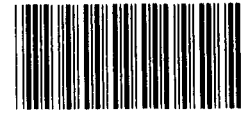


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DEFENSE INVENTORY: Further Improvements Needed  
in Management of Spare Parts and Other Secondary  
Items

Statement of  
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Before the  
Committee on Governmental Affairs  
United States Senate



Mr. Chairman and Members of the Committee:

We are here today to discuss inventory management issues facing the Department of Defense (DOD). We testified before you in 1987 on the growing problems in inventory management including inaccurate inventory records, poor controls and accountability, and significant inventory growth. Last year, I reported to you that we did not see a great deal of progress in correcting these problems and that DOD had reported \$34 billion in unrequired inventory.<sup>1</sup>

The work we have been conducting for you this past year focuses on that portion of DOD's inventory that it reports as required and DOD's initial efforts to reduce its total inventory, including its known excesses. We are continuing this work and will make a final report to you when it is completed.

#### RESULTS IN BRIEF

Our review indicates that the inventory reductions reported by DOD in its September 1990 Supply System Inventory Report are somewhat misleading. In short, DOD's reported data are not comparable to prior year data, do not include all on-hand inventory, and overstate the required inventory.<sup>2</sup>

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<sup>1</sup>Defense Inventory: Problems in Managing Secondary Items, GAO/T-NSIAD-90-19, Mar. 6, 1990.

<sup>2</sup>The Supply System Inventory Report stratifies DOD's inventory. These break down into two principal categories: required and unrequired.

DOD's September 30, 1990, report shows total spare parts and other secondary item inventory to be \$7.6 billion less than at September 30, 1989. If DOD had reported its 1990 inventory on a basis consistent with 1989, the inventory would have been valued about the same in both years.

The on-hand inventory shown in DOD's supply report consisted mainly of items that were centrally controlled, but did not include billions of dollars of inventories held at local levels, such as aboard combat ships and with troop units.

Our ongoing work indicates that the numbers of years of supply on hand included in the inventory that DOD reports as required is more than would seem to be necessary or prudent. As you know, when too much inventory is held on hand, there is an increased risk of it becoming obsolete or unnecessary. DOD's supply report categorizes these extra years of on-hand supply as required even though they are more than DOD's instructions say are the maximum assets which should be on hand or on order at a given time.

DOD has started or planned many initiatives to reduce its inventories. However, DOD's continued high inventory levels at a time when the force structure is being reduced calls for additional reductions in funding for supplies.

REPORTED INVENTORIES ARE NOT  
VALUED ON CONSISTENT BASES

A practice that can lead to confusion when one is trying to determine if inventories are growing or diminishing is that of revaluing inventory. DOD has made valuation changes that it believes more accurately reflect the value of its inventory. Our first chart shows that, had DOD valued its 1990 inventory on a basis consistent with its 1989 valuation, it would have reported a 1990 inventory of \$109.4 billion, only a slight reduction from the \$109.5 billion reported in 1989.

Changes in the method of valuing inventory, and not changes in the amount of inventory, accounted for 99 percent of the \$7.6 billion total inventory reduction reported by DOD for 1990. As we have recommended, the Army and Air Force changed to a valuation method that reduced the reported value of items needing repair by \$4.5 billion. The Navy had for several years already recognized the reduced value of items needing repair. The Army and Air Force have valued their inventory at the last acquisition cost. The Navy had used the original acquisition cost to value its inventory prior to 1990. For 1990, the Navy reduced its reported inventory by \$3 billion by using an estimate of the lower of an item's original acquisition cost or its current market value.

DOD used and plans to use other valuation methods for other purposes. For example, DOD reported about \$8.1 billion in potential excess inventory as of September 1990, and is considering revaluing such inventory as scrap. We estimate that such a change would reduce DOD's reported inventory by \$8 billion.

While we recognize that corrections and improvements are needed in the way DOD values its inventory, the rationale and impact of any material change in the inventory valuation should be fully explained so that such a change does not lead to misinterpretations.

Another possible change that could affect reported inventory involves transfers among categories of inventory rather than revaluation. Subsequent to the September 1990 DOD report, the Air Force moved about \$300 million of inventory from unrequired categories to required categories. The Air Force did this by adding what it termed as an "extended year" to the requirements objective it used for certain items when creating the report. If more items are included in the future under this "extended year" criterion, more inventory currently reported as unrequired would move to required categories, thus further increasing the inventory reported as required and reducing what is reported as unrequired.

DOD'S SUPPLY REPORT DOES NOT  
INCLUDE ALL ON-HAND INVENTORY

DOD's Supply System Inventory Report does not include significant quantities of on-hand secondary stocks controlled by local levels. We found no summary data on the total of such inventories, but the quantities are substantial.

For example, inventories of spare and repair parts aboard combat ships were not reported. These include ship and submarine supplies that the Navy estimates are valued at \$4.0 billion, and aviation supplies totaling \$3.6 billion. Also, in January 1991, the DOD Inspector General reported that six maintenance facilities were holding over \$319 million of unrecorded inventory.

ON-HAND INVENTORY REPORTED  
AS REQUIRED IS EXCESSIVE

We have conducted a preliminary analysis which compares the inventory to demands. We have also looked at how DOD components have allocated items among the categories of their required inventory. These analyses indicate that the required inventory is overstated.

To compare required inventories to demands, we analyzed automated records for 141,907 line items of Air Force repairable aircraft

inventory. Of the total value of \$35 billion,<sup>3</sup> about \$9.7 billion was identified as exceeding requirements. The required inventory valued at \$25.3 billion involved 105,717 line items. Our analyses of the required items showed that (1) a large portion of them had no projected demands and (2) items with demands had unnecessarily high quantities categorized as required.

There was no projection of recurring demand for about 65 percent (68,718) of the items. They had a value of \$2.3 billion, about 9 percent of the required inventory value. (This amount did not include an additional \$78 million worth of war reserves.) These items were of varying value, with relatively few units of any given item on hand.

-- For example, on March 30, 1990, the Air Force had 4 circuit card assemblies used on test equipment for the C-5 aircraft. The assemblies were valued at \$128 each and were identified as required. According to the inventory manager, the 4 items were acquired in 1974 from excess stock held by the contractor manufacturing the test equipment. Air Force records did not indicate any usage of the items, but they are classified as required because they represent an insurance against being out of stock in case they are needed.

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<sup>3</sup>The acquisition values for items in the automated records were not reduced to reflect the lower value of items that needed repair.

-- As another example, as of December 31, 1990, the Air Force had 6 circuit card assemblies used on a test station for the F-15 aircraft. The assemblies were valued at \$2,367 each, with five considered required and one unrequired. The five assemblies were considered to be insurance against being out of stock. Available Air Force records did not indicate any usage.

Of the 36,999 items with demands, 17,348 had stocks on hand that exceeded war reserves and a 2-year supply. The value of the additional stocks was estimated at \$4.5 billion. For example, the Air Force held 202 disks and hubs on hand (each valued at \$8,600) for the F-15 and F-16 aircraft as of March 31, 1990. This was twice as many as was reported as required and we estimate that the ones reported as required would last about 5 1/2 years based on the Air Forces' recurring requirements.<sup>4</sup>

Our preliminary examination of the way the Navy allocated its on-hand supplies revealed an overall excessive allocation to the required categories. In one case, the Navy had 115 power supplies for sonar receivers on hand valued at \$4,100 each. The Navy identified 93 of these as required and estimated demand at 20 items

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<sup>4</sup>Thirty-one disks and hubs valued at \$8,600 each were issuable and the remainder of the on-hand items needed repair at an estimated cost of \$1,369 each. The on-hand inventory in required categories totaled 98, of which 5 were for projected nonrecurring demands. The yearly recurring demand averaged about 17 items.



per year. The Navy categorized its needs for the power supplies as follows:

- 5 for funded war reserves,
- 48 projected issues for 2 1/2 years,
- 6 for a safety level,
- 12 for a numeric stockage objective for insurance purposes,
- 12 for use while items are repaired,
- 4 for use during the procurement lead time, and
- 6 for unfunded war reserves.

Excluding the 5 funded as war reserves, the remaining 88 items would last about 4 1/2 years.

We believe DOD's supply report does not reveal excesses such as those reflected in the examples I've cited. Consequently, the information provided to top management and the Congress may be representing more of the inventory as needed than really is.

Based on an analysis of Navy and Air Force stratification reports<sup>5</sup> for September 30, 1990, \$10 billion of the \$39.6 billion inventory reported as required in these stratification reports, exceeded the maximum needed as defined by DOD instructions to item managers for purposes of ordering items.

DOD's instructions to item managers identify assets which should be either on hand or on order as of given dates. The instructions define the point to which inventories can fall before item managers should place orders by identifying eight levels of requirements. The instructions add a ninth level to "display the maximum assets which may be on hand and on order over and above the reorder point as of a moment in time." We found that the on-hand inventory alone that was reported by DOD as required far exceeded even the ninth level of on-hand and on-order inventory referred to in DOD's instructions.

For example, the Navy held 232 issuable navigation lights as of September 30, 1990. The lights were valued at \$1,430 each. The maximum on hand or on order under DOD instructions was 137 items, but 177 on-hand items were reported as required. Using the Navy's projected 27 annual recurring demands and excluding 15 items needed for war reserves and nonrecurring demands, we estimate that it

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<sup>5</sup>The military services and DLA use an inventory stratification process to develop inventory budgets and show why inventory is held. The reports included about 74 percent of the total inventory that DOD reported for 1990, and excluded fuel, inventory in transit, Marine Corps inventory, and certain local-level stocks.

would take 6 years to use the non-war reserve items reported as required.

As another example, Air Force records showed that a maximum of 65 of the previously noted F-15 and F-16 disks and hubs were needed as of the date of the reports, even though 98 were reported as required.

Clearly, the examples I've just cited indicate that DOD's required inventory is excessive. We do not think DOD should have large numbers of routine operating stocks on hand to meet long-term needs. We are concerned that DOD's supply report does not reflect these excesses, and are considering whether and how DOD's reporting system could send warning signals of excessive on-hand inventory much sooner than it does now.

Warning signals are necessary because they identify the results of wasteful practices we have identified in the past. We reported<sup>6</sup> to you last year that the Air Force routinely initiated purchase requests too soon and we recommended that the practice be stopped. However, DOD and the Air Force disagreed. You will also hear today from the DOD Inspector General on recent excessive purchases at DLA.

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<sup>6</sup>Defense Inventory: Growth in Air Force and Navy Unrequired Aircraft Parts, GAO/NSIAD-90-100, Mar. 6, 1990.

At present, the change just begun by the Air Force would do the opposite. It would delay warning signals rather than speed them up. In addition, we believe the change would be wasteful. As I mentioned earlier, the Air Force is adding an "extended year" of requirements to some items. It serves to mask unrequired inventory, and could increase acquisitions by preventing the cancellation of excess materials on order. We have recommended canceling the "extended year" of requirements, but DOD and the Air Force disagree.

IMPACT OF SUPPLY TRANSACTIONS  
DURING OPERATION DESERT SHIELD

You asked us to look at the effect on the defense inventory of Desert Shield and Storm and the resulting increased military operations. At this time only preliminary information is available. We were able to analyze preliminary DOD-wide summary data on contract actions for secondary items and other purchases such as related services. We also examined more detailed data on the 5,000 Defense Logistics Agency (DLA) line items having the greatest value of transactions.<sup>7</sup>

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<sup>7</sup>The 5,000 items excluded fuel, but included more than purely secondary items. The detailed data covered the period through January 31, 1991.

Our second chart shows that the value of the total contract actions for April 1, 1990, through March 31, 1991, followed a pattern similar to the prior year, except that contract actions in March 1991 dropped below those for March 1990.

Most classes of items remained stable or decreased (49 of 78, or 63 percent, of two-digit federal supply codes), whereas some such as fuels, lubricants, and oils, increased. The value of DLA actions increased during the year ending March 1991, whereas the value of military services' actions declined somewhat.

DLA's actions totaling \$11.3 billion for the year ending March 31, 1991, represent a \$2 billion increase over the prior year. Our preliminary analyses of detailed data for the 5,000 DLA line items with the greatest value of transactions indicate that while subsistence transactions to purchase such things as food and personal items greatly increased, transactions for other items did not increase as much. For example, comparisons of summary purchase activity for the year ending March 31, 1991, to the prior year show:

-- Subsistence purchases increased from \$1.6 billion to \$2.6 billion. The largest such contract action in our detailed data was \$217 million as part of a service contract to assemble foods into Meals Ready to Eat (MRE) packages. Overall, MRE-related purchases dominated DLA purchases during

July 1990 to January 1991, totaling about \$529 million of the 7-month total of \$1.6 billion for subsistence.

- Clothing and textiles purchases remained stable at \$1.1 billion. The single largest procurement was \$115 million for chemical protective suits. Our analysis indicates that these chemical protective suits had been in short supply for quite some time. DLA officials said this is primarily as the result of an inadequate industrial base. A purchase of hot weather and desert related clothing totaled \$99 million. The next largest procurement was for \$53 million for extreme cold weather clothing scheduled for use in Alaska.
  
- Medical purchases increased from \$430 million to \$641 million. Our analysis indicates that \$118 million was for various drug related items and an additional \$51 million was for x-ray equipment. The largest contract action for a single line item was \$16.2 million for adjustable beds.

#### WHAT NEEDS TO BE DONE

One of the areas highlighted in both our and DOD testimony before you last year was the impact of DOD's organizational culture, or

mind-set, on efforts to improve inventory management.<sup>8</sup> We identified the culture as a barrier to improvement. DOD officials testified that their culture has been to make sure they always have materials or parts on hand when needed, even to the point of buying substantially more than they need. They said they believed a change in the culture was underway and that it would result in improved inventory management.

In its most recent progress report, DOD identified five objectives to reduce inventories. The objectives were to (1) minimize new items entering the system, (2) reduce the number of items in the system, (3) reduce the quantities of material stocked, (4) pursue commercial alternatives to material stockage, and (5) improve control and visibility. As you are well aware, DOD's plans call for a decline in the size of the military force structure.

We compared a portion of the defense inventory as of September 1990 to September 1989. The portion we examined is mainly that inventory monitored centrally on automated stratification reports. There was a slight increase in on-hand inventory. However, our comparative analyses showed that due-in inventory had decreased. In particular, inventory on order decreased from \$26.6 billion in September 1989 to \$21 billion in September 1990.

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<sup>8</sup>An organization's culture can be thought of as the values, beliefs, attitudes, and expectations shared by its people. There is a consensus that culture strongly influences how an organization behaves.

This comparative analysis indicates that DOD is making some progress in reducing its inventory and addressing its culture issues, but not to the extent shown in DOD's September 30, 1990, inventory report. We commend the steps DOD has taken, but are concerned about the impression that on-hand inventory reductions have already been achieved.

Our report today recommends that the Secretary of Defense

- direct the military services and DLA to use a uniform inventory valuation method that will provide comparable data between periods and across organizations, and fully disclose any deviations from uniform valuation; and
  
- report inventory in a manner that recognizes all levels of on-hand inventory and reflects requirements that are consistent with the inventory that DOD defines as the maximum assets which may be on-hand or on order at a given time.

You asked us to discuss today the potential for reductions in DOD's supply budget. Last year, we estimated that there was a potential for reductions of \$2 to \$4 billion for secondary items. The Congress reduced the DOD request by over \$2 billion after the Iraqi invasion of Kuwait. Today we are reporting that we believe that DOD's excessive inventory is far greater than shown in DOD's



reports. Consequently, we believe there is still significant potential for savings in the supply area.

The question should be not whether a reduction should be made, but how much the reduction should be in a given year. DOD cannot fix all the problems and make the transition to a reasonably sized inventory in 1 year. There is a point at which large reductions can be disruptive but we think any large organization can handle a 10 percent reduction from what it planned to spend. This would amount to about \$2.5 billion for fiscal year 1992.

If reductions in this area are considered, it is important to be aware that most supply transactions to acquire secondary items involve operations and maintenance funds, but about 13 percent of purchases from stock funds in 1991 was from funds appropriated for procurement, military personnel, and other accounts. We see no reason to limit reductions to only the operations and maintenance account.

Mr. Chairman, that concludes my prepared testimony. I would be pleased to address your questions.