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Report to the Chairman, Subcommittee on Readiness, Committee on Armed Services, House of Representatives

ARMY LOGISTICS

Use of Long Supply Assets in Depot-Level Repair Programs Could Reduce Costs

GAO
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National Security and
International Affairs Division

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November 16, 1989

The Honorable Earl Hutto
Chairman, Subcommittee on Readiness
Committee on Armed Services
House of Representatives

Dear Mr. Chairman:

As the former Subcommittee Chairman requested, we examined the Department of the Army's use of long supply inventories in depot-level repair programs. Our work revealed that the Army has not implemented its program to maximize the use of such inventories. This report provides several recommendations to the Secretary of the Army for improving the Army's management of its long supply inventories.

As arranged with your office, we are sending copies of this report to appropriate congressional committees, interested Members of Congress, and the Secretary of the Army. Copies will also be made available to other interested parties upon request.

This work was performed under the direction of Richard Davis, Director, Army Issues, who may be reached on (202) 275-4141 if you or your staff have any questions. Other GAO staff members who made major contributions to this report are listed in appendix III.

Sincerely yours,

Frank C. Conahan
Assistant Comptroller General

Executive Summary

Purpose

As of September 1988, the value of the Army's on-hand inventories of spares and repair parts that exceeded normal peacetime operations levels and war reserves was about $3.9 billion. Quantities that exceed authorized levels are commonly referred to as "long supply" assets. Once inventories exceed the Army's needs, it must decide whether to retain, dispose of, or find uses for this stock. Depot-level repair programs—which involve complex repair, such as engine overhaul or rebuilding performed at Army maintenance depots and by contractors—offer opportunities to use these stocks and save repair costs.

The former Chairman of the Subcommittee on Readiness, House Committee on Armed Services, requested GAO to determine whether the Army has a program to use long supply spares and repair parts in depot-level repair programs and, if so, whether the program is working effectively. The former Chairman also requested GAO to evaluate the economic advantages of using these assets in repair programs.

Background

The Army Materiel Command establishes supply policies and procedures for six inventory control points, which manage the Army's inventories and replenish them through procurement or the repair of unserviceable assets (assets that need to be repaired). These control points are required to ensure that asset quantities are kept at authorized levels.

Both the Department of Defense and the Army recognize that opportunities exist in depot-level repair programs to replace unserviceable assets with serviceable assets in long supply, rather than repair them.

In 1981, the Army developed an automated program, known as the "Report of Assets in Long Supply." Using this program, item managers were to identify long supply assets in serviceable condition and prevent unnecessary repairs by offering these assets for use in depot-level repair programs instead of repairing unserviceable assets. In doing so, the Army can efficiently use on-hand inventories, which have already been funded, and prevent unnecessary repairs.

Results in Brief

Although the Army has developed a program to identify long supply assets available for depot-level repair programs, the program is not effective because it lacks the means to match the large inventories of long supply assets to the thousands of depot repair programs. Establishing an effective program is further hindered by a long-standing conflict over the price Army depots should pay for long supply assets purchased

through the Army's stock fund. Because the Army has not had an effective program, it does not have records to determine lost economic benefit from prior years.

One inventory control point developed a means to match serviceable long supply assets to applicable depot repair programs. At GAO's request, using that methodology, five of the Army's inventory control points identified about $59.6 million in long supply assets that could have been used in fiscal year 1989 depot repair programs. GAO estimated that using these assets instead of repairing unserviceable assets would have enabled the Army to reduce its repair costs by about $14.9 million.

Principal Findings

Need for Automated Procedures

Although the "Report of Assets in Long Supply" has been available since 1981, it does not provide an automated means of matching long supply assets with the thousands of ongoing or scheduled repair programs. Inventory managers believe that manually matching assets to applicable repair programs is too time-consuming and is neither feasible nor practical in the current working environment. One inventory control point, the Missile Command, however, has developed an automated matching process that could possibly be used at the other inventory control points to provide Army-wide capability. The Army is currently reviewing the feasibility of implementing this automated system.

In the absence of an automated means, inventory managers, on occasion, have manually identified long supply assets and matched them to applicable depot repair programs. Even when this was done, Army depots had not requisitioned these assets from the inventory control points because of the Depot System Command's reluctance to pay for stock-funded assets at full unit prices. Currently, depots may obtain long supply assets purchased with procurement appropriations at no cost, but they must pay the full cost of assets purchased through the stock fund.

The Depot System Command believes that using stock-funded assets penalizes its depot operations by requiring them to pay more for the assets than the cost to repair them. In the Command's view, this situation reflects poorly on the depots' performance. Thus, the Depot System Command believes that inventory managers should issue stock-funded, long supply assets to depots at less-than-full unit price.

The Department of Defense, however, has stated that current policies governing the issue of stock fund material to depot repair programs are clear and do not pose a pricing conflict. It pointed out that current policies permit depots to recover any losses by simply adjusting next year's prices to maintain the integrity of the depots' industrial and stock fund systems. For this reason, it believes that inventory control points and depots should comply with existing regulations on the use of long supply assets.

Opportunities for Saving Repair Costs

None of the six inventory control points had been routinely screening their inventories to determine the potential for using long supply assets in depot repair programs. At GAO's request, however, five of the six control points screened their inventories and identified $59.6 million worth of long supply assets applicable to scheduled fiscal year 1989 depot-level repair programs.

GAO calculated that using the $59.6 million in long supply assets to replace assets scheduled for repair could have reduced repair costs by about $14.9 million. However, several offsetting costs must be considered in calculating net savings to the government, such as the costs to transport the assets to repair depots and the potential costs of delaying production lines while awaiting delivery of serviceable inventory. These costs and benefits cannot be evaluated until the Army identifies which long supply assets can be used in repair programs.

GAO's estimate of the opportunities to use long supply assets is conservative because it represents the minimum number of spare parts the Army projected for repair during the overhaul or rebuilding of the assets. The actual number of parts repaired is determined during the execution of the repair program. At that time, the Army can determine the actual use of long supply assets and reductions in repair costs.

Internal Controls Need Strengthening

The problems hindering the maximum use of long supply assets have been reported on several occasions but have not been corrected, in part, because the Army's internal control program does not ensure the prompt resolution of audit findings. For example, GAO reported in 1980 that a principal reason that the Army did not have a program to use long supply assets as government-furnished materiel was that an automated process designed to match assets with applicable repair programs

was not available. The Army Materiel Command did not identify material weaknesses in the use of long supply inventories in its Financial Integrity Act assessments for fiscal years 1987 and 1988.

The Army needs to strengthen its internal controls for correcting long-standing problems identified in audit reports and ensuring that inventory control points and depots comply with current policy and procedures for the effective management of long supply assets.

Recommendations

GAO recommends that the Secretary of the Army direct the Commander of the Army Materiel Command to take the following actions:

- Determine whether the automated means developed by the Army's Missile Command to match long supply assets to applicable repair programs will produce the desired results. If not, develop an effective automated procedure that will provide Army-wide capability.
- Require inventory control points and depots, at a minimum, to comply with current policies and procedures for maximizing the use of long supply assets applicable to repairs performed by contractors and by depots.

Other recommendations are included in chapter 3.

Agency Comments

In commenting on a draft of this report, Department of Defense officials concurred with its conclusions and recommendations, except for its recommendations concerning the conflict over the use of stock-funded assets and the cancellation of the development of an enhancement for the Report of Assets in Long Supply. These recommendations have been deleted from the report.

They also disagreed with GAO's estimate of $14.9 million in repair cost reductions. GAO's estimate of $14.9 million in repair cost reductions merely illustrates that opportunities exist for the Army to use long supply in depot repair programs.

These points are discussed in full in chapters 2 and 3, and the Department of Defense's comments are included as appendix II.

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Abbreviations

AAA	Army Audit Agency
AFAO	Approved Force Acquisition Objective
AMC	Army Materiel Command
AMCCOM	Armament, Munitions and Chemical Command
AVSCOM	Aviation Systems Command
CECOM	Communications-Electronics Command
DESCOM	Depot System Command
DOD	Department of Defense
GAO	General Accounting Office
ICP	inventory control point
MICOM	Missile Command
RAILS	Report of Assets in Long Supply
TACOM	Tank-Automotive Command
TROSCOM	Troop Support Command
TULSSA	The Utilization of Long Supply Selected Assets

Introduction

The Army's mission is to organize, equip, and train its forces for combat. To do so, it must ensure that it has sufficient assets in its supply system to meet the needs of its units in a timely fashion. The Army Materiel Command (AMC) administers the Army's supply system and establishes management policies and procedures for its six inventory control points (ICP). These ICPs estimate future demands for individual assets and try to ensure that stock is on hand when it is required so that the capability of Army forces is not hindered.

The basic challenge to the ICPs is to ensure that the proper amount of stock is on hand when it is required. If inventory levels are too low, the Army cannot satisfy customer demands. If inventory levels are too high, money is invested in stock that may not be needed, resources may be wasted, and other important needs may not be met. As a result, the Army could incur unnecessary costs to hold and store these inventories.

As of September 30, 1988, the Army's ICPs managed about $12.7 billion worth of secondary assets.[1] Of this amount, $8.4 billion represented serviceable assets, that is, assets that are new, repaired, or reconditioned and ready for issue to users. The remaining $4.3 billion represented unserviceable assets that is, assets awaiting repair or disposal.

Growth in Long Supply Inventory

The Congress and the Department of Defense (DOD) have continually expressed serious concern over supply management problems, which continue to plague the military services. Such problems deal with inadequate internal controls and accounting systems, inaccurate inventory records, and ineffective physical inventory controls. Congressional decisionmakers and defense managers have identified ways to address these long-standing problems, but additional problems, particularly inventory growth in secondary assets, have posed new challenges for supply management personnel.

For example, DOD's secondary asset inventory has grown from $43 billion in 1980 to $94 billion in 1987. About $27 billion of this increase represents growth in Approved Force Acquisition Objective (AFAO)

[1]Secondary assets generally include components for principal assets, i.e., spare parts, repair parts, and supplies. Principal assets include tanks, aircraft, vehicles, and weapon systems.

inventory, and an additional $19 billion represents growth in long supply assets. AFAO inventories include quantities to support ongoing operations and safety level and war reserve requirements. Quantities that exceed the AFAO are commonly referred to as "long supply."[2]

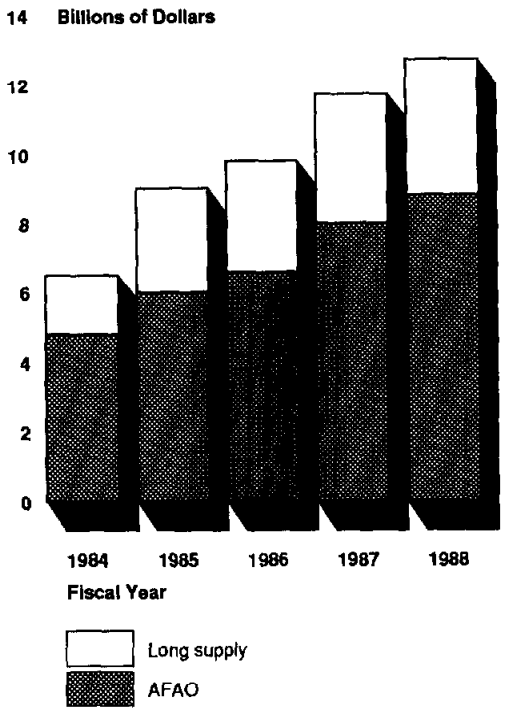
Long supply assets have no known present peacetime or wartime requirement. Some of the inventory will be used for contingencies or for future peacetime needs, but increases in long supply are considered undesirable growth. The growth in this category has renewed concerns over whether the services have more inventory than they need or can efficiently manage.

Like DOD's inventories, the Army's AFAO and long supply inventories have increased substantially in recent years. For example, the AFAO for secondary assets increased 83 percent, from $4.8 billion in fiscal year 1984 to $8.8 billion in fiscal year 1988. For the same period, secondary assets in long supply increased from $1.7 billion to $3.9 billion, or about 129 percent.[3] Figure 1.1 illustrates the relationship between the AFAO and long supply for secondary assets and the growth since fiscal year 1984.

[2]In DOD's response to our draft report, officials stated that the Department preferred the use of the term "inapplicable assets" to refer to quantities that exceed the AFAO. Whether referred to as long supply or as inapplicable assets, assets that exceed the AFAO satisfy no known current requirement.

[3]For this report, "long supply" represents assets on hand and available for use. Long supply actually includes both serviceable and unserviceable assets. The amount of long supply inventory was taken from the Army's quarterly Summary Dollar Stratification Reports, showing serviceable and unserviceable assets on hand and above the AFAO.

Figure 1.1: Growth in Long Supply and AFAO Assets



Note: Amounts include both procurement-funded and stock-funded assets.

Causes for Inventory Growth and Increases in Long Supply Assets

Numerous congressional investigations, Army studies, and GAO reports have identified problems with and causes of secondary inventory growth and increases in long supply. For example, in October 1987 the Deputy Secretary of Defense told the Senate Committee on Governmental Affairs that the increase in secondary inventory was due primarily to efforts to improve materiel readiness, the procurement of modern weapon systems, and the increase in the mission activities of current forces.

The Deputy Secretary of Defense noted that unconstrained growth of materiel stockpiles could be counterproductive to military capability; that is, such growth can divert funds, facilities, and personnel from modernization and expansion activities. He pointed out that DOD has several programs aimed at identifying the high growth areas and limiting growth that does not contribute to the modernization, readiness, and sustainability of U.S. forces.

DOD has identified additional reasons for the growth, such as (1) inflation, (2) rising prices, (3) greater lead times to procure items, (4) the elimination of older equipment, and (5) a moratorium on the disposal of excess assets. Army studies performed in October 1987 and March 1988 cited other factors, such as (1) inaccurate engineering estimates of failure factors for new weapons, (2) incomplete data for forecasting demand, (3) inaccurate or outdated overhaul consumption factors for depot work, and (4) human error.

We identified similar reasons in two recent reports.[4] We noted that 21 reports issued between 1974 and 1987 cited even more causes for excess inventory, such as the failure to cancel excess assets on order, the unnecessary procurement of materiel, and duplicate demands and inventories.

Use of Long Supply Assets in Army Depot Maintenance

The Army's depot-level maintenance programs[5] are intended to return unserviceable assets to like-new condition. However, at times it may be more efficient to substitute long supply assets that are already in serviceable condition for unserviceable assets scheduled for depot maintenance repair. Reductions in the serviceable long supply inventory represent the use of funds already invested. In addition, using assets in long supply could improve military readiness by reducing equipment turnaround time—the time required to exchange a unit's unserviceable equipment for serviceable equipment—because time would not be spent repairing the unserviceable equipment. For fiscal year 1989, the Army's estimated cost for depot maintenance was about $1.7 billion.

ICPs make decisions on the use of long supply after determining which principal assets or components need repair. For example, prior to the fiscal year in which repair actions are to be started, the ICPs (1) determine the number of assets to be repaired and (2) forecast the number of repair parts necessary to support repair actions. In addition, to support the repair programs, they attempt to ensure that all the parts are available when needed. To preclude the unnecessary repair of unserviceable assets, ICPs are required to identify and offer serviceable long supply assets as substitutes for those assets scheduled in repair programs.

[4]Army Inventory Management: Inventory and Physical Security Problems Continue (GAO/NSIAD-88-1, Oct. 1987) and Defense Inventory: Growth in Secondary Items (GAO/NSIAD-88-189BR, July 1988).

[5]Complex repairs are performed by contractors or at the Army's depots (as opposed to in the field) and include major overhauls or the rebuilding of principal items, such as engines and related parts and equipment.

The ability to make decisions on which principal assets or components to repair, when to schedule repair actions, and when long supply assets can be used as substitutes for repairs requires the extensive use of sophisticated automated systems. The Army's standard automated system—the Requirements Determination and Execution System—is used to calculate stock positions, compute requirements, and recommend whether inventory should be purchased or repaired to meet future demands. The ICPs can either accept or modify the automated repair recommendations if the item manager has more current or accurate supply information.

The ICPs also use the system for screening the inventory to (1) identify assets in long supply, (2) determine the type of asset and identify the inventory manager, (3) identify the type and compute the amount of funds used to purchase the inventory, and (4) identify assets as either reparable or consumable.

In 1981 the Army developed the "Report of Assets in Long Supply" (RAILS), an automated procedure for item managers to improve their management of long supply inventories. This procedure was designed to provide item managers the capability to identify all long supply assets in serviceable condition and to prevent unnecessary repair actions by offering these assets for use in depot-level repair programs rather than having the depots repair unserviceable assets.

The Depot System Command (DESCOM) assigns repair work loads to its depots. If the work can be accomplished, DESCOM issues fixed-priced repair orders to the performing Army depots who then generate production schedules. DESCOM requisitions materiel and repair assets from the ICPs to support approved repair programs. When long supply assets are substituted for unserviceable assets, fixed-price repair orders are not adjusted to compensate for the use of the long supply assets.

Inventories are purchased with either procurement appropriations or Army stock funds. A procurement appropriations asset is an asset that has a unit price of $5,000 or greater. The Army currently provides depots with assets purchased with procurement appropriations free of charge. In using these assets, the depots save operations and maintenance funds that the ICPs have provided to repair the unserviceable assets.

A stock-funded asset is an asset that has a unit price of less than $5,000 and has been purchased through the Army stock fund. The fund, which

operates as a revolving fund, provides interim financing for procurement from commercial sources and is reimbursed by Army customers, such as repair depots, who requisition and use stock-funded assets. The full unit price would normally be higher than the estimated cost to repair the unserviceable asset (resulting in higher material costs to the depot), but the Army requires depots to pay full unit prices for stock-funded assets used in their repair programs. In such cases, therefore, the depot's industrial fund, which also operates as a revolving fund, must absorb the cost difference between estimated repair costs and material costs to the depot.

For assets repaired under contract, DESCOM controls the funding, monitors the progress of the repairs, and certifies payment to the contractors. Contractors may send requisitions for materiel and repair assets directly to the ICPs. When long supply assets are issued as government-furnished materiel, payments to the contractors are reduced.

Objectives, Scope, and Methodology

The former Chairman of the Subcommittee on Readiness, House Committee on Armed Services, asked us to determine whether the Army had a program to use long supply inventory in depot-level repair programs and, if so, whether it was working effectively. Also, the Subcommittee Chairman asked us to evaluate the economies of reducing the inventory and avoiding unnecessary repair costs through the greater use of long supply assets in depot repair programs.

We performed work at AMC's Missile Command (MICOM), Huntsville, Alabama; at Army depots located in Anniston, Alabama, and Chambersburg, Pennsylvania; and at DESCOM headquarters, also located in Chambersburg. We interviewed supply and maintenance officials and item managers; reviewed pertinent DOD and Army regulations, policies, procedures, and internal studies; and analyzed MICOM's proposals to improve the use of long supply, including its automated program to enhance inventory management. At the depots, we also examined selected assets in long supply to test their availability for use in depot repair programs.

Because the Army had no records showing the current use, number, or availability of long supply assets offered to the depots or used in prior years, we requested the six ICPs to identify items that were to be repaired in the fiscal year 1989 depot repair program and were in long supply as of September 30, 1988. The six ICPs were the Armament, Munitions and Chemical Command (AMCCOM); the Aviation Systems Command (AVSCOM); the Communications-Electronics Command (CECOM);

MICOM; the Tank-Automotive Command (TACOM); and the Troop Support Command (TROSCOM).

After identifying the applicable inventory, we computed the potential repair cost reductions if the Army substituted long supply assets for assets to be repaired. We calculated the potential cost reductions in repairs using the Army's procedures for estimating the cost to repair assets. Additional details on our methodology for identifying assets and computing estimated repair cost reductions are contained in appendix I.

MICOM had developed a low-cost automated methodology for identifying long supply inventory applicable to scheduled depot repair programs. Because MICOM's methodology appeared to be a logical approach to matching long supply assets to depot repair programs, we considered it suitable for the purpose of our evaluation. Therefore, to enhance the timeliness and consistency of the data, we asked the ICPs to use MICOM's methodology. Five submitted data that generally complied with our request. We excluded TACOM from our analysis because it submitted data that had to be substantially qualified.

We used the Army's computer programs, reports, records, and statistics in making our review. We did not independently determine the reliability of the Army's statistical data on assets in long supply. To assess the adequacy of internal controls, we identified the pertinent requirements for managing secondary inventory in long supply. At each location we visited, we examined the most recent annual assurance statement available to determine whether material weaknesses in long supply management had been reported.

Our review was performed from October 1988 through March 1989 in accordance with generally accepted government auditing standards.

The Army Does Not Have an Effective Program for Using Long Supply Assets in Depot-Level Repair Programs

The Army's program to maximize the use of serviceable long supply assets in depot-level repair programs has not worked effectively, in part, because the ICPs do not have an automated means to match assets to repair programs. Performing this task manually would, in their view, be impractical and time-consuming. Had a successful program been in place at all the ICPs, the Army would have achieved substantial benefits, including (1) the use of inventory in which funds had already been invested and (2) reduced repair costs.

Army and DOD Policies Require Efficient Use of Long Supply Assets

According to Army policy, the basic premise in using long supply assets in depot repair programs is that the Army should not repair assets when new or reconditioned assets are in long supply. When serviceable assets in long supply are provided without charge to the depot or to contractors as government-furnished materiel, the Army prevents unnecessary repairs and reduces the need for operations and maintenance funds that it has budgeted to pay for repair costs. According to Army officials, substituting serviceable assets instead of repairing unserviceable assets can also reduce maintenance downtime for the Army's equipment and, in effect, improve military readiness.

In determining whether to substitute its long supply assets for unserviceable assets, the Army should consider factors such as (1) whether the assets are technically suitable for use and whether they are available in sufficient quantity and quality and (2) whether the use of these assets entails any offsetting costs such as increased costs for transporting or storing items.

Various DOD instructions and Army regulations stress the economic benefits of using long supply assets. For example, Department of Defense Instruction 4140.41, Government-Owned Materiel Assets Utilized as Government-Furnished Materiel for Major Acquisition Programs, dated July 26, 1974, stresses that managers must recognize the potential savings of the effective use of on-hand inventory. The instruction requires item managers to furnish high-cost long supply assets, when practicable, to contractors for use in production contracts for major systems and equipment.

In addition, AMC Regulation 700-42, Furnishing of Long Supply and Excess Stocks as Government-Furnished Materiel, dated January 27, 1981, requires item managers to furnish long supply assets to production contractors for use in the fabrication or rebuilding of materials whenever substantial net savings are attainable with acceptable risks. A

draft of Army Regulation 750-2, Maintenance of Supplies and Equipment - Wholesale Level Maintenance, dated May 1988, requires that item managers identify long supply assets for use in repair programs unless the depot repair program manager at the ICP specifically authorizes the repair of items instead of substituting the long supply assets.

In evaluating long supply management policy, we noted that one ICP requires its item managers to (1) identify long supply assets that will be requisitioned for use in repair programs and (2) review repair programs no later than 60 days prior to execution and cancel or reduce repairs when long supply assets are available.

A Means Is Lacking to Match Long Supply Assets to Depot Repair Programs

The ICPs have an automated procedure (RAILS) to identify assets in long supply. However, selecting assets for use in repair programs had to be done manually because an automated means of matching assets to scheduled repair programs has not been developed. As a result, none of the ICPs were using the RAILS system because they believed that the manual process of matching assets to repair programs was impractical and too time-consuming to perform in the current working environment.

In 1981, AMC developed RAILS, an automated procedure intended to be used by its ICPs to screen their inventories and (1) identify long supply assets in serviceable condition and (2) prevent repair actions on these assets. Our analysis showed that with RAILS the ICPs have the capability to identify serviceable assets in long supply at any time during the year. RAILS provides an automated list of serviceable assets together with the "next higher assembly" to which they are related. The next higher assembly is the asset for which a repair program has been established. From this list, the item managers, who have responsibility for managing long supply, can select assets that can be applied to repair programs and notify the depots to requisition them.

AMC officials told us that the RAILS procedure would be replaced with a modified system known as "The Utilization of Long Supply Selected Assets" (TULSSA). According to AMC officials, TULSSA improves RAILS because it excludes certain categories of assets from the RAILS report that do not apply to scheduled repair programs, such as obsolete assets. However, officials at AMC's Central Systems Design Activity told us that TULSSA, like RAILS, will not provide a means of matching assets to repair programs. DOD estimates that TULSSA will be fielded in early 1990.

During our review, MICOM personnel had recently developed automated procedures that provided its item managers with reports matching long supply assets with the repair programs to which they applied. The automated procedures were intended to help promote the use of long supply by eliminating the concerns about screening long supply assets manually. MICOM's Materiel Maintenance Technical Support Division developed these procedures at an estimated cost of about $19,700. At MICOM's suggestion, AMC is determining whether such a system should be incorporated by all the ICPs.

Issues Involved in Offering Stock-Funded Assets for Depot Repair Programs

In the absence of an automated means, ICPs, on occasion, have manually identified long supply assets and matched them to applicable depot repair programs. Even when this was done, Army depots had not requisitioned these assets from the ICPs because of DESCOM's reluctance to pay for stock-funded assets at full unit prices. DESCOM believed that its depots could repair unserviceable assets at less cost than the Army stock fund unit prices for the serviceable assets in long supply. DESCOM must pay for stock-funded assets at the asset's full unit price, unlike procurement appropriations assets, which are provided to the depots without charge. DESCOM believed that it had no incentive to requisition and use stock-funded, long supply assets because of the adverse impact on the depots' operating funds.

Under current operating procedures, the depot's industrial fund absorbs the cost difference between estimated repair costs and actual material prices. DESCOM believes that using stock-funded assets penalizes its depot operations by paying more for the assets than the cost to repair them. In DESCOM's view, this situation reflects poorly on the depots' performance.

DOD officials, however, have stated that current policies governing the issue of stock fund material to depot repair programs are clear and do not pose a pricing conflict. They pointed out that current policies permit depots to recover any losses by simply adjusting next year's prices to maintain the integrity of the depots' industrial and stock fund systems. For this reason, they believe that ICPs and depots should comply with existing regulations on the use of long supply assets.

Opportunities for Saving Repair Costs by Using Long Supply Assets

By eliminating or reducing the obstacles that have inhibited the use of long supply assets in depot-level repair programs, the Army could (1) maximize the use of existing inventories for which funds have already been invested and (2) reduce repair costs.

We asked the six ICPs, using the automated means MICOM recently developed, to screen their inventories and identify long supply assets applicable to scheduled fiscal year 1989 Army depot and contractor repair programs as of September 30, 1988. We requested the ICPs to identify the next higher assembly that was scheduled for repair and "match" the quantity of repair assets in long supply with the quantity required to support the repair of that assembly.

We received data from all six ICPs and were able to use the data from five of them. After we adjusted the data to ensure that it was comparable, we identified $59.6 million of long supply inventory that could have been used in fiscal year 1989 repair programs and computed $14.9 million in repair cost reductions if this inventory had been used in these programs. Additional details on asset identification and repair cost computations are contained in appendix I.

Table 2.1: Applicable Serviceable Inventory and Estimated Repair Cost Reductions for Fiscal Year 1989 Repair Programs

Dollars in millions

ICP	Serviceable inventory in long supply as of 9/30/88	Inventory applicable to repair programs	Estimated repair cost reductions
AMCCOM	$483.6	$0.9	$0.5
AVSCOM	484.9	27.8	1.1
CECOM	651.0	17.9	5.6
MICOM	278.7	4.8	1.5
TROSCOM	153.3	8.2	6.2
Total	**$2,051.5**	**$59.6**	**$14.9**

In evaluating the impact of using stock-funded, long supply assets on depot operations, we believe that several offsetting costs must be considered in calculating net savings to the government, such as the costs to transport the assets to repair depots and the potential costs of delaying production lines while awaiting delivery of serviceable inventory. These costs and benefits cannot be evaluated until the Army identifies which long supply assets can be used in repair programs.

Our estimate of opportunities to use long supply assets is conservative because it represents the minimum number of spare parts the Army projected for repair during the overhaul or rebuilding of the assets. The actual number of parts repaired is determined during the execution of the repair program. At that time, the Army can determine the actual use of long supply assets and reductions in repair costs.

Matching Assets to Applicable Repair Programs

Table 2.2, which is an excerpt from MICOM's report on repair plans for the TOW/Cobra weapon system, illustrates the concept of identifying the next higher assembly and matching serviceable assets in long supply with assets scheduled for repair. Also, it provides some insight into the type of data needed to identify the opportunities for the use of long supply in depot repair programs.

Sight Unit Stabilizer for the TOW/Cobra Weapon System

Table 2.2: Assets in Long Supply Matched to Repair Program for the Sight Unit Stabilizer

National stock number	Asset name	Quantity required	Quantity in long supply	Unit price
Next higher assembly				
1430-01-145-9751	Sight unit stabilizer			
Reparable asset				
1430-01-007-2780	Lens assembly	4	9	$238
1430-01-007-3777	Motor assembly, azimuth	4	27	633
1430-01-007-3782	Lens assembly	4	59	249
1430-01-007-3805	Resolver, mount assembly	4	78	817
1430-01-007-3806	Resolver assembly	7	135	1,016
1430-01-007-9548	Detector assembly	4	34	1,013
1430-01-007-9552	Filter-wheel assembly	4	43	281
1430-01-007-9559	Motor tachometer	37	9	495
1430-01-008-6250	Flip flop assembly	15	101	2,655
1430-01-014-5390	Circuit card assembly	4	39	768
1430-01-051-1447	Motor assembly	11	125	973
1430-01-102-4326	Shaft assembly	4	3	3,063
5961-01-007-2015	Diode assembly, wide	11	29	540

Determining the Reductions in Repair Costs

After the quantity of assets required to support the next higher assembly was matched to the quantity of assets available in long supply, our next step was to determine the Army's estimated costs to repair the unserviceable assets. That is, substituting long supply for unserviceable assets eliminates the need for repair actions, thus reducing repair costs. The Army generally estimates asset repair costs by multiplying the asset unit price by a percentage factor derived from either historical repair data or engineering estimates. Given these factors, we determined repair cost reductions by multiplying the number of long supply assets that could be substituted for unserviceable assets by the repair cost percentage factor.

To illustrate our computations, we selected three data elements from MICOM's repair program for the TOW/Cobra weapon system shown previously, namely, the reparable asset, the unit price, and the number of assets in long supply that could be substituted. Table 2.3 shows that using long supply assets instead of repairing unserviceable assets would reduce repair costs by about $35,900.

Table 2.3: Reductions in Repair Costs for the Sight Unit Stabilizer

National stock number	Unit price	Cost factor	Estimated repair costs	Quantity required	Total savings
1430-01-007-2780	$238	.40	$95.20	4	$380.80
1430-01-007-3777	633	.40	253.20	4	1,012.80
1430-01-007-3782	249	.40	99.60	4	398.40
1430-01-007-3805	817	.40	326.80	4	1,307.20
1430-01-007-3806	1,016	.40	406.40	7	2,844.80
1430-01-007-9548	1,013	.40	405.20	4	1,620.80
1430-01-007-9552	281	.40	112.40	4	449.60
1430-01-007-9559	495	.40	198.00	3[a]	594.00
1430-01-008-6250	2,655	.40	1,062.00	15	15,930.00
1430-01-014-5390	768	.40	307.20	4	1,228.80
1430-01-051-1447	973	.40	389.20	11	4,281.20
1430-01-102-4326	3,063	.38	1,163.94	3[a]	3,491.82
5961-01-007-2015	540	.40	216.00	11	2,376.00
Total					**$35,916.22**

[a]The quantity required was adjusted to account for two repair programs that required more assets than were available in long supply

In this illustration, the actual use of assets in long supply instead of repairing assets would reduce repair costs. The unserviceable assets could be added to long supply or disposed of, depending upon the Army's future needs.

Conclusions

The Army's program to maximize the use of long supply in depot-level repair programs has not been effective. Because the ICPs had no automated means to do so, they have not been screening their inventories to identify assets in long supply that could replace assets scheduled for repair. DESCOM was reluctant to use long supply assets at its depots because it believed that depots could repair unserviceable assets at less cost than the Army stock fund unit prices for the serviceable assets in long supply.

To implement the RAILS program as intended, the Army needs to provide the automated means necessary to match assets in long supply to applicable repair programs. MICOM has already automated the process, and the Army needs to determine whether this process provides the ICPs with this automated capability.

Without an effective program to use long supply in depot-level repair programs, the Army has lost opportunities to maximize the use of inventory for which funds have already been invested. Actual data on their use in repair programs was unavailable, but on the basis of our analysis, we estimate that serviceable long supply assets worth millions of dollars could be available for use in repair programs. If this inventory were used, the Army could reduce repair costs and possibly improve military readiness by reducing the time it takes to repair assets.

Recommendations

We recommend that the Secretary of the Army direct the Commander of AMC to take the following actions:

- Determine whether the automated means developed by the Army's Missile Command to match long supply assets to applicable repair programs will produce the desired results. If not, develop an effective automated procedure that will provide Army-wide capability.
- Require inventory control points and depots to comply with current policies and procedures for maximizing the use of long supply assets applicable to repairs performed by contractors and by depots.

Agency Comments and Our Evaluation

In commenting on our draft report, DOD officials agreed with our recommendations to (1) determine whether the Army can use the automated procedure developed by the Missile Command to match long supply assets with applicable repair programs and (2) comply with current policies and procedures for maximizing the use of long supply. They said that the Army is testing MICOM's procedure to evaluate whether it should

be adopted as a standard process for all the ICPs. The Army's test is scheduled to run through fiscal year 1990.

DOD officials did not agree with our recommendation to adjust fixed-price repair orders to minimize the conflict over the use of stock-funded assets. Their position was that current policies on the price depots should pay for stock-funded assets are clear and do not pose a pricing conflict. They believed that, under current policies, adjustments are made to the next year's prices to account for a fund's profit or loss in the preceding year. They pointed out that these policies permit depots to recover any losses by simply adjusting next year's prices to maintain the integrity of the depots' industrial and stock fund systems. For this reason, ICPs and depots should be complying with existing regulations on the use of long supply assets.

We agree with DOD's position. It was not our intention to change the policies and procedures for stock-fund or industrial fund operations. We simply suggested adjusting fixed-price repair orders as a way of resolving the conflict between DESCOM and the ICPs over the use of stock-funded assets in depot repair programs. The intent of our suggestion is met if the Secretary of the Army directs AMC, ICPs, and depots to comply with existing program requirements for using long supply in depot repair programs. Therefore, we have deleted our recommendation on the need to resolve the conflict over the use of stock-funded assets.

DOD officials also did not agree that TULSSA should be canceled because it is scheduled to be fielded in the first quarter of fiscal year 1990 and it will have applications other than repair purposes. Our rationale for recommending that the Army cancel TULSSA was that it does not provide the means to match long supply assets with depot repair programs or screen them for other purposes. Given that the Army plans to use TULSSA for other purposes, we have therefore deleted the recommendation in our report that TULSSA be canceled.

DOD officials agreed that the Army should maximize the use of its long supply inventory and that substituting serviceable long supply assets for assets scheduled for repair could reduce repair costs and maintenance downtime. However, they did not agree with our estimate of $14.9 million in repair cost reductions if the $59.6 million in long supply had been used in fiscal year 1989 repair programs. They commented that we had not offset our estimate with the increased costs of relocating stock or considered the potential costs of delaying production lines while awaiting the delivery of long supply. They agreed that the costs

and benefits cannot be fully evaluated until the Army identifies which items in long supply can be used in its repair programs.

Our estimate of $14.9 million in repair cost reductions merely illustrates that opportunities exist for the Army to use long supply in depot repair programs. Because the Army had no historical data on the use of long supply assets, we (1) took a "snapshot" of the opportunities that existed as of September 30, 1988, and (2) computed repair costs assuming that all the assets would be used.

It was not our intention to suggest that the $14.9 million in repair cost reductions was exact. In our draft report, we said that offsetting costs would have to be considered and, as DOD agreed, actual cost reductions could not be determined until the Army identified which assets would be used in the repair programs. We continue to believe that the maximum use of long supply in depot repair programs offers significant opportunities to reduce repair costs, reduce equipment turnaround time, and make the best possible use of stock where inventory funds have already been invested.

Internal Controls Can Be Strengthened by Prompt Resolution of Program Deficiencies

Prior GAO and Army Audit Agency (AAA) reports and an AMC study have presented many of the issues described in chapter 2. The Army has taken some actions to improve the management of its long supply inventories, such as developing RAILS to identify these kinds of assets and establishing a committee to develop ways of improving the use of long supply. However, the results of our review indicate that little effective action has been taken to improve the way long supply assets are used in repair programs.

Recurring Deficiencies Have Not Been Corrected

An important step in strengthening internal controls is to verify that planned actions have been implemented as envisioned and that the completed corrective actions have been effective.[1] During our review, we found that prior audit reports and studies had documented that the Army had not implemented its policy and procedures for maximizing the use of long supply assets. Although improved inventory identification procedures have been developed, the Army has not taken prompt action to automate the matching of applicable assets with repair programs or to resolve the conflict over the use of stock-funded assets.

The needed corrective actions have been thoroughly identified in previous reports. In not taking them, the Army has lost opportunities to maximize its use of long supply inventories. The following are several examples that illustrate this condition:

- In 1980, we reported that one ICP was screening its inventory and had successfully used long supply to reduce the amounts paid to contractors.[2] During fiscal years 1976 through 1979, it had used $4 million in assets as government-furnished material in procuring Cobra helicopters. The other ICPs were not screening their long supply inventories, as required, because they had no computer software programs to identify assets applicable to depot repair programs. They believed that to manually identify applicable assets was too time-consuming and impractical.

  In the 1980 report, we pointed out that standard automated procedures were needed for the ICPs to use in screening their inventories. Because of past delays in developing such procedures, we urged the Army to establish reasonable time frames to develop and implement the procedures. AMC developed RAILS in 1981 for its ICPs to use in identifying long supply

[1]Standards for Internal Controls in the Federal Government, GAO Accounting Series, 1983.

[2]The Army Should Increase Its Efforts to Provide Government-Furnished Materiel to Contractors (LCD-80-94, Aug. 1980).

inventories but did not provide the automated means for matching assets in long supply with contractor and depot repair programs.

- In 1981, AAA stated that MICOM had programmed $2.4 million in fiscal year 1981 to repair secondary assets that were in long supply. The causes were that (1) procedures to identify assets in long supply that were programmed for repair had not been automated and (2) controls to ensure that repair programs were reviewed to verify the need for assets scheduled for repair were inadequate.

  MICOM agreed with AAA's recommendations to review its repair programs, to cancel programs in cases when repair was not needed, and to establish controls to ensure that periodic reviews were made of repair programs. In AAA's follow-up audit in June 1987, it found, as it had previously found, that MICOM had about $4.3 million programmed in fiscal year 1987 for depot repair on assets that were in long supply. Again, MICOM agreed to review all of its repair programs and cancel requirements for assets in long supply.

- In 1986, an AMC committee, which was studying ways to improve long supply management, summed up issues that hindered the Army in implementing an effective program for using these assets in depot repair activities. The committee reported that (1) even with RAILS, the process for selecting applicable assets was a manual one and, therefore, too time-consuming and (2) paying the full unit prices for stock-funded assets penalized DESCOM's depot operations. It recommended that RAILS be automated and that stock-funded assets be issued to the depots free or at reduced prices. At the time of our review, AMC had not yet taken action on either recommendation.

Management Commitment Needed to Enforce Compliance With Existing Policy and Guidance

Existing Army policy and guidance and draft Army Regulation 750-2 appear sufficient to promote the maximum use of long supply inventories in depot repair programs. Problems concerning the manual selection of assets applicable to repair programs and the use of stock-funded assets have sidetracked the program and should be resolved. Resolving these problems will not, however, guarantee an effective program unless the ICPs and DESCOM comply with the policy and guidance and commit themselves to an effective program.

The Army is annually required to review and report on weaknesses in its internal control systems.[3] Weaknesses in controls are considered material when, among other things, they exist in a majority of agency components and risk or result in the actual loss of at least $10 million. AMC's assessment of internal controls for fiscal years 1987 and 1988 did not identify material weaknesses in the use of long supply inventories in depot-level repair programs. However, AMC officials said that, through existing regulations and headquarters directives, the ICPs had adequate guidance on Army requirements for managing their inventories of long supply and that noncompliance with this guidance indicated an apparent breakdown in the internal controls process.

The officials indicated that enforcing compliance would be difficult unless top management at the ICPs were committed to implementing an effective program. They added that, in managing their resources, top management can emphasize programs in which they are interested and, in effect, neglect programs in which they have little or no interest or have insufficient technical support, e.g., personnel and automation.

At MICOM, where we made an in-depth test of internal controls related to the use of long supply, local supplements to existing regulations, policy directives, and handbooks appeared to contain clear instructions for the seven offices that had responsibilities for managing long supply. However, five of the offices, which had the responsibility for identifying assets to be offered to the depots, were not complying with the guidance because they took no action after receiving the RAILS report. Supply management officials at MICOM and at the other ICPs told us that compliance was predicated upon AMC's providing solutions to the problems of manual asset identification and the use of stock-funded items.

Conclusions

The Army does not have the program it envisioned to maximize the use of long supply assets in depot repair programs. Although the Army has established guidance for the program, the long-standing problems with manual processing and the use of stock-funded items show that the Army has not corrected the problems that prior audits have identified. Timely and responsive action to correct these audit deficiencies is required by internal control standards. Thus, the Army's resolution of

[3]The Federal Managers' Financial Integrity Act of 1982 (P.L. 97-255) requires agency heads to report annually on whether the agency's system of internal accounting and administrative control meets the act's requirements.

these problems should have been prompt and the corrective actions adequately monitored to ensure that the improvements needed for an effective program were made. In order to ensure that a disciplined internal control system is maintained, the Army must require compliance with its policy and procedures. We believe that the Army needs to consider the internal control problems in this chapter for inclusion as weaknesses to be reported under the Financial Integrity Act.

Recommendations

We recommend that the Secretary of the Army direct the Commander of AMC to take the following actions:

- Strengthen internal control procedures on the use of long supply inventories in depot-level repair programs by (1) monitoring the extent to which corrective actions are responsive to audit findings and recommendations and (2) conducting on-site management reviews to ensure that ICPs and depots are complying with procedures for maximizing the use of long supply assets in depot-level repair programs.
- Report the deficiencies in the use of long supply assets as a material weakness in the Army's system of internal controls.

Agency Comments and Our Evaluation

DOD officials agreed with our recommendations. They stated that, when testing is completed on the automated screening of long supply assets, AMC will instruct its ICPs and depots on areas requiring further monitoring under the internal control program. The Army plans to perform policy compliance reviews at its ICPs and depots to evaluate their use of long supply assets in depot repair programs. Also, the Army plans to report the deficiencies in screening and using long supply assets as internal control weaknesses until the deficiencies are corrected.

Methodology for Matching Applicable Long Supply Inventory to Fiscal Year 1989 Repair Programs and Computing Estimated Repair Costs

To determine the potential for using long supply inventories in depot-level repair programs, we requested the ICPs to screen their inventories and match assets in long supply with repair programs scheduled for fiscal year 1989. MICOM had already developed an automated procedure for matching such assets to applicable programs. Therefore, we provided the ICPs with MICOM's logic and methodology for automated matching to assist in their inventory screening and asset identification. Once they had identified assets with potential use in depot-level repair programs, we adjusted the results to ensure that (1) all assets were reparable (as opposed to consumable) and (2) the numbers of assets required for the repair programs did not exceed the numbers of assets available in long supply.

After making these adjustments, we computed the reductions in estimated repair costs. The first step in computing estimated reductions was to determine the cost for repair (the unit-funded cost for each asset scheduled for repair). The unit-funded cost is calculated by multiplying an asset's unit price by the ICP's repair cost percentage ("the unit-fund percentage" is computed on the basis of historical data or engineering estimates). For example, an asset valued at $3,862.50 would have an estimated repair cost of $1,351.88 ($3,862.50 x 0.35 [unit-fund percentage]). We then determined total reductions by multiplying the estimated repair costs by the number of assets that could be substituted for the unserviceable assets scheduled for repair. The ICPs provided the repair cost percentages they use in budgeting for depot-level repair programs. Table I.1 summarizes the results of our analyses.

Table I.1: Estimated Repair Reductions Resulting From Using Long Supply Assets

ICP	Serviceable assets in long supply as of 9/30/88	Applicable inventory	GAO adjusted inventory	Estimated reductions in repair costs
AMCCOM	$483.6	$0.7	$0.9	$0.5
AVSCOM	484.9	31.1	27.8	1.1
CECOM	651.0	17.9	17.9	5.6
MICOM	278.7	7.0	4.8	1.5
TROSCOM	153.3	8.5	8.2	6.2
Total	**$2,051.5**	**$65.2**	**$59.6[a]**	**$14.9**

[a]We adjusted the ICPs' applicable inventory data for the following reasons: (1) long supply assets allocated in fractional quantities to repair programs were rounded up to the nearest whole number; (2) nonreparable (consumable) assets were subtracted from the applicable inventory of reparable assets; and (3) assets that were required for repair programs and exceeded the quantity available in long supply were rounded down to equal the total quantity available.

Comments From the Department of Defense

Note: GAO comments supplementing those in the report text appear at the end of this appendix.

ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, D.C. 20301-8000

PRODUCTION AND LOGISTICS

September 14, 1989

(L/SD)

Mr. Frank C. Conahan
Assistant Comptroller General
National Security and International
Affairs Division
U.S. General Accounting Office
Washington, DC 20548

Dear Mr. Conahan:

This is the Department of Defense (DoD) response to the General Accounting Office (GAO) draft report, "MILITARY LOGISTICS: Use of Long Supply Assets in Army Depot-Level Repair Programs Could Reduce Costs," dated July 18, 1989 (GAO 393300). The Department concurs with the overall thrust of the draft report--that when practical and economical, serviceable inapplicable inventory should be used rather than repairing unserviceable inventory. The DoD disagrees, however, with the findings and recommendations concerning pricing policy, the estimated amount of the potential cost avoidance, and curtailment of current systems development.

The detailed DoD comments on the report findings and recommendations are provided in the enclosure. The Department appreciates the opportunity to comment on the draft report.

Sincerely,

R.L. Beckwith
Major General, USMC
Military Deputy to the ASD(P&L)

Enclosure

GAO DRAFT REPORT - DATED JULY 18, 1989
(GAO CODE 393300) OSD CASE 8062

"MILITARY LOGISTICS: USE OF LONG SUPPLY ASSETS IN ARMY DEPOT-LEVEL REPAIR PROGRAMS COULD REDUCE COSTS"

DEPARTMENT OF DEFENSE COMMENTS

* * * * *

FINDINGS

- **FINDING A**: **Growth in Long Supply Inventory**. The GAO observed that the Congress and the Department of Defense have continually expressed concern over supply management problems, which continue to plague the Military Services. The GAO noted that congressional decisionmakers and Defense managers have identified ways to address many long-standing supply problems, but additional problems--particularly inventory growth in secondary assets--have posed new challenges for supply management personnel.

  The GAO cited the example of the DoD secondary asset inventory, which has grown from $43 billion in 1980 to $94 billion in 1987. The GAO estimated that (1) about $27 billion of this increase represents growth in Approved Force Acquisition Objective inventory and (2) an additional $19 billion represents growth in long supply assets. The GAO explained that Approved Force Acquisition Objective inventories include quantities to support ongoing operations and safety level and war reserve requirements. The GAO further explained quantities that exceed the Approved Force Acquisition Objective are commonly referred to as "long supply."

  The GAO found that, like the overall DoD inventories, the Army long supply inventories have increased substantially in recent years. The GAO cited, as an example, the Approved Force Acquisition Objective for secondary assets for the Army--which increased 83 percent, from $4.8 billion in FY 1984 to $8.8 billion in FY 1988. The GAO noted that during the same period, secondary assets in long supply increased from $1.7 billion to $3.9 billion, or an increase of about 129 percent. (pp. 2-3, pp. 12-14/GAO Draft Report)

Now on pp. 2, 8-10.

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Enclosure

DOD Response: Partially concur. The DoD does not use or define the term "long supply," because it erroneously implies unnecessary inventories. Rather, the Department prefers the term "inapplicable assets" to refer to quantities that exceed the Approved Force Acquisition Objective, i.e., material that must be purchased to satisfy known budget year requirements. Most inapplicable inventory is used to meet requirements, but not necessarily during the current budget year.

- **FINDING B**: **Causes for Inventory Growth and Increases in Long Supply Assets**. The GAO pointed out that numerous congressional investigations, Army studies, and GAO reports have identified problems with and causes of secondary inventory growth and increases in long supply. The GAO referred to an October 1987 statement by then Deputy Secretary Taft to the effect that unconstrained growth of material stockpiles could be counterproductive to Military capability by diverting funds, facilities and personnel from modernization and expansion activities. The GAO noted the Deputy Secretary further testified that the Department of Defense had several programs aimed at identifying the high growth areas and limiting growth that does not contribute to the modernization, readiness, and sustainability of U.S. forces.

  The GAO found that the DoD had identified additional reasons for the growth, such as (1) inflation, (2) rising prices, (3) greater lead times to procure items, (4) the elimination of older equipment, and (5) a moratorium on the disposal of excess assets. The GAO reported that Army studies performed in October 1987 and March 1988 cited still other factors for the inventory growth, such as:

  - inaccurate engineering estimates of failure factors for new weapons;
  - incomplete data for forecasting demand;
  - inaccurate or outdated overhaul consumption factors for depot work; and
  - human error.

  During its audit, the GAO observed additional causes for excess inventory--such as (1) the failure to cancel excess assets on order, (2) the unnecessary procurement of materiel, and

Now on pp. 10-11.

(3) duplicate demands and inventories. (p. 2, pp. 14-15/GAO Draft Report)

DOD Response: Concur. Valid reasons exist for most of the growth in inventory and the inapplicable stock. In addition to the reasons addressed in the draft report, force modernization, improved stockage for required parts, life-of-type buys, and economic production buys, also contributed to the growth.

As part of the Army's force modernization initiative, new weapons were fielded in the active Army, and older systems were transferred to Reserve forces and National Guard, held for war reserve, or retained for Foreign Military Sales. During the initiative, the number of Army managed items increased by 18%, from 338,000 to 399,000. Logistics support for the new and displaced systems added to the inventory growth.

Improving stockage for required parts at the retail level significantly increased material readiness. Since fiscal year 1987, the Army has consistently met or exceeded its Full Mission Capable goal of 90%. Because requirements must be determined based on probabilities, not certainty, a cost of improved readiness was increased inapplicable inventory.

Life-of-type buys for items which the manufacturer discontinued production and purchases to take advantage of economic production quantities, increased inventories in excess of the budget year requirements and are categorized as inapplicable inventory.

The Department has an aggressive program for reducing unnecessary inventory growth, which includes: cataloging actions to eliminate duplicate items; revised policy on retention and inventory stratification; revisions to requirements computation models; reduction in leadtimes; transition to Weapon Systems Management; and Automated information system modernization to provide more accurate and timely data for decisions.

- **FINDING C**: **Use of Long Supply Assets in Army Depot Maintenance**. The GAO explained that the Army depot-level maintenance programs are intended to return unserviceable assets to like-new condition. The GAO noted, however, that at times, it may be more efficient to substitute long supply assets (which are already in serviceable condition) for unserviceable assets scheduled for repair during depot maintenance. The GAO pointed out that

reductions in the serviceable long supply inventory represent the use of funds already invested. The GAO further pointed out that using assets in long supply could improve military readiness by reducing equipment turnaround time because time would not be spent repairing the unserviceable equipment.

The GAO observed that the inventory control points make decisions on the use of long supply after determining which principal assets or components need repair. According to the GAO, prior to the fiscal year in which repair actions are to be started, the inventory managers (1) determine the number of assets to be repaired and (2) forecast the number of repair parts necessary to support repair actions. The GAO reported that the inventory managers attempt to ensure that all the parts are available, when needed--to support the repair programs and to preclude the unnecessary repair of unserviceable assets. The GAO also reported that the managers identify and offer serviceable long supply assets as substitutes for those assets scheduled in repair programs.

The GAO described the Army "Report of Assets in Long Supply," an automated procedure for use by inventory managers. The GAO explained that the automated procedure is designed (1) to improve management of long supply inventories, (2) to provide the item manager the capability to identify all long supply assets in serviceable condition and (3) to prevent unnecessary repair actions by offering these assets for use in depot-level repair programs. (pp. 2-3, pp. 16-18/GAO Draft Report)

Now on pp. 2, 11-13.

DOD Response: Concur.

- **FINDING D: DoD and Army Policy Requires Efficient Use of Long Supply Assets**. The GAO observed that the basic Army premise in using long supply assets in depot repair programs is that the Army should not repair assets when new or reconditioned assets are in long supply. The GAO further observed that, when serviceable assets in long supply are provided without charge to the depot or to contractors as Government-furnished materiel, the Army prevents unnecessary repairs and reduces the need for operations and maintenance funds that it has budgeted to pay for repair costs. The GAO cited various statements by Army officials that substituting serviceable assets instead of repairing unserviceable assets can also reduce maintenance downtime for the Army equipment and, in effect, improve military readiness. The GAO

concluded that, in determining whether to substitute its long supply assets for unserviceable assets, the Army should consider the following factors:

- whether the assets are technically suitable for use and whether they are available in sufficient quantity and quality; and

- whether the use of these assets entails any offsetting costs such as increased costs for transporting or storing items.

(The GAO also cited several DoD Instructions and Army regulations that stress the economic benefits of using long supply assets.) (pp. 3-4, pp. 21-23/GAO Draft Report)

Now on pp. 2, 15-16.

DOD Response: Concur.

- **FINDING E**: **A Means Is Needed to Match Long Supply Assets to Applicable Repair Programs**. The GAO observed that, in 1981, the Army Materiel Command developed a report, "Report of Assets in Long Supply"--an automated procedure to be used by Army inventory control points to screen their inventories, as follows:

  - identification of long supply assets in serviceable condition; and

  - prevention of repair action on those assets.

  The GAO noted that, with the automated procedure, the inventory managers have the capability to identify serviceable assets in long supply at any time. The GAO further noted that the automated procedure provides inventory managers with an automated list of serviceable assets, together with the next higher assembly to which they are related.

  The GAO found, however, that the item managers are not using the list to manage long supply. The GAO referred to a statements by an Army Missile Command officials that, although the procedure provided a list of all the thousands of assets in long supply, the list had to be manually matched to thousands of items in repair programs. According to the GAO, these officials considered this process too labor-intensive, too time-consuming, and neither practical nor feasible. In discussing the issue with

Army Materiel Command personnel, the GAO learned that the central design activity for automated data processing systems was planning to modify the current procedure to allow the inventory managers to exclude certain categories of assets from the current long supply report that do not apply to scheduled repair programs. The GAO observed, however, that the new procedure still will not provide a means of matching assets to repair programs.

The GAO further found that the Army Missile Command had already taken the initiative to improve the use of the long supply report by developing an automated procedures that provides its item managers with reports matching long supply assets with the repair programs to which they applied.

The GAO concluded that the Army needs to provide the automated means necessary to match assets in long supply to applicable repair programs. The GAO further concluded that the Army needs to determine whether this process is feasible for the Report of Assets in Long Supply system. The GAO pointed out that improving the long supply procedures would provide the inventory control points with a fully automated capability to identify assets in long supply that can be used in repair programs. The GAO stressed that such an improved system would eliminate the need for the selective screening currently planned to be performed by the proposed new Utilization of Long Supply Asset program. (p. 4, pp. 24-25/GAO Draft Report)

Now on pp. 3, 16-17.

DOD Response: Concur The Army is in the process of testing the automated procedure developed by the Army Missile Command, as recommended by the GAO. The test will run through Fiscal Year 1990, at which time an evaluation will be made to determine whether this automated process should be standardized for all Army National Inventory Control Points.

- **FINDING F**: **Need to Resolve Pricing Conflict**. The GAO found that the Army needs to resolve a long standing pricing conflict. The GAO observed that the Army Materiel Command and its Depot Systems Command have opposing views over the price Army depots should be charged for Army stock-funded assets.

The GAO explained that the fund, which operates as a revolving

fund, provides interim financing for procurement from commercial sources and is reimbursed by Army customers, such as repair depots, who requisition and use stock-funded assets.

The GAO described current procedures, which permit depots to obtain long supply assets purchased with appropriated funds at no cost, but Army policy requires that depots pay full cost of assets purchased through the stock fund.

According to the GAO, the Depot Systems Command believes that inventory managers should issue stock-funded, long supply assets to depots at less than full unit price, while the Army Materiel Command believes that the depots should pay the full cost of these assets. The GAO concluded that both the depot operating/industrial fund and the inventory managers stock fund are revolving funds and, as such, should not incur a loss or a profit.

Based on the concept that revolving funds should incur neither a loss or a profit, the GAO agreed that both Army positions have merit. The GAO recognized that requiring depots to pay full price for stock-funded, long supply assets used in the depot repair program would result in increased material costs because those assets would generally cost more than the depot's repair cost. The GAO emphasized that these increased costs would not be recovered through the fixed-price repair orders and, therefore, the losses would have to be absorbed by the Depot's industrial fund.

Similarly, the GAO explained that the integrity of the stock fund is jeopardized if inventory managers issue assets without recovering the full cost of those assets. The GAO concluded that one way to resolve this conflict would be to adjust fixed-price repair orders to allow depots to recover the increased costs associated with using stock-funded, long supply assets. (pp. 5-6, pp. 23-25/GAO Draft Report)

Now on pp. 4, 17.

DOD Response: Non-concur. Current policies governing the issue of stock fund material to depot repair programs are clear and do not pose a pricing conflict. The goal of both the stock fund and depots' industrial fund is neither to make a profit nor incur a loss. Prices for both funds are set annually based on estimated costs to provide stable prices to their customers. Routinely, when a profit or loss is determined for a fund at the end of one

year, adjustments are simply made to the next year's prices to maintain the integrity of the fund.

Depot industrial fund repair prices should include the cost of stock-funded items when they can be anticipated. When they cannot, current policies allow for the recoupment of losses. The GAO suggested change is unnecessary and would undermine one of the principal purposes of the industrial fund--i.e. to provide stable repair prices.

- FINDING G: Opportunities for Saving Repair Costs by Using Long Supply Assets. The GAO found that none of the six inventory control points had been routinely screening their inventories to determine the potential for using long supply assets in depot repair programs. At the request of the GAO, five of the six inventory control points screened their inventories and identified $59.6 million worth of long supply assets applicable to scheduled FY 1989 depot-level repair programs.

  The GAO calculated that, using the $59.6 million in long supply assets to replace assets scheduled for repair, could have avoided repair costs of about $14.9 million. The GAO pointed out, however, that several offsetting factors must be considered in evaluating the impact of using stock-funded, long supply assets on depot operations. The GAO noted that the increased costs of paying full unit prices and transportation and storage associated with using these assets must be offset against the reduction in repair costs and freed-up operating funds generated by the free issue of procurement-appropriation assets. According to the GAO, these costs and benefits cannot be evaluated until the Army identifies which long supply assets can be used in repair programs.

  The GAO considered its estimate of avoided repair costs to be conservative because it represented the minimum number of spare parts the Army projected for repair during the overhaul or rebuilding of the assets. The GAO emphasized that the actual number of parts repaired is determined during the execution of the repair program. The GAO pointed out that, at that time, the Army can determine the actual use of long supply assets and reduction in repair costs. The GAO concluded that, if the long supply inventory were used, the Army could save millions of dollars in unnecessary repair costs and possibly improve mili-

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Now on pp. 4, 18-20.

tary readiness by reducing the time it takes to repair assets. (pp. 6-7, pp. 27-31/GAO Draft Report)

DOD Response: Partially concur. The Department does not agree with the GAO estimate of cost avoidance. The GAO acknowledges that their estimate should be offset by the increased costs of relocating serviceable stocks, but is not. The potential costs of delaying depot production lines while awaiting delivery of serviceable inventory, particularly for unprogrammed requirements, is also not considered. The Department agrees with the GAO that the costs and benefits cannot be evaluated until the Army identifies which inapplicable assets can be used in their repair programs. The Army is proceeding with a test to determine the actual costs and benefits.

- **FINDING H: Internal Controls: Recurring Deficiencies Have Not Been Corrected**. The GAO emphasized that an important step in strengthening internal controls is to verify that planned actions have been implemented as envisioned and that the completed corrective actions have been effective. The GAO found that prior audit reports and studies had documented that the Army had not implemented its policy and procedure for maximizing the use of long supply assets. The GAO acknowledged that improved inventory identification procedures have been developed, but the Army has not taken prompt action to automate the matching of applicable assets with repair programs and to resolve the conflict over the use of stock-funded assets.

  The GAO explained that the needed corrective actions have been thoroughly identified in previous audits, and that by not taking them the Army has lost opportunities to maximize its use of long supply inventories. The GAO specifically referred to a 1980 GAO report,[1/] an 1981 Army Audit Agency audit report, and a 1986 Army Materiel Command study, all of which identified the problems with long supply assets and recommended actions for correcting these problems. The GAO concluded that, since timely and responsive action to resolve audit deficiencies is required by internal control standards, the Army resolution and corrective action should have been prompt. (p. 4, pp. 34-36/GAO Draft Report)

Now on pp. 5, 24-25.

[1/]GAO Report LCD-80-94, "The Army Should Increase Its Efforts to Provide Government-Furnished Material to Contractors," August 1980 (OSD Case 5444).

DOD Response: Concur. The Department has identified the Army's weakness in screening inapplicable assets in its last two Inspector General Semi-annual Reports to Congress. The Army is now testing the feasibility of the approach recommended by the GAO for automated screening of inapplicable assets. The test will run through the end of Fiscal Year 1990, at which time the results will be analyzed and applied.

- **FINDING I**: **Internal Controls**: **Management Commitment Needed to Enforce Compliance With Existing Policy and Guidance**. The GAO observed that existing Army policy and guidance and draft Army Regulations appear sufficient to promote the maximum use of long supply inventories in depot repair programs. The GAO found, however, that problems concerning the manual selection of assets applicable to repair programs and the use of stock-funded assets have sidetracked the program and should be resolved. The GAO emphasized that resolving these problems will not guarantee an effective program unless the inventory control points and the Army Depot Command comply with the policy and commit themselves to an effective program. The GAO referenced the requirement for the Army to review and report on material weaknesses in its internal control systems. The GAO observed that the Army Materiel Command assessment of internal controls for FY 1987 and FY 1988 did not identify material weaknesses in the use of long supply inventories. However, the GAO referenced statements by command officials that, through existing regulations and headquarters directives, the inventory control points noncompliance with existing guidance indicated an apparent breakdown in the internal controls process.

  The GAO concluded that the Army must require compliance with its policy and procedures, ensuring that a disciplined internal control system is maintained. The GAO further concluded that the Army needs to consider the internal control problems referenced in its report for inclusion as material weaknesses to be reported under the Financial Integrity Act. (p. 4, pp. 36-37/GAO Draft Report)

Now on pp. 5, 25-26.

DOD Response: Concur. The Army will include the use of inapplicable assets within its Internal Control Program as a material weakness in its next report. Army National Inventory Control Points will be instructed to include this subject within their Internal Control Programs until weaknesses are corrected.

* * * * *

RECOMMENDATIONS

- **RECOMMENDATION 1**: The GAO recommended that the Secretary of the Army direct the Commander of the Army Materiel Command to determine whether the automated means developed by the Army's Missile Command to match long supply assets to applicable repair programs will produce the desired results. If not, the commander should develop an effective automated procedure that will provide Army-wide capability. (pp. 7-8, p. 33/GAO Draft Report)

Now on pp. 5, 21.

DOD Response: Concur. At the request of the Army Materiel Command, the Depot System Command and the Missile Command began a test of the automated system developed by the Missile Command in June, 1989. Army depots participating in the test include: Anniston, Letterkenny, Red River, and Sacramento. The Depot Systems Command has been tasked to produce a quarterly progress report, the first of which is due in October 1989. The results of the test will be analyzed to determine the feasibility and cost effectiveness of utilizing these assets and the Missile Command's automated procedure.

- **RECOMMENDATION 2**: The GAO recommended that the Secretary of the Army direct the Commander of the Army Materiel Command to resolve the conflict over the use of stock-funded assets. The GAO suggested that an alternative to help minimize the conflict would be to adjust fixed price repair orders whenever long supply assets are used. (p 8, p. 33/GAO Draft Report)

See comment 1.

DOD Response: Non-concur. The Department does not agree that a conflict exists over the use of stock-funded assets. The stock fund policy is that inapplicable items are issued at standard price. The industrial fund policy allows for losses incurred in one year to be recouped during the next year through pricing adjustments to maintain the integrity of the fund.

- **RECOMMENDATION 3**: The GAO recommended that, if automated procedures are implemented before the pricing conflict is resolved, the Secretary of the Army direct the Commander of the Army Materiel Command to require inventory control points and depots, at a minimum, to comply with current policies and procedures for maximizing the use of long supply assets applicable to repairs

Now on pp. 5, 21.

performed by contractors and by depots. (p. 8, p. 33/GAO Draft Report)

DOD Response: Partially concur. As previously stated, the Department does not agree that a pricing conflict currently exists. The DoD does, however, agree that the Secretary of the Army should direct compliance with current policies governing the use of inapplicable items in their repair programs. The Secretary of the Army will provide this guidance within sixty days.

- **RECOMMENDATION 4**: The GAO recommended that the Secretary of the Army direct the Commander of the Army Materiel Command to cancel further development of "The Utilization of Long Supply Selected Assets" because--by modifying the "Report of Assets in Long Supply"--the Army would not need to develop any enhancements to select assets for use in depot-level repair programs. (p. 33/GAO Draft Report)

See comment 2.

DOD Response: Non-concur "The Utilization of Long Supply Selected Assets" is required for screening of inapplicable assets for use as Government Furnished Material, in addition to the repair program. Regardless of results of the test of the Missile Command's automated procedure, the system will still be required for other than repair purposes. Fielding of the system is scheduled for the first quarter of 1990.

- **RECOMMENDATION 5**: The GAO recommended that the Secretary of the Army direct the Commander of the Army Materiel Command to strengthen internal control procedures on the use of long supply inventories in depot-level repair programs by (1) monitoring the extent to which corrective action are responsive to audit findings and recommendations and (2) conducting onsite management reviews to ensure that inventory control points and depots are complying with procedures for maximizing use of long supply assets in depot-level repair programs. (p. 38/GAO Draft Report)

Now on p. 27.

DOD Response: Concur. Based on the results of the test of the Missile Command's automated procedure, the Army Materiel Command will instruct the National Inventory Control Points and depots on areas requiring further monitoring under the Internal Control Program. This subject will be incorporated into the policy compliance reviews at the inventory control points and depots to ensure they are maximizing the use of inapplicable assets in

depot repair programs. This process is expected to be completed within sixty days.

- **RECOMMENDATION 6**: The GAO recommended that the Secretary of the Army direct the Commander of the Army Materiel Command to report the deficiencies in the use of long supply assets as a material weakness in the Army's system of internal controls. (p. 38/GAO Draft Report)

Now on p. 27.

DOD Response: Concur. The deficiencies in the use of inapplicable assets will be included in the Fiscal Year 1989 report as a material weakness in the Army's system of internal controls.

The following are GAO's comments on the Department of Defense's letter dated September 14, 1989.

GAO Comments

1. This recommendation has been deleted from the report.

2. This recommendation has been deleted from the report.

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