United States General Accounting Office

GAO

Report to the Secretary of the Air Force

February 1990

SPARE PARTS

Air Force Reports Progress and Problems in Obtaining Competition

GAO/NSIAD-90-75

GAO

United States
General Accounting Office
Washington, D.C. 20548

National Security and
International Affairs Division

B-237221

February 14, 1990

The Honorable Donald B. Rice
The Secretary of the Air Force

Dear Mr. Secretary:

This report discusses the progress and problems of Air Force competition advocates in obtaining competition on spare parts purchases. The report contains recommendations to you.

We are sending copies of this report to the Chairmen, House Committees on Government Operations and on Armed Services and Senate Committees on Governmental Affairs and on Armed Services; the Director, Office of Management and Budget; the Secretary of Defense; and other interested parties.

This report was prepared under the direction of Nancy R. Kingsbury, Director, Air Force Issues, who may be reached on (202) 275-4268 if you or your staff have any questions concerning this report. Other major contributors to this report are listed in appendix I.

Sincerely yours,

Frank C. Conahan
Assistant Comptroller General

Executive Summary

Purpose

The Air Force spends about $6 billion annually on spare parts to support its weapon systems. Air Force statistics show that for fiscal year 1988 over half the spare parts dollars were for contracts awarded noncompetitively. Purchasing parts competitively is preferred because it helps ensure fair and reasonable prices and can save millions of dollars.

In 1984 the Congress established competition advocates within the Air Force and other executive agencies to promote competition and challenge the barriers to competition. Because of the large dollar amounts spent for noncompetitive spare parts purchases and the long-standing congressional interest in competition, GAO reviewed Air Force competition advocate programs to evaluate the progress and problems advocates have experienced in obtaining competition when purchasing spare parts.

Background

The Air Force Logistics Command is responsible for purchasing spare parts within the Air Force through its five Air Logistics Centers. Each Logistics Center has a competition advocate directorate, a materiel management directorate, and a contracting and manufacturing directorate that are involved in purchasing spare parts.

After item managers in the materiel management directorate identify the requirement to purchase a part, advocates in the competition advocate directorate screen the part to determine if circumstances warrant a competitive acquisition strategy. Screening involves identifying if more than one supplier can provide the part and ensuring that the engineering data needed to produce the part are available to potential manufacturers. Additionally, advocates responsible for source development seek additional sources and assist potential manufacturers in demonstrating their technical capabilities to produce the part. Buyers in the contracting and manufacturing directorate then solicit qualified suppliers and negotiate contracts for the part.

Results in Brief

Air Force statistics and reports indicate that advocates have helped increase competition on spare parts purchases. For example, in fiscal year 1988, 43 percent of the amount spent for spare parts was for contracts awarded competitively, which is almost double the percent for contracts awarded competitively in fiscal year 1984.

Despite this progress, more than half of the funds spent for spare parts were for contracts awarded noncompetitively. The lack of engineering

data needed for additional manufacturers to produce the parts was the primary reason cited by advocates for parts not being suitable for competition. Valid reasons exist for not having some data; however, GAO, the Air Force, and the Department of Defense have reported on data problems for years and have generally concluded in previous reports that the Air Force needs to (1) provide increased management attention early in the weapon system's acquisition phase and (2) better coordinate the delivery and the review of engineering data. These conclusions are generally still applicable. Moreover, screening and other programs conducted by the competition advocates do not eliminate the reasons for the data problems.

Even though desired engineering data are often unavailable, advocates can take other actions to increase competition. Specifically, the current screening process can be revised to focus management attention on the more expensive noncompetitive parts with high competitive potential. Identifying and concentrating on these parts require a different approach to screening and more involvement by materiel management personnel. In addition, advocates need better measures to assess their program's effectiveness.

GAO's Analysis

Air Force Advocates Have Made Progress

The amount of competition obtained in purchasing spare parts—as measured by the percent of dollars for contracts awarded competitively, the amounts for contracts awarded competitively, and the number of competitive actions—has increased. For example, in fiscal year 1984 only 22 percent of the amount spent for spare parts was for contracts awarded competitively, whereas in fiscal year 1988 the amount was 43 percent.

In addition, Logistics Command reports on item screening and source development at the Logistics Centers indicate that advocates continue to identify previously noncompetitive items as suitable for competition and seek additional sources.

Data Problems Continue to Impede Competition

Despite the Air Force's progress in increasing competition, about 57 percent of the $5.7 billion spent for spare parts in fiscal year 1988 was for contracts awarded noncompetitively. Statistics indicate that about

76 percent of the noncompetitive procurements were attributable in part to unavailable engineering data needed for additional manufacturers. Valid reasons exist for not having some data. However, prior reports have generally concluded that the Air Force needs to do more to ensure availability of needed engineering data. The Air Force has taken some actions to improve item screening and facilitate reverse engineering. Nevertheless, GAO's review showed data problems continue to substantiate the previous conclusions.

Moreover, the competition advocates' programs do not address the reasons for unavailable data. Item screening, for example, attempts to identify and obtain missing data but does not address the reasons for unavailable data. Accordingly, item screening is not intended to prevent future occurrences of similar data problems.

New Approaches and Better Information Needed

Most of the dollars for noncompetitive purchases are for a relatively few high-dollar parts, and these purchases potentially offer the opportunity to compete more dollars. For example, the top 9 percent of the parts due in to the Oklahoma City Air Logistics Center accounted for 75 percent of the dollars. A sample of the most recent purchases of those parts showed that 75 percent of those purchased by the Logistics Center were not competed. Focusing attention on the noncompetitive high-dollar parts could increase the dollars competed but would require a different approach than the current process, which focuses attention on parts currently in the procurement process.

Materiel managers, who are familiar with parts' requirements and manufacturers, could be more involved in working with the advocates to obtain competition. These managers are in the best position to identify those noncompetitive parts with the most potential for competition and create a competitive environment before the parts enter the purchasing process. Early identification of competitive opportunities would allow advocates time to overcome competitive barriers such as unavailable data.

Furthermore, advocates need better management information to assess program results. Even though Air Force competition indicators show progress, they are influenced by too many other factors to measure effectiveness adequately. Competition advocates cannot determine the effectiveness of program initiatives. For example, the advocates do not track statistics on item screening to determine if parts recommended for competition were competed.

Recommendations

GAO recommends that the Secretary of the Air Force direct the Competition Advocate General to develop, considering costs and benefits,

- procedures that supplement the current screening program and involve materiel managers in developing strategies for eliminating barriers to competition in their program area specialties, paying particular attention to high-dollar parts, and
- information to identify the competitive results of source development initiatives and screening actions taken by the competition advocates.

Agency Comments

GAO requested written comments from the Department of Defense, but none were provided.

Contents

Abbreviations

AFLC	Air Force Logistics Command
AFSC	Air Force Systems Command
ALC	Air Logistics Center
GAO	General Accounting Office

Introduction

The Air Force spends about $6 billion per year for spare parts to support its weapon systems. When more than one qualified supplier has the opportunity to bid on a contract for spare parts, the contract can be awarded competitively. However, if only one qualified source is available, the contract must be awarded sole source or noncompetitively. Purchasing parts competitively helps ensure that the government pays fair and reasonable prices. It also can lead to improved ideas, designs, technology, delivery, and quality of products and services and save the government millions of dollars. When competition is impeded, the government may lose opportunities to obtain lower prices and increase the productivity and the effectiveness of its programs.

The Congress has had a long-standing goal to eliminate unnecessary noncompetitive contracts in the military procurement process. In 1984 the Congress established competition advocates in the Air Force and other executive agencies to promote the use of competition and help eliminate barriers to competition. The Air Force reported an increase in the level of competition for spare parts from 22 percent in fiscal year 1984 to 43 percent in fiscal year 1988, the last complete reporting year. Even though competitive rates have increased, 57 percent of the dollars spent for spare parts in fiscal year 1988 were for contracts awarded noncompetitively.

Role of Competition Advocates in Purchasing Spare Parts

The Air Force Logistics Command (AFLC) maintains and supports Air Force weapon systems through five Air Logistics Centers (ALC). One of the primary activities of the ALCs is to purchase spare parts. Each ALC has a competition advocate directorate, a materiel management directorate, and a contracting and manufacturing directorate that are involved in purchasing spare parts. The competition advocate directorate is responsible for promoting competition and challenging barriers through two primary programs: item screening and source development. The materiel management directorate determines and funds spare parts requirements and has responsibility for the design, development, control, and performance and reliability of assigned systems and equipment. The contracting and manufacturing directorate solicits competition, negotiates, and contracts for the purchase of the spare parts.

The process of purchasing spare parts begins when item managers in the materiel management directorate determine the purchase requirements for spare parts. Once a purchase requirement is identified, analysts in the competition advocate directorate's engineering data management

division screen or review the item to determine if a competitive acquisition strategy is warranted. First, they consider whether (1) the Air Force possesses adequate data for other potential manufacturers to produce the item and (2) more than one qualified supplier can produce the part. Next, personnel in the competition advocate directorate's source development division attempt to identify additional manufacturers and assist the manufacturers in demonstrating to engineers in the materiel management directorate that the manufacturers have the technical capability to produce the parts. Last, buyers in the contracting and manufacturing directorate issue solicitations to qualified suppliers and negotiate contracts to purchase the parts.

Objectives, Scope, and Methodology

The objectives of our review were to identify the progress and the problems experienced by Air Force advocates in obtaining competition for spare parts. To accomplish our objectives, we reviewed the competition advocate programs in the ALCs, annual statistics on the rates of competition, reports on results of program activities, the AFLC competition plans, and studies on the effectiveness of the competition advocates. (We did not verify the accuracy of the statistics.) Also, we reviewed a sample of 84 high-dollar parts from the reparable parts management system at the Oklahoma City ALC to determine the extent of competition and the reasons competition was not obtained.

We did our work at Air Force Headquarters, Washington, D.C.; AFLC, Ohio; Oklahoma City ALC, Oklahoma; Warner Robins ALC, Georgia; and Ogden ALC, Utah. At each location we interviewed responsible agency personnel and reviewed applicable policies, procedures, and pertinent documents.

We performed our review between September 1988 and August 1989 in accordance with generally accepted government audit standards. We requested written comments from the Department of Defense, but none were provided.

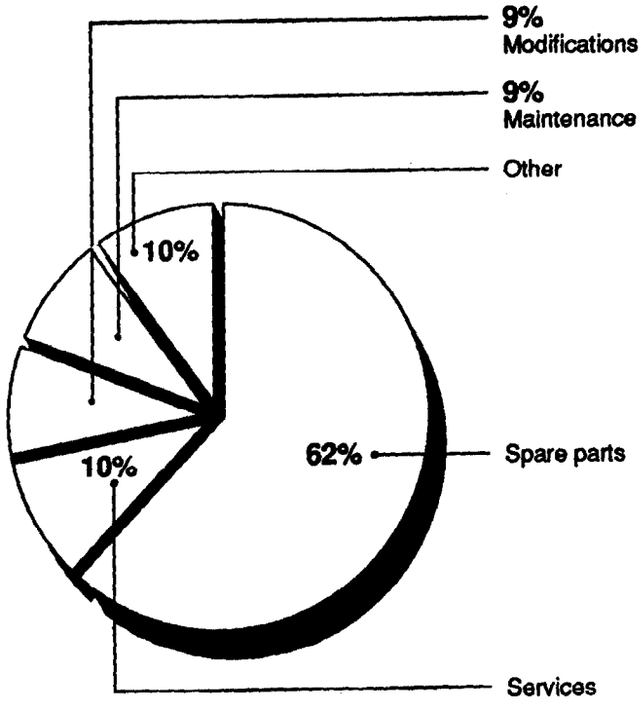
Air Force Competition Advocates Have Made Progress

Air Force reports on competition indicate that advocates have made progress. Since the Congress established competition advocates in 1984, the AFLC has reported annual increases in most measures of competition, including percent of dollars, amounts of dollars, and percent of contract actions. In addition, the AFLC has reported annually to the Congress on the progress of item screening and source development, the major programs for improving competition. Moreover, a study by the Competition Advocate General of the Air Force concluded that the competition program has been institutionalized and is effective.

Increasing Competitive Rates Reported

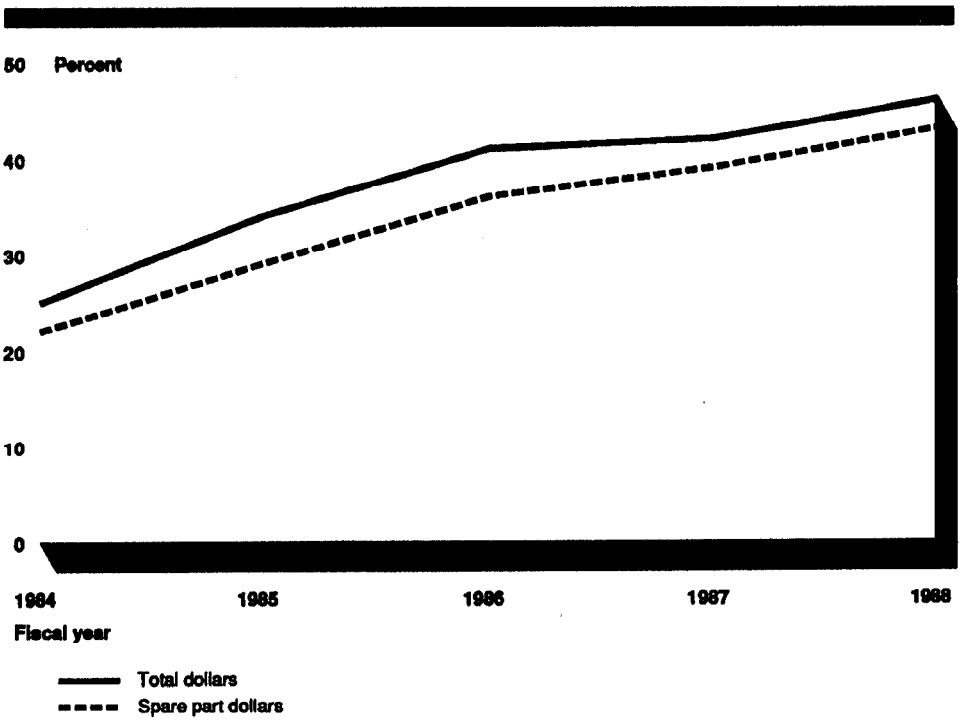
AFLC statistics on (1) the percent of dollars for contracts awarded competitively, (2) the amounts for contracts awarded competitively, and (3) the percent of competitive contract actions indicated progress in increasing competition since 1984. Competition on spare parts accounted for most of the increased rates because spare parts comprise the largest portion of the AFLC's expenditures. For example, the AFLC reported that spare parts made up about 62 percent of its total procurement spending for fiscal year 1988, as shown in figure 2.1. The AFLC reported that 43 percent of the amount spent for spare parts was for contracts awarded competitively.

Figure 2.1: AFLC's Fiscal Year 1988 Procurement Expenditures by Category



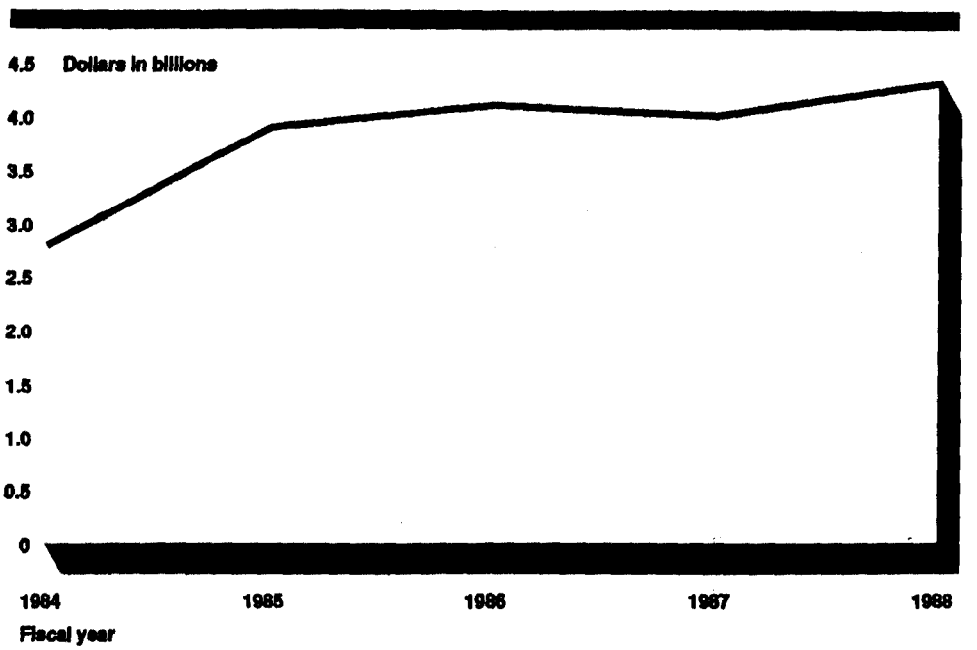
The AFLC reported that the percent of dollars for contracts awarded competitively for all expenditures increased from 25 percent in fiscal year 1984 to 46 percent in fiscal year 1988 and that the percent of spare parts dollars for contracts awarded competitively increased from 22 percent in fiscal year 1984 to 43 percent in fiscal year 1988, as shown in figure 2.2.

Figure 2.2: Percent of Total and Spare Parts Dollars Awarded Competitively



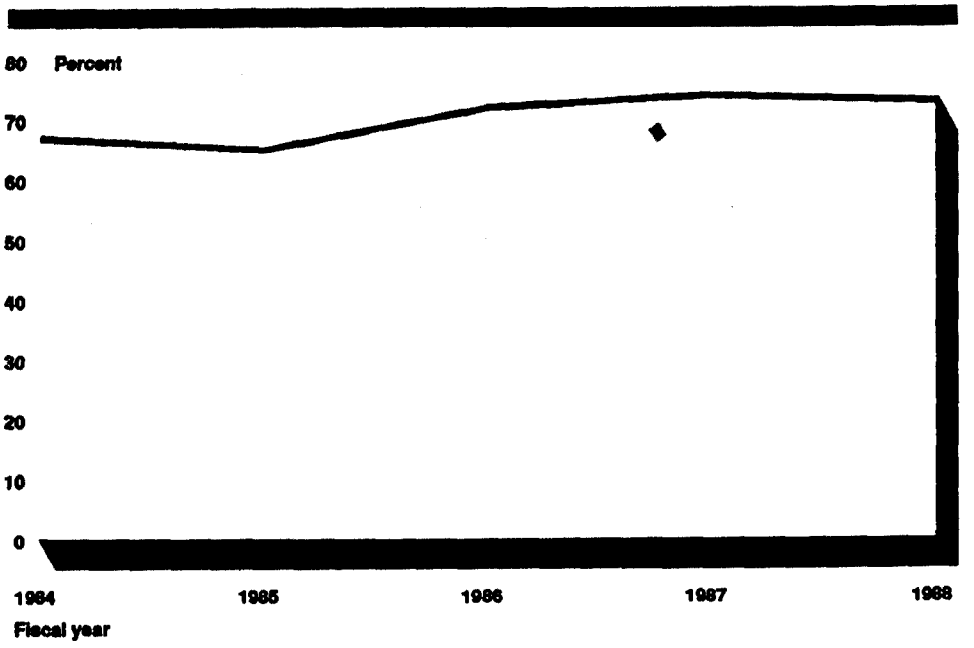
The AFLC reported that the amount of dollars for contracts awarded competitively also increased from about $2.8 billion in fiscal year 1984 to about $4.3 billion in fiscal year 1988, as shown in figure 2.3.

Figure 2.3: Dollars Awarded Competitively



Likewise, the AFLC reported the percent of contract actions awarded competitively increased from about 67 percent in fiscal year 1984 to about 73 percent in fiscal year 1988, as shown in figure 2.4.

Figure 2.4: Percent of Contract Actions Awarded Competitively



The Competition Advocate General of the Air Force attributes these trends primarily to the programs and efforts of the competition advocates.

Progress Reported in Item Screening and Source Development Programs

The AFLC reported that item screening and source development, the competition advocates' major programs for improving competition, showed increases in the percent of items deemed suitable for competition and in the percent of contractors approved as sources for parts.

Item Screening

Air Force regulations require annual reports, called Command Competition Plans, on the competition programs. According to the AFLC's 1989 Command Competition Plan, competition advocates at the five ALCs continue to identify items that were previously awarded sole source as suitable for competition. During fiscal year 1988 the advocates reviewed fewer items than in fiscal year 1987 but identified a slightly higher percent of items that were suitable for competition, as shown in table 2.1.

Table 2.1: Spare Parts Reviewed and Found Suitable for Competition

	Number of parts		
Fiscal year	Reviewed	Suitable for competition	Percent
1987	59,693	24,936	42
1988	55,259	23,938	43

The ALCs have also reported a number of successful competitive procurements resulting directly from the screening process. For example, the Ogden ALC estimated that costs of about $8 million were avoided through 1992 as a result of identifying vendors and subcontractors as competitive sources for F-4 aircraft radome components. The Air Force had previously purchased these items sole source from the prime contractor.

Source Development

Competition advocates at the ALCs have undertaken several activities to identify additional manufacturing sources to increase the likelihood of competition. These activities include conducting vendor fairs, visiting manufacturers, and publishing brochures.

Regarding vendor fairs, AFLC officials set a goal that each ALC hold at least one fair every year and participate in other fairs sponsored by various organizations. The ALCs hosted a total of 13 fairs in fiscal year 1988 and participated in 20 fairs hosted by other organizations. The fairs display sole-source replenishment spares and contractor-supported maintenance items to attract industry personnel who want either to start or expand business with the Air Force. The Oklahoma City ALC implemented a fair at which items remained on display for about three months. Oklahoma City ALC officials believe that having continuous access to the items encourages more contractors to participate.

Source development personnel also visit contractor facilities to identify additional manufacturers. According to AFLC reports, source development personnel made 558 visits during fiscal years 1985 through 1988, and 1 of these visits resulted in approving 2 alternative manufacturing sources for B-1B windshields. ALC officials estimated that the competition would save the Air Force about $2.4 million over a 5-year period.

In addition, four ALCs publish a brochure referred to as a "hit list," which is sent to potential manufacturers. It identifies selected parts currently being purchased noncompetitively that the Air Force would like

to obtain competitively. The ALCs do not report the number of conversions to competition resulting from these lists.

Overall, the Air Force has reported an increase in the percent of contractors that are being approved as sources for items. According to AFLC statistics, contractors requested approval as sources for over 27,000 items during fiscal years 1985 through 1988 (see table 2.2). The engineers in the materiel management directorate approved over 19,000 of these requests and therefore increased opportunities for competition.

Table 2.2: Number of Contractors Approved as Sources

	Number of contractors		
Fiscal year	Requesting approval	Approved	Percent
1985	7,327	4,315	59
1986	6,670	4,696	70
1987	6,957	5,449	78
1988	6,298	5,116	81
Total	**27,252**	**19,576**	**72**

Competition Advocate General Reports Progress

The Competition Advocate General of the Air Force assessed the institutionalization and effectiveness of competition programs. As part of the study, both the Air Force Systems Command (AFSC) and the AFLC conducted self-evaluations based on criteria established by a steering committee. The criteria for institutionalization included having policies and procedures, an organization and resources, a training program, and a method of monitoring performance. The criteria for effectiveness included cost avoidance by competition, proper utilization of resources, and sufficient resources to accomplish programs. Another part of the study looked at the competition advocates' efforts to promote competition and challenge noncompetitive procurements.

The Competition Advocate General, the AFSC, and the AFLC concluded that the competition program has been institutionalized and is effective. The AFLC report said that substantial achievements had been made and that competition statistics indicated that its field units have effectively implemented the programs. Both the AFLC and the AFSC identified the development of competition policies and procedures, their commitment to competition, and dollar savings as the strengths of their competition programs. However, both raised concerns about the need for engineering data so that additional manufacturers could compete, and the AFLC indicated a need for meaningful management indicators of effectiveness.

Engineering Data Problems Continue to Impede Competition

Even with the reported increases in competition, the Air Force is missing potential opportunities to achieve savings and other benefits derived from competition. This is occurring primarily because the Air Force lacks adequate engineering data needed for additional manufacturers to produce the parts. This problem is not new. Reports by us, the Air Force, and the Department of Defense have identified for years that unnecessarily unavailable engineering data has been the major impediment to increasing competition for parts. Furthermore, the conclusions of these reports—that the Air Force needs to (1) provide increased management attention early in a weapon system's acquisition to ensure that the engineering data needed for additional manufacturers to produce the part are obtained when appropriate and (2) better coordinate the delivery and the review of engineering data—are generally still applicable. Although the Air Force competition advocates' approaches to increasing competition and the AFLC's technical improvements to enhance the quality of data are helpful, they do not eliminate the reasons for the data problems.

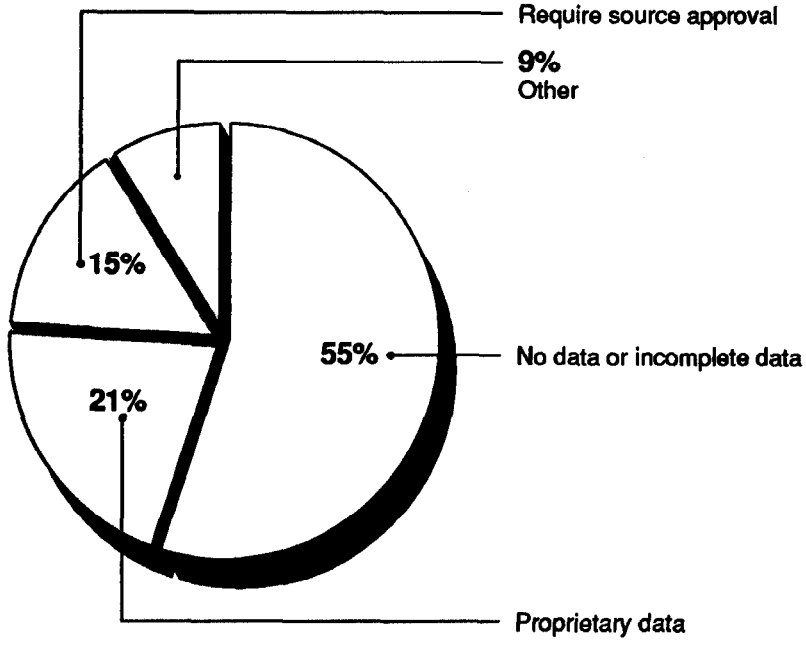
Unavailable Data Is the Major Cause of Noncompetitive Procurements

In fiscal year 1988 the AFLC spent about $5.7 billion for spare parts, of which about $3.2 billion, or about 57 percent, was for contracts awarded noncompetitively. AFLC statistics on the results of spare parts procurement screening and a sample of high-dollar procurements at the Oklahoma City ALC showed that a high percent of all the noncompetitive AFLC procurement actions were partly due to unavailable engineering data.

Procurement Screening Statistics

Screening program personnel review for competition those parts identified to be purchased. By the end of fiscal year 1988, the AFLC had reviewed or screened for competition 313,573 items. Competition advocates determined that 127,996, or 41 percent, of these items could be procured competitively and that 185,577, or 59 percent, were not suitable for competition. Unavailable data accounted for about 76 percent of the items determined by the advocates to be unsuitable for competition, as shown in figure 3.1.

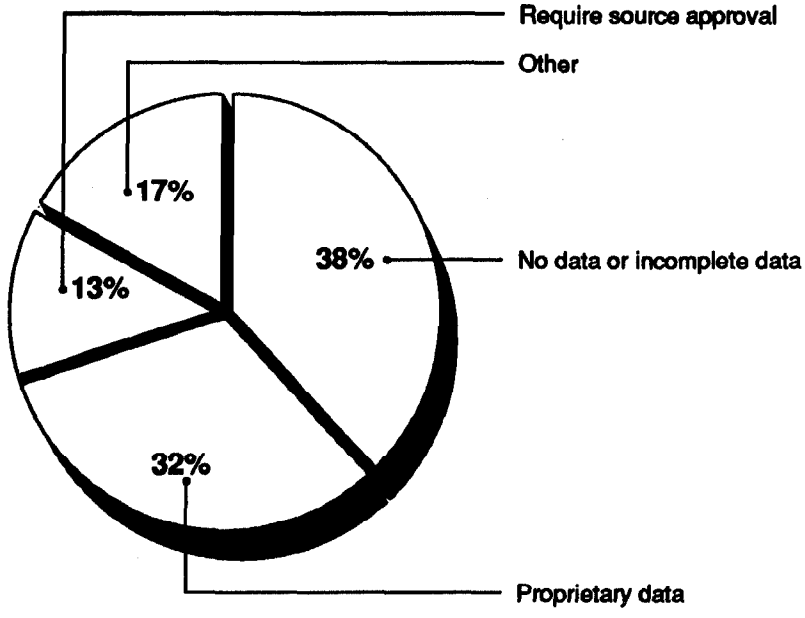
Figure 3.1: Reasons That Items Were Unsuitable for Competition



Spare Parts Sample

At the Oklahoma City ALC, a sample of the top 385 reparable spares on order with the highest dollar values showed that unavailable data accounted for about 70 percent of the items determined to be unsuitable for competition, as shown in figure 3.2.

Figure 3.2: Reasons That Items Were Unsuitable for Competition at the Oklahoma City ALC



In addition, AFLC's competition effectiveness study, discussed previously, concluded that no data or incomplete data is consistently the major reason for being unable to compete items.

Unavailable Data Has Been the Major Barrier for Years

Although valid reasons exist for not having some of the engineering data that additional manufacturers need to produce the parts, we, the Air Force, and the Department of Defense have reported that unnecessarily unavailable engineering data needed for the procurement of spare parts has been the major impediment to competition in parts purchases. For example, as early as 1961 we reported[1] unsatisfactory conditions in the military services' receipt, control, and use of contractor-furnished data. In response to the report, the Department of Defense said these conditions were among the most intricate and difficult problems confronting management, and, until they are corrected, progress by the military services in increasing competitive procurement of aeronautical replacement spare parts will be seriously impeded.

In October 1983 the Air Force Management Analysis Group reported that Air Force efforts to obtain the data necessary to purchase spare

[1]Review of Noncompetitive Procurement of Aeronautical Replacement Spare Parts Within the Department of Defense (B-133396, Sept. 18, 1961).

parts competitively were not effective and that procedures for accepting engineering data focused on format with little attention to usability. The report further stated that adequate criteria for evaluating the usability of data did not exist. The usability of the data can only be determined, in most cases, at the time of use for competitive procurement, which generally takes place long after the data have been developed, delivered, and accepted. According to the report, once the data entered the Air Force system, serious problems occurred with storage, distribution, and control. The report also stated that management underemphasized planning for spare parts competition during a weapon system's development and acquisition.

According to a 1988 report by the Air Force Inspector General, much of the future competitiveness in spare parts acquisition is directly related to the up-front emphasis, or lack thereof, in engineering data and its management. Furthermore, a long-term commitment to improving engineering data management is essential to ensuring lasting improvements in competitive spare parts procurement.

During this review we found that reasons for unnecessarily unavailable data included late delivery of the data, incomplete or illegible data, and lost data. For example, about 15 percent of the high-dollar reparable items in our sample at the Oklahoma City ALC were judged not suitable for competition because contractors had not delivered engineering data needed for additional manufacturers to produce spares for the B-1B bomber. The B-1B contracts required the contractors to deliver the engineering data before December 1986, but by August 1988 the Air Force had received only 4 percent of the data. Since that time additional data have been received, and all data are expected by March 1990. However, the Air Force has rejected the first three data deliveries because of technical problems and errors in the data. Until acceptable data are delivered, the Air Force will be precluded from obtaining competition on most B-1B spare parts.

The conclusions in previous reports are generally still applicable. The Air Force needs to (1) provide increased management attention early in a weapon system's acquisition to ensure that needed engineering data are obtained when appropriate and (2) better coordinate the delivery and the review of such data.

Advocates' Efforts Do Not Address the Reasons for Data Problems

The Competition Advocate General established a goal for fiscal year 1988 to improve data quality and availability. Two programs to improve data availability are item screening and reverse engineering. These programs address problems with unavailable data after they occur rather than prevent the problems. The programs also attempt to obtain the engineering data needed to achieve competition on individual parts before procurement. Also, technological improvements that are underway in the AFLC should help support item screening and facilitate reverse engineering. These improvements address concerns expressed in earlier reports regarding data storage, but they do not address data problems that occur early in the acquisition process. The AFSC's advocates that are involved in the early phases of the acquisition process have no specific program for ensuring the adequacy of engineering data during the acquisition of major systems.

AFLC Efforts

Item screening and reverse engineering are two programs used by competition advocates in the AFLC to address the problem of unavailable data. Technological improvements will also be used to facilitate the programs. Item screening determines, on a case-by-case basis, if engineering data are available to allow other manufacturers to bid on an item. According to analysts and officials at the ALCs, obtaining the necessary engineering data to enable competitive procurement of spares can, and often does, take a long time. The process of assembling a complete data package often requires a series of requests for data from contractors. The receipt of one drawing can often identify the need for additional drawings or for the drawings to be clarified.

During the screening of an F-15 spare part included in our Oklahoma City ALC sample, a data technician identified the need for additional data. In a May 12, 1986, letter, the technician requested certain engineering drawings from the manufacturer. The ALC received the drawings on August 29, 1986, but these drawings identified that additional drawings were needed to manufacture the part. Because sufficient data were not available in time to complete the data package, the ALC, on September 26, 1986, awarded a noncompetitive contract totaling $8.3 million to the manufacturer for 43 of the parts. On May 1, 1987, in preparation for a reprocurement of the same part, engineers again requested the additional needed drawings. Once again, the ALC did not receive the drawings in time and awarded noncompetitive contracts for this part on May 28, 1987, and on September 27, 1987, for $1.6 million and $3.5 million, respectively.

When engineering data are unavailable, reverse engineering may be used to develop needed engineering drawings. Under this process, the Air Force provides sample parts to contracting firms and solicits competitive bids for the development of complete engineering drawings. According to Air Force officials, spare parts funding may be used for this process as long as requirements exist for the part. Otherwise, operation and maintenance funds must be used. According to the Competition Advocate General, obtaining operation and maintenance funds for this process is difficult because funding must compete with other high-priority operation and maintenance projects.

The AFLC is also involved in a number of technological improvements to increase efficiency and improve quality. These include computer-aided design/computer-aided manufacturing, engineering data computer-assisted retrieval, contract data management, and engineering data integrated distribution systems. Although these improvements should facilitate competition and enhance data quality through improved storage and retrieval and faster reverse engineering, they do not address other up-front reasons for unavailable engineering data. For example, since the engineering data computer-assisted retrieval system is designed to automate the requisitioning, indexing, filing, retrieving, and distributing functions of engineering data depositories, it should facilitate the item screening program. However, the system does not resolve or address such problems as undelivered data or unacceptable data. Furthermore, the Air Force does not expect to complete the system until 1996.

AFSC Efforts

According to the Competition Advocate General and the AFSC Competition Advocate, advocates in the AFSC are involved in obtaining engineering data. They participate in the planning of the acquisition of engineering data and, from time to time, answer inquiries from ALCs about specific data problems. However, advocates in the AFSC said that they primarily focus on obtaining competition in the procurement of the major weapon systems. For example, the Aeronautical System Division's competition plan for fiscal years 1989 through 1991 emphasizes attempts to increase competition in major acquisitions but does not mention efforts to ensure that the contractors provide adequate engineering data to allow competition in the future purchase of spare parts.

Conclusions

Despite efforts to improve data quality and availability, unnecessarily unavailable data remains the major impediment to increasing competition. Programs need to address the reasons for unavailable data. The

competition advocates' efforts to obtain unavailable data, although helpful, primarily address the problem after it occurs. Therefore, the conclusions of previous reports—that the Air Force needs to (1) provide increased management attention early in a weapon system's acquisition to ensure that the engineering data needed for additional manufacturers to produce the part are obtained when appropriate and (2) better coordinate the delivery and the review of engineering data—are generally still applicable.

New Approaches and Better Information Should Help Advocates

In addition to ensuring that engineering data are available to obtain competition on spare parts, new approaches and better management information should help competition advocates improve the effectiveness of their programs and measure results. According to the Competition Advocate General, the Air Force is obtaining most of its competition on spare parts when competition is most easily achieved. The Competition Advocate General believes that increasing competition on future spare parts purchases will not be easy. The current process focuses on achieving competition on those parts that are currently being purchased. However, AFLC statistics and a sample of high-dollar spare parts at the Oklahoma City ALC indicated that most of the dollars for noncompetitive purchases are for a relatively few high-dollar parts. Identifying and focusing management attention on the high-dollar parts with high competitive potential will require another approach. Also, better management information is needed in assessing the effectiveness of the advocate's programs.

Current Process Has Limitations

Under the current process, the ALCs initiate screening for competition when they receive purchase requirements. The Competition Advocate General said that advocates wait until receipt of a purchase requirement to initiate screening because they do not want to waste time screening parts that may not be purchased. This process, however, focuses on those noncompetitive parts currently being purchased and limits the advocates to obtaining competition in time to meet the part's requirement date. As the advocates deal with more challenging problems, such as multiple requests for data, an approach that identifies and focuses on parts before the purchasing process starts should help in increasing competitive purchases.

Increased Attention on High-Dollar Parts Needed

High-dollar parts can have more of an impact on the dollars for contracts awarded competitively. For example, a March 31, 1988, list of parts due in to the Oklahoma City ALC showed that the top 400 items, about 9 percent of the items on the list, accounted for about 75 percent of the total cost of those parts. Furthermore, the top 16 items, less than 1 percent, accounted for about 21 percent of the total cost. A sample of the most recent purchases of the items indicated that high-dollar items are less competitive. The sample also showed that about 75 percent of the most recent buys of the top items applicable to the Oklahoma City ALC were not competed, including 13 of the top 16 items. Also, the 1988 AFLC competitive statistics indicated that high-dollar items are less competitive. For example, 27 percent of the contract actions that were not

competitive accounted for over half (54 percent) of the dollars. Thus, an approach that focuses on identifying and eliminating barriers to competitive buys of high-dollar parts offer the most potential to compete more dollars.

Management Involvement in Targeting High-Dollar Parts Needed

Materiel managers should identify those high-dollar parts that offer the greatest potential for competition because these managers know how the parts are used and which parts will most likely be needed. They also make decisions that affect the competitiveness of those parts, such as determining if manufacturers are qualified to produce the parts. Therefore, involving materiel managers in identifying parts for competition, setting competition goals, and carrying out plans to increase competition should help increase competition for high-dollar parts.

Targeting items for improved competition has been successful. For example, the San Antonio ALC's competition advocate directorate coordinated efforts with the materiel management directorate and the contracting and manufacturing directorate to increase the competition rate (the competitive obligations divided by the total obligations) for the T56 engine. According to the AFLC, the competition rate on the T56 was initially below 5 percent. Goals were set at 25 percent for fiscal year 1988, 40 percent for fiscal year 1989, and 50 percent for fiscal year 1990. The rate reported through June 1988 was about 24 percent.

The Warner Robins ALC is involving materiel management personnel in planning and developing competition. The competition advocate at the Warner Robins ALC asked the Director of Materiel Management to make a commitment to competition and obtain a commitment from the various materiel management divisions and system program managers. The advocate provided information on past division-level competition rates and asked that they identify at least 10 high-dollar items for each division that could be targeted for competition. Although the results of this effort are not yet known, the concept appears to offer a valuable supplemental method for breaking down barriers to competition on high-dollar parts.

Better Management Information Needed

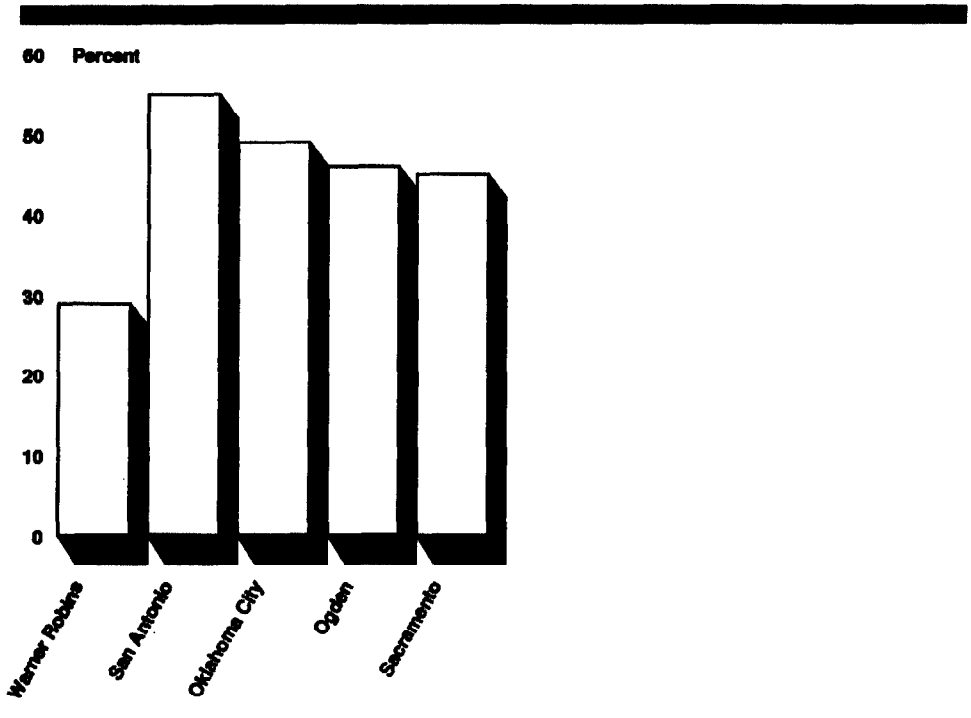
The competition advocate does not obtain the information necessary to evaluate the effectiveness of the efforts being taken to achieve competition. The competition advocate currently judges progress by broad

measures of competition rates. Without additional information the advocate cannot determine whether competition is being effectively obtained by the various programs.

Competition Rates Do Not Measure Effectiveness

Although the trends in competitive rates indicate that advocates have had a positive effect in increasing competition, the trends do not measure the effectiveness of advocates' programs. A high competition rate at one ALC does not necessarily mean that a more effective job is being done. Figure 4.1 shows the range of competition rates reported for fiscal year 1988 at each ALC.

Figure 4.1: Fiscal Year 1988 Competition Rates at Each ALC



The competition rate at each ALC may be affected by differences in the types of parts being procured, total obligations, regulatory interpretations, foreign military sales, and initial provisioning parts. For example, the competition rate at Warner Robins ALC is affected by large follow-on production acquisitions of electronic warfare systems and subsystems. (The ALC's competition rate for spare parts other than electronic warfare was 46 percent in fiscal year 1988.)

The rates can also be affected by events unrelated to competition programs. For example, the AFLC's competition effectiveness study reported that the competition rate is distorted because deobligations of funds from prior fiscal years were combined with obligations from the current fiscal year. The fiscal year 1989 AFLC competition plan pointed out that including deobligations of noncompetitive purchases from a prior fiscal year improved the competition rate by lowering the overall obligations but not competitive obligations. This increased the competition rate without increased competition.

Management Information Is Needed to Relate Program Efforts to Results

AFLC's advocates cannot determine to what extent program initiatives enhance competition. The existing information describes the work load completed but not competition achievements. For example, the advocates know that in fiscal year 1988 they screened 55,259 spare parts and identified 23,938 as suitable for competition. However, the advocates do not track statistics on item screening to determine if the parts they recommended for competition were actually competed. In another example, the advocates know that they made 558 visits to contractor facilities during fiscal years 1985 through 1988, but they do not identify how much more competition resulted from these visits.

Without detailed information on program initiatives, the AFLC advocates cannot determine whether the limited resources they use are effective. Information on how well program initiatives enhance competition could lead to changes in where resources are placed and help maximize the competitive posture of the Air Force.

Recommendations

We recommend that the Secretary of the Air Force direct the Competition Advocate General to develop, considering costs and benefits,

- procedures that supplement the current screening program and involve materiel managers in developing strategies for eliminating barriers to competition in their program area specialties, paying particular attention to high-dollar parts, and
- information to identify the competitive results of source development initiatives and screening actions taken by the competition advocates.

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