DEFENSE DEPOT MAINTENANCE

Contracting Approaches Should Address Workload Characteristics
The Department of Defense (DOD) expects to achieve large savings by contracting out many of its support functions and activities to the private sector. As part of this effort, DOD plans to contract out more of its $13 billion annual requirement for depot-level repair and maintenance of weapon systems and equipment. In addition, DOD plans to streamline its contract management and oversight activities and rely more on competitive market forces to assure product quality and reasonable prices. As you requested, we reviewed how DOD manages contracting for depot maintenance to determine the characteristics of that contracting and the implications of those characteristics for future depot maintenance contract management processes and procedures.

Background

Depot maintenance involves the repair, overhaul, modification, and upgrade of weapon systems, vehicles, and other DOD items at DOD-owned facilities and private-sector contractor activities. The workload mix between the public and private sector has remained relatively constant for many years. DOD is seeking to contract out more of its depot maintenance requirements. The expectation is that increased competition for DOD’s depot maintenance work will produce substantial savings. In March 1996, DOD issued regulations directing that new systems and major upgrade programs “shall maximize the use of contractor provided, long-term, total life-cycle logistics support that combines depot-level maintenance along with wholesale and selected retail materiel management functions.”

DOD’s approach to assuring product quality and fair prices for depot maintenance work that is contracted out to the private sector where competition is limited is through contract management and oversight.

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1This mix was influenced by 10 U.S.C. 2466, which limited depot maintenance work that could be contracted out to the private sector to not more than 40 percent of depot-level maintenance funds for any fiscal year. The National Defense Authorization Act for Fiscal Year 1998 amended 10 U.S.C. 2466 to provide for a 50/50 mix. The act also included a new provision, 10 U.S.C. 2460, which establishes a statutory definition of depot-level maintenance and repair work that includes interim contractor support and contractor logistics support work.
requirements. This includes on-site inspections and record keeping and reporting requirements. The military services manage and oversee depot maintenance contracts with assistance from the Defense Contract Audit Agency (DCAA) and the Defense Contract Management Command (DCMC). DCAA provides accounting and financial advisory services in connection with negotiating, administering, and closing out contracts. DCMC is DOD’s principal contract oversight agency, which provides assistance ranging from evaluation of contractors’ proposals to on-site monitoring of contractors’ day-to-day operations.

DOD is implementing the preference for the acquisition of commercial items established in the Federal Acquisition Streamlining Act of 1994 (FASA). DOD expects that commercial products and services, which are subject to competitive market forces, will result in high-quality products and services at a lower cost. Greater reliance on commercial products and services, if done in a competitive environment, should shift much of the quality assurance and cost control responsibility to the contractors and, thereby, reduce management and oversight required by DOD contract administration personnel. This approach is intended to provide needed product quality and price control at less cost to the government. DOD states that it expects the inclusion of more commercial products and components in weapon systems to result in a competitive commercial market for depot-level maintenance and repair of these systems.

Results in Brief

DOD is attempting to rely more on competitive market forces to assure quality products at fair prices. Consistent with recent declines in the defense budget, resources for administering and auditing contracts have been cut significantly, with DOD reducing its total acquisition workforce at all levels. From fiscal year 1993 to July 1997, DCAA and DCMC reduced their personnel levels by more than 18 and 24 percent, respectively, and further reductions are planned. In making these reductions, both organizations are reengineering their processes. They are attempting to rely more on competitive market forces and contractor internal processes and controls to assure quality products at fair prices, but it is uncertain whether these processes and conditions will function as expected.

At present, depot maintenance contracting represents a challenge to relying on commercial market forces. This is because most depot maintenance is currently performed on noncommercial, DOD unique items. About 91 percent of the depot maintenance contracts we reviewed were awarded noncompetitively, mostly to original equipment manufacturers.
that own the data rights. Other factors, including difficulties in precisely defining requirements, also impact efforts to rely on competitive market forces. As DOD continues transitioning from its traditional contract management and oversight structure, it will need to increase the use of competitively awarded depot maintenance contracts. To the extent that competition for some maintenance workloads is not possible or practicable, DOD will need to address how best to assure product quality and reasonable prices when competitive market forces are not present. DOD has developed a logistics strategic plan that lays out specific objectives and strategies for improving DOD’s logistics activities. However, the plan does not address the depot maintenance issues raised in this report. We have previously recommended that the Secretary of Defense require the development of a detailed implementation plan for improving the efficiency and effectiveness of DOD’s logistics activities to include depot maintenance. The challenges that DOD faces in successfully relying on competitive market forces for depot maintenance require management attention and actions to address the unique characteristics of DOD’s depot maintenance activities and assure that expected savings can be achieved.

Streamlining Contract Management and Oversight Activities

As a result of budget declines and DOD’s efforts to increase reliance on competitive market forces for cost control and quality assurance, DCAA and DCMC have substantially downsized and streamlined their operations. DCAA’s staffing has decreased by 1,046 personnel—over 18 percent—from fiscal year 1993 to July 1997. During the same time period, DCMC’s staffing has decreased by 4,579 personnel—a 24-percent reduction. In addition, since 1993, DCMC has reduced its field offices from 140 to 79. This has required prioritizing work to focus on areas of higher risks and relying more on contractor self-oversight where risks are low.

DCAA is focusing its efforts on implementing risk assessment procedures and process reengineering. For example, as part of DOD’s plan to rely more on contractor self-oversight, DCAA can reduce its oversight after determining that strengthened contractor internal controls can be relied upon. DCMC officials are focusing resources on contract areas that have the highest risk for cost growth, schedule slippage, or significant technical problems and are allowing contractors to perform self-oversight in the more routine, low-risk contracting areas. They are also relying more on sampling methods to assure quality and contract compliance rather than having inspectors doing 100-percent inspections. Sample sizes are based

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on assessments of the risks inherent in the contractors’ processes. DCMC officials stated that they will use a contractor performance-based assessment model to determine risk and the level and frequency of review based on an assessment of past performance.

In our high-risk series report on defense contract management, we discussed some of the issues related to DOD's management of future contract risk.3 We stated that the risk increases substantially when the activity is coupled with (1) continuing fundamental changes in the acquisition and contracting processes that have yet to be fully implemented or evaluated and (2) a contract administration and auditing resource base that already has been substantially reduced.

Characteristics of Depot Maintenance Work Create Challenges for Implementing Reforms

Defense depot maintenance contracting has a number of characteristics that must be considered as DOD moves toward contracting out more of its depot maintenance. Primary among these is that most depot-level maintenance is on noncommercial, DOD unique, weapon systems parts and components for which there is often no competition or a limited competitive market. Other characteristics include (1) reliance on cost reimbursable type contracts because requirements are often undefined, (2) use of government provided parts and materials, and (3) contract provisions that allow contractors to perform work that may be needed but is not included as a fixed-price line item in the contract. This work is usually ordered on the basis of fixed hourly rates specified in the contract. These characteristics affect contract costs and/or performance risks and, accordingly, affect contract management and oversight requirements.

Competition Is Limited for Depot Maintenance Workloads

Most depot maintenance contracts are currently awarded without competition. This is largely because most depot maintenance contracting is for work on noncommercial, DOD unique items. Most of this work is awarded on a sole-source basis to original equipment manufacturers that own the technical data rights.4

To assess competitive conditions, we asked 12 government contracting organizations to classify as competitive or sole source all depot repair and maintenance contracts awarded from the beginning of fiscal year 1996 to

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4Technical data are the designs, drawings, and specifications necessary for the production and repair of items. In most of the contracts we reviewed, the original equipment manufacturer owns the exclusive rights to this data.
March 1997. They identified 15,346 contracts totaling $2.2 billion. Sole-source awards were made in 13,930 contracting actions—about 91 percent—that were valued at about $1.5 billion, or about 69 percent of the total dollars awarded. Table 1 shows the percent of noncompetitive contracts by service.

Table 1: Percent of Sole-Source DOD Depot Maintenance Contracts by Service

<table>
<thead>
<tr>
<th>Service</th>
<th>Percent of total number</th>
<th>Percent of total dollar value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Army</td>
<td>95</td>
<td>99</td>
</tr>
<tr>
<td>Air Force</td>
<td>50</td>
<td>43</td>
</tr>
<tr>
<td>Navy</td>
<td>99</td>
<td>72</td>
</tr>
</tbody>
</table>

In examining the rationale for sole-source awards, we found that DOD had not acquired the technical data rights to compete the work for many of its weapon systems and components and DOD officials believe that, at this point, buying the data would be too costly. Officials at the contracting organizations told us that if technical data is not bought as a part of the initial acquisition package, the government has little leverage to get the data at an affordable price later on in the system life-cycle. Additionally, it is difficult to make an argument for a large one-time investment for technical data once the acquisition program is completed. Officials also said that even if the government owns the technical data, private contractors may have little interest in competing for the work when it involves (1) small volume, (2) obsolete technology, (3) irregular requirements, and/or (4) unstable funding.

DOD plans indicate greater reliance on noncompetitive contracts to original equipment manufacturers (OEM) for depot maintenance support. Within legislative requirements, DOD policy calls for maximum use of long-term, total life-cycle logistics support contracts for new weapon systems. Under such arrangements, the OEMs could become the providers of many systems’ depot maintenance support.

Undefined Requirements Are a Characteristic of Many Maintenance Workloads

We examined 345 depot maintenance contracts awarded by 12 contracting organizations, and found that 212, or 61 percent, were fixed-price type contracts that had price and performance generally defined at the time of contract award. However, because of reasons such as undefined work requirements, 80, or 23 percent, were cost-reimbursable type contracts. The remaining were a combination of the two types of contracts. Table 2
shows by service the contract types used for the 345 contracts we sampled.

<table>
<thead>
<tr>
<th>Type of contract</th>
<th>Army</th>
<th>Air Force</th>
<th>Navy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed price</td>
<td>22</td>
<td>111</td>
<td>79</td>
</tr>
<tr>
<td>Cost</td>
<td>37</td>
<td>38</td>
<td>5</td>
</tr>
<tr>
<td>Combination</td>
<td>10</td>
<td>18</td>
<td>25</td>
</tr>
<tr>
<td>Total</td>
<td>69</td>
<td>167</td>
<td>109</td>
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Officials at the contracting organizations said that as risk increased with the degree of complexity of the work, the more likely it was that something other than a fixed-price type contract would be used. They said they used fixed-price contracts when adequate repair histories were available to establish a price range for the maintenance work. Officials said they used cost-reimbursement type contracts when maintenance requirements could not be predetermined for the contract period or when adequate repair history did not exist on which to establish reasonable price ranges. For example, officials at the Army Communications-Electronics Command stated that selection of the contract type generally was based on technical uncertainties surrounding the maintenance work to be performed. A cost-reimbursement contract was used whenever the uncertainties were of such magnitude that cost and performance could not be reasonably estimated for a fixed-price contract.

Under fixed-price type contracts, more risk is borne by contractors because they incur losses when costs are greater than expected. Since the contractor assumes most of the risks, the government’s contract administration and oversight burden is reduced. Conversely, DOD is subject to greater cost risks under a cost-reimbursable contract because contractors generally are reimbursed for all allowable, allocable, and reasonable costs incurred. Because the contractor’s incentive to maximize efficiency and minimize cost is generally less, more oversight is required for cost-reimbursable contracts. If more commercially available weapon systems parts and components are used in the future, this could reduce the use of cost-reimbursable contracts, particularly if repair histories were commercially established.
In some depot maintenance contracts, DOD agrees to provide the contractor with repair parts and materials from its supply system. These practices generally require increased management attention to assure that the parts and materials are available as required, that material accountability is maintained, and that the contractor does not use excessive quantities of government-furnished material. When materials are not provided in accordance with contract requirements, the contractor could incur added costs, which are passed on to DOD. Further, if material accountability is not accurately maintained, costs to the government can be substantially increased. For example, the Warner Robins Air Logistics Center had a $113.2 million cost overrun on F-15 aircraft contract maintenance work that was directly related to government-furnished material. DOD and Air Force officials believed that a cause of the cost overrun was loss of control over government-furnished items that the contractor returned in exchange for new ones. In another instance, we found that the Air Force paid $24.9 million to settle claims related in part to its failure to provide a contractor with timely government-furnished material. Finally, we have identified workloads where increased usage of government-furnished material by the contractor significantly increased the costs to the government of contracting out the work. Given these and similar situations, changes in contract management practices need to take into account the unique aspects of government-furnished material.

Depot maintenance contracts often contain provisions that allow contractors to perform and charge the government for additional work that could not be specifically defined at the time of contract award but may be needed as an item is being repaired. For instance, when an item is disassembled and inspected during the repair process, the contractor may discover work needed that was not spelled out by the basic contract requirements, such as corrosion hidden inside an aircraft wing. DOD anticipates the potential for such additional work and increased costs by including clauses in its maintenance contracts referred to as “over-and-above” work. The contract specifies an hourly rate for such work.

According to DOD officials, over-and-above work requires close attention to validate the extent and cost of such work. For example, in fiscal year 1997, the Air Force experienced a substantial increase in the over and above contract cost for programmed depot maintenance on the B-1B aircraft—from $150,000 to $500,000 per aircraft. The Air Force examined the contractor’s over-and-above requests and found that some requests
should have been accomplished by the contractor as part of the basic programmed depot maintenance contract. After rescinding the administrative contracting officer's authority to approve them, program officials are now reviewing all over-and-above requests for the B-1B.

DOD Plans for Improving Logistics Functions and Activities

As reflected in the Quadrennial Defense Review (QDR) and the Defense Reform Initiative (DRI), DOD has begun a program to improve the operations of its business activities. DOD also has developed a strategic plan for improving logistics functions and activities. The plan gives direction to improvements needed to reduce the cost of its logistics systems and lays out specific objectives and strategies to produce these improvements. For instance, the plan provides general guidance and implementation strategy for depot maintenance related activities involving (1) outsourcing, privatization, and elimination of unneeded maintenance capability; (2) reducing existing public sector maintenance infrastructure; (3) using public-private competition to the maximum extent allowed by statute for workloads being performed by DOD depots; and (4) using maximum competition for workloads previously awarded without full and open competition.

Although the plan provides guidance and implementation strategy for some important objectives related to depot maintenance, it does not specifically address the contract depot maintenance issues raised in this report. Previously, we recommended that the Secretary of Defense require the development of a detailed implementation plan for improving the efficiency and effectiveness of DOD's logistics activities, to include depot maintenance. We recommended that the plan establish time frames for identifying and evaluating the most cost-effective solutions and identify required resources for accomplishing cost-reduction initiatives. In response to that recommendation, DOD has stated that a specific plan for improving the efficiency and reducing the cost of DOD's logistics programs, including depot maintenance, is not needed because the QDR and DRI provide an overall strategic plan and strategy for reducing DOD's infrastructure. While we agree that the QDR and the DRI provide strategic guidance, our work illustrates the need for more specificity in implementation plans related to individual business activities, such as depot maintenance.

Conclusions

DOD is streamlining and reengineering its traditional contract management and oversight organizations—including those in its buying activities, DCAA, and DCMC. These initiatives are in their early stages of implementation as they relate to depot maintenance contracting. A number of factors unique to contracting for depot maintenance repair and maintenance workloads create challenges to DOD’s efforts as it implements new contracting approaches. Primary among these at this time is that most depot-level maintenance is on noncommercial, DOD unique parts and components for which there is often little or no competition. Other factors that need to be addressed as implementation continues are the inherent difficulties of defining repair requirements at the time of contract award, the management tasks associated with providing government-furnished material, and the management tasks associated with approving additional work that contractors discover once the repair of an item has begun.

Citing the QDR and DRI, DOD has disagreed with previous recommendations that we have made for the development of a detailed implementation plan for improving the efficiency and effectiveness of DOD’s logistics activities, including depot maintenance.

However, given the results of this and other recently completed work, we believe DOD should reconsider the need for a detailed implementation plan to guide future management improvement efforts to increase the cost-effectiveness of DOD’s depot maintenance program, including that portion of the program that is contracted out to the private sector.

Recommendation

We recommend that the Secretary of Defense require the development of a detailed implementation plan to guide future management improvement efforts to increase the cost-effectiveness of DOD’s depot maintenance program, including issues related to improving the management and cost-effectiveness of contract depot maintenance workloads.

Agency Comments

DOD reviewed a draft of this report and provided official oral comments. DOD officials stated that they generally concurred with the intent of our recommendation. They also provided comments to improve the technical accuracy of the report, which have been incorporated as appropriate.

Scope and Methodology

To evaluate the implications of outsourcing and other acquisition reform initiatives on DOD’s management and oversight of depot maintenance
work, we made extensive use of our prior work and the work of others on issues related to contracting. See a list of related GAO products at the end of this report. We reviewed the Federal Acquisition Regulation (FAR), DOD supplements to the FAR, and other pertinent regulations to identify the policies, procedures, and processes that DOD follows in contracting for depot maintenance support from the private sector. We examined studies of DOD's acquisition system that identified concerns with DOD's management and oversight of its contracting function and proposals to improve the system. In addition, we analyzed data from DOD organizations to evaluate (1) the status of initiatives to improve contract management and oversight, (2) the impact of these initiatives on staffing and workload, and (3) the potential impact that increased outsourcing would have on their management and oversight of contract maintenance.

We conducted our review in accordance with generally accepted government auditing standards.

We are sending copies of this report to the Secretaries of Defense, the Army, the Navy, and the Air Force; the Director of the Office of Management and Budget; and interested congressional committees. Copies will be made available to other interested parties upon request.

If you or your staff have any questions concerning this report, please contact me on (202) 512-8412. Major contributors to this report are listed in appendix I.

David R. Warren, Director
Defense Management Issues
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Abbreviations

DCAA Defense Contract Audit Agency
DCMC Defense Contract Management Command
DOD Department of Defense
DRI Defense Reform Initiative
FAR Federal Acquisition Regulation
FASA Federal Acquisition Streamlining Act
OEM original equipment manufactures
QDR Quadrennial Defense Review
# Appendix I

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Related GAO Products


Defense Outsourcing: Challenges Facing DOD as It Attempts to Save Billions in Infrastructure Costs (GAO/T-NSIAD-97-110, Mar. 12, 1997).


Aerospace Guidance and Metrology Center: Cost Growth and Other Factors Affect Closure and Privatization (GAO/NSIAD-95-60, Dec. 9, 1994).


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