holding and ordering costs should also be considered. The AFLMC will develop an EOQ price-break model which will allow base-level users to make the best decision on how much to order.

3. We plan to build a microcomputer model that can be used for EOQ quantity discounts. This model will be user friendly and available through Small Computer Applications for Logistics Engineering (SCALE).

QUANTITY DISCOUNT

PART 2

SUGGESTED PROCEDURE

1. Supply

    a. Select stable demand LP items eligible for solicitation of quantity
discount prices according to demand data. (Items with multiple quantity
demand levels.)

    b. Annotate requests "QUANTITY DISCOUNT REQUESTED."

2. Contracting

    a. Solicit quantity discounts on annotated requests from vendors.

    b. Upon vendor's response, forward discounts for greater quantities to
supply.

3. Supply

    a. Evaluate quantity discount information by running the EOQ Price Break
model and return the decision to Contracting.

    b. Change the EOQ in the SBSS for items purchased with quantity
discounts.

4. Contracting. Purchase the EOQ selected by Supply's EOQ price-break
model to get the quantity discount.

APPENDIX B

YEARLY REQUIREMENTS LISTING

YEARLY REQUIREMENTS

(SUGGESTED PROCEDURE)

1. Furnishing yearly requirements to Contracting for selection of contracting methods with short leadtimes will reduce the time and cost of processing LP requests and result in significant savings for the Air Force. A coordinated Supply and Contracting effort is required:

    a. Supply

        (1) Select Federal Supply Groups (FSGs) with stable demands, such as electronic components, FSG 59 (see sample format attached).

        (2) Extract descriptive and yearly requirements data consisting of:

            (a) Stock Number

            (b) Description

            (c) Unit Price (UP)

            (d) Extended Annual Cost (UP X Annual Demands)

            (e) Number of orders (Annual Demands/EOQ)

            (f) Quantity Per Order (EOQ)

            (g) Cost of Order (EOQ X UP)

        (3) Furnish the descriptive and yearly requirements data to Contracting as a hard copy listing until electronic interface is established.

2. Contracting

    a. Use SBSS yearly requirements to:

        (1) Select contracting methods with short leadtimes.

LOCAL PURCHASE ITEMS W/DEMAND LEVEL GT ZERO

NOUN	ESTIMATED COST	ANNUAL QTY	ANNUAL COST
P/NCL65BI040JPE	5.00	2	10.00
P/N16758843-001	15.00	2	30.00
FUSE LINK 5 AMP	3.11	46	143.06
SWITCH KEY CYL LOCK	23.89	2	47.78
FLOW SWITCH FI-8S	279.10	4	1,116.40
PRESSURE CONTROLLER	71.17	2	142.34
P/N486869MRD02123	319.83	4	1,279.32
P/NA153FEPUB-XMI	784.09	2	1,568.18
SWITCH H O A	59.11	6	354.66
SWITCH SEAL	1.08	6	6.48
SWITCH AYVACUUM	18.15	2	36.30
CONNECTOR EXPLOSIOW	46.61	27	1,258.47
P/N 211XBX48S10	130.32	2	260.64
PLUG BANANA BLU NST	0.64	8	5.12
SEAL TIGHT, CONNECTR	0.81	6	4.86
CLAMP ADAPTER	4.89	10	48.90
PLUG CONNECTOR	1.59	840	1,335.60
PLUG BLACK NYLON	13.56	6	81.36
BLOK TRMNL PWR PLNT	54.43	2	108.86
BLOK TRMNL 7X1X1/4	54.43	2	108.86
TERMINA BLOCK AY	29.87	2	59.74
BLOK TRMNL 7X1X1/4	54.43	2	108.86
T/035R-1-341-4	6.14	2	12.28
TERMINAL BLOCK	0.93	82	76.26
TERMINAL LUG	0.60	130	78.00
TERMINAL 915073R1	0.27	232	62.64
TERMINAL 238101R1	0.39	148	57.72
TERMINAL LUG	0.09	44	3.96
SPLICE CONDUCTOR	0.04	4,400	176.00
PNEUMATIC RELAY	117.90	7	825.30
P/N 2101A1-24 VDC	215.25	4	861.00
RELAY TIME DELAY	110.77	6	664.62
HORN LOUD SPEAKER	58.64	24	1,407.36
TRANSFORMER BRACKET	25.96	20	519.20
CONDUIT OUTLET	1.06	7	7.42
CONDUIT SEALITE	0.80	90	72.00
COUPLING 1/2	0.58	58	33.64
BOX CON 1/2X1/2	0.28	276	77.28
BOX 3/4X3/4 STR	0.72	40	28.80
COVER JUNCTION BOX	0.12	70	8.40
COND MET 11/4EMT	5.81	22	127.82
CONDUIT METAL	8.69	42	364.98
J BOX 4 SQ 1 K	1.30	12	15.60
COND FLEX EMT 1/2	22.09	30	662.70
SWITCH BOX ROMAX	1.00	6	6.00
CONDUIT OUTLET	4.63	4	18.52
PLATE WALL ELECT	1.82	4	7.28
LEAD LUG SW	37.03	4	148.12
CABLE AY ELECTRIC	141.18	4	564.72
P/N MS25083-1CC6	0.50	20	10.00
TOTAL			15,013.33

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