United States General Accounting Office

GAO

Report to the Secretary of Defense

March 1996

DEFENSE LOGISTICS

Requirement Determinations for Aviation Spare Parts Need to Be Improved

GAO/NSIAD-96-70

GAO

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

National Security and
International Affairs Division

B-260432

March 19, 1996

The Honorable William J. Perry
The Secretary of Defense

Dear Mr. Secretary:

We reviewed the Air Force's and the Navy's policies and procedures for determining requirements and budgets for aviation spare parts. Our objective was to determine whether the Air Force's and the Navy's requirements and budgets reflect the actual amounts needed.

Background

The Air Force and the Navy budget and spend billions annually to procure and repair aviation spare parts. For example, for fiscal year 1997, the Navy budgeted $1.4 billion for this purpose.[1] For fiscal year 1996, the Air Force budgeted $3.9 billion to procure and repair aviation spare parts. The Air Force's F-100 engines used on F-15 and F-16 aircraft and the Navy's F-404 engines used on F/A-18 aircraft account for a sizable portion of the procurement and repair budgets and expenditures for aviation spare parts.

Both services use automated systems to compute requirements and to prepare their annual budgets for aviation spare parts. The systems base the computations on past usage, acquisition lead times, flying hour programs, maintenance replacement factors, and additional special needs. Requirements are then offset by the assets on hand and on order to arrive at the amounts needed.

Results in Brief

The Air Force and the Navy budgeted $132 million more than needed for aviation spare parts because of questionable policies concerning the determination of requirements and the accountability for depot maintenance assets. The Air Force, in preparing its fiscal year 1996 budget for aviation parts, did not consider $72 million of on-hand assets. In preparing its fiscal year 1997 requirements for aviation parts, the Navy counted $60 million in depot maintenance requirements twice.

Our sampling tests showed that the Air Force and the Navy made other errors in computing their requirements because management oversight procedures and internal controls were not adequate. The Air Force and the Navy used unsupported or incorrect (1) maintenance replacement rates,

[1]Similar fiscal year 1997 data was not available for the Air Force at the time of our review.

(2) demand rates, (3) planned program requirements, (4) repair costs, (5) lead times, (6) due-out quantities, and (7) asset quantities on hand and on order. These inaccuracies totaled $35 million on the sample items alone and resulted in some requirements' being overstated by $25 million and others' being understated by $10 million.

Air Force and Navy Policies Result in Overstated Requirements

Although Air Force and Navy policies and procedures related to reserving on-hand assets for depot maintenance requirements differ, both agencies' policies and procedures result in overstated requirements. Our review of overall budget inventory data related to these assets and our sampling tests of F-100 and F-404 engine parts showed that the Air Force and the Navy overstated budgeted buys and repairs by about $132 million. This overstatement occurred because of questionable Air Force and Navy policies concerning the determination of requirements and the accountability for assets held in reserve to satisfy depot maintenance needs.

Air Force

Since 1984, Air Force policy has been to reserve on-hand consumable parts[2] for depot maintenance needs and not to use these assets to offset computed requirements when deciding to buy or projecting annual budgeted buys. This Air Force policy is unlike the Navy's, which does require that assets held for depot level maintenance needs be applied to computed requirements.

The Congress has made several attempts to change the Air Force's policy. In response to our 1989 report,[3] the House Committee on Armed Services directed the Air Force to consider depot supply level assets in its requirements and budget computations. In 1992, we reported[4] that the Air Force continued to exclude depot supply level assets from its requirements and budget computations. As a result, the Congress reduced the Air Force's operation and maintenance budget for fiscal year 1994.

Despite these efforts, the Air Force continues its policy of not considering depot supply level assets in requirements and budget computations. Our

[2]Consumable parts are not economically reparable and are discarded when worn out or broken. In contrast, reparable items are parts that can be fixed and used again.

[3]Military Logistics: Air Force's Management of Backordered Aircraft Items Needs Improvement (GAO/NSIAD-89-82, June 2, 1989).

[4]Air Force Requirements: Cost of Buying Aircraft Consumable Items Can Be Reduced by Millions (GAO/NSIAD-93-38, Nov. 18, 1992).

analysis of overall inventory data for fiscal year 1995 showed that the Air Force overstated fiscal year 1996 budgeted requirements by $72 million because assets reserved for depot maintenance were not applied to budgeted buy requirements.

Our sampling test of 22 F-100 engine parts for which there were actual and budgeted buys also showed that the Air Force continues to exclude depot supply level assets from its periodic requirement and annual budget computations. Of 22 sample items, 10 had depot supply level assets valued at about $1.8 million that the Air Force did not apply to offset recurring depot level maintenance requirements in the periodic requirements and annual budget computations. Of the 10 items, 3 had current buys costing about $2.7 million, which could have been reduced by about $366,000 if depot supply level assets had been applied to offset requirements.

For example, in September 1994, the San Antonio Air Logistics Center computed an initial buy quantity of 31,420 F-100 engine duct segments (NSN 2840-01-270-7659PT) costing about $2.8 million. In finalizing the buy computation, the Center made changes, lowering the buy to 2,868 items costing about $307,000. However, the computation did not consider 3,680 depot supply assets that were available to offset requirements. If these assets had been applied to offset requirements, this procurement would not have been necessary. Similarly, the Center overstated budget requirements by not applying these depot supply level assets.

According to Department of Defense (DOD) Materiel Management Regulation 4140.1-R, dated January 1993, the inventory managers, for the purpose of limiting buys and repairs, shall apply all retail and wholesale assets against wholesale requirements. Nevertheless, DOD's and the Air Force's position is that depot supply level assets are set aside for depot maintenance and, therefore, are not considered to offset wholesale requirements. We do not agree with this position because depot supply level assets are a part of the wholesale inventory. They have not been issued from wholesale storage and transferred to the depot maintenance activities. Further, because wholesale requirements are based on past recurring demands, it is reasonable to expect that assets procured to meet these demands should be considered when making future procurement decisions.

Navy

The Navy's policies and procedures related to assets reserved for depot maintenance needs, unlike the Air Force's policies and procedures, require

the Navy to apply these assets to computed requirements. However, we found that some Navy requirements are duplicated, resulting in overstated requirements. On the basis of our review of overall fiscal year 1995 budget data for aviation parts and our sampling test of 12 F-404 engine parts, we found that the Navy overstated fiscal year 1997 stock fund budgets by at least $60 million. This occurred because the Navy included reserve level depot maintenance requirements in periodic requirements and annual budget computations twice. These reserve levels are included once as recurring demands based on past depot maintenance usage and again in a planned program requirements category that is not based on recurring demands.

For example, in May 1995, the Aviation Supply Office budgeted a fiscal year 1997 buy for 4,734 F-404 nozzle segments (NSN 2840-01-166-4886TN) costing about $7.8 million. We found that the budgeted buy requirement was overstated by 1,008 units, valued at about $1.7 million, because this requirement was included twice. It was included as a separate, identifiable nondemand-based requirement and again as part of the recurring demand-based requirements.

Aviation Supply Office officials told us that the apparent duplication of requirements in the fiscal year 1997 aviation parts budget was offset by the application of assets reserved for depot maintenance to the recurring demand requirements. We disagree that the duplication of requirements is entirely offset by the application of these assets because the requirements are still incorrectly included as both recurring and nonrecurring demand requirements, but the assets are only applied once.

Computations Are Inaccurate

We reviewed a sample of 34 F-100 and F-404 engine parts for which the Air Force and the Navy projected high-dollar buys or repairs in fiscal year 1995. We identified inaccuracies in the periodic requirement or budget computations for 22 items (64 percent of the sample items) that resulted in under or overstated requirements valued at $35 million. These inaccuracies were due to the use, in requirement computations, of unsupported or incorrect (1) maintenance replacement rates, (2) demand rates, (3) planned program requirements, (4) due-out quantities, (5) lead times, (6) repair costs, and (7) asset quantities on hand and on order.

Air Force

We reviewed 22 F-100 engine consumable parts and found inaccuracies in the Air Force's computations for 12 items. The inaccuracies caused the

fiscal year 1995 budget requirements to be understated by about $2 million on some items and overstated by about $10 million on others. The inaccuracies occurred because inventory managers used incorrect requirement and asset information or did not make necessary changes when updating budget requirement computations. The inaccurate information included incorrect (1) lead times, (2) due-out quantities, and (3) asset quantities on hand and on order.

For example, in September 1994 the San Antonio Air Logistics Center computed an initial buy quantity of 756 F-100 engine ring assemblies (NSN 2840-01-327-2917PT). In finalizing the buy computation, the Center made changes to reflect updated information that decreased lead time and due-out requirements and increased on-hand and on-order assets. As a result, the computation changed from a 756 buy to a zero buy. Changes made on buy computations also affect budget requirement projections. However, in this case the Center did not make these changes in the final budget requirements computation. As a result, budget requirements were overstated by $4.3 million.

In another example, the San Antonio Air Logistics Center (in September 1994) computed an initial buy quantity of 21,524 F-100 engine stage compressor blades (NSN 2840-00-371-2217PT). In finalizing the buy computation, the Center made changes to reflect updated information that decreased lead time and due-out requirements and increased on-hand and on-order assets. As a result, the computation changed from a 21,524 buy to a zero buy. However, the changes were not reflected in the final budget requirements computation. As a result, budget requirements were overstated by $1.1 million.

Our review identified a need to strengthen existing procedures and practices for management level review and validation of budget requirement computations. Air Force Materiel Command Regulation 57-6, dated January 29, 1993, assigns primary responsibility for the accuracy and integrity of consumable item requirements to Air Logistics Center management. However, the regulation allows management personnel at the centers to delegate authority to lower level analysts to carry out certain quality review and control functions. We found that periodic requirements and annual budget computations for the 22 sample items generally were signed off at the supervisor level. However, this level of review is not ensuring that necessary requirement changes are reflected in the budget requirement computations.

Navy

We reviewed 12 F-404 engine parts and found inaccuracies in the Navy's computations for 10 items. The inaccuracies caused buys and repairs to be understated by about $8 million on some items and overstated by about $15 million on others. These inaccuracies included unsupported or incorrect (1) maintenance replacement rates, (2) demand rates, (3) planned program requirements, (4) repair costs, and (5) lead times.

For example, in March 1995, the Aviation Supply Office computed a repair requirement for 328 F-404 engine compressor rotor assemblies (NSN 2840-01-288-1767) costing $26.6 million. The computation overstated repair requirements by 76, valued at about $6.1 million, because an incorrect maintenance demand rate and an erroneous parts application was used. We could find no data supporting the maintenance demand rate used. The Office provided data that showed a lower demand rate should have been used. Also the data indicated that the rotor assembly was applicable only to one type of fan and not to a second fan, which also was included in the computation.

In another case, in May 1995, the Aviation Supply Office budgeted fiscal year 1997 funds for the repair of 554 F-404 engine high-pressure rotors (NSN 2840-01-201-1357) costing $19.1 million. The budgeted repair cost was understated by $7.2 million because an outdated unit repair cost was used. The Office used a unit repair cost of $34,479, but the latest negotiated unit repair cost was $47,577.

Our review identified a need to strengthen existing procedures and practices for management level review and validation of requirement and budget computations. For example, we noted that repair computations were not receiving higher management level review and approval. These computations contained a large portion of the inaccuracies identified.

Recommendations

We recommend that the Secretary of Defense direct the Secretary of the Air Force to

- revise buy and budget requirement computation policies and procedures to require that on-hand assets reserved for depot maintenance needs be considered in periodic requirement and annual budget computations and
- strengthen management oversight procedures and internal controls to ensure that key elements (such as on-hand and due-out quantities and lead times) of requirement and budget computations are accurate.

We also recommend that the Secretary of Defense direct the Secretary of the Navy to

- revise policies and procedures for buy and budget requirement computations to eliminate duplication of depot maintenance requirements and
- strengthen management oversight procedures and internal controls to ensure that key elements of requirement and budget computations are accurate.

Agency Comments and Our Evaluation

DOD agreed that action should be taken to improve the accuracy of requirement determination processes and stated that the Air Force and the Navy are taking such actions (see app. I for DOD's complete comments). The Air Force is issuing a new instruction that will establish levels of management review depending on the dollar value of the requirement actions. This instruction is expected to provide a stronger management overview that will ensure that key elements of the requirements computation are more accurately maintained. The Navy is implementing an automated system to improve data element validation. The system will provide an on-line checkoff list of key data elements for the item manager to validate when making decisions on requirements execution and budget development.

DOD did not agree that current Air Force and Navy procedures related to reserving on-hand assets for depot maintenance resulted in overstated requirements. With regard to the Air Force, DOD stated that if assets were applied to maintenance requirements, as we believe they should be, those assets would not be available to meet other requirements. DOD also stated the issue is becoming moot because wholesale management of nearly all Air Force consumable items are being transferred to the Defense Logistics Agency.

We continue to disagree with the DOD position because wholesale requirements include depot maintenance needs that are based on past recurring demands. We believe it would be reasonable inventory management and would save money to use reserved assets to offset wholesale requirements when making procurement decisions. As for the transfer of consumable item management to the Defense Logistics Agency, this transfer is not scheduled to be completed until late 1997. Once the transfer is made, the Defense Logistics Agency must ensure that the Air

Force pays for assets when they are received at the depots. Otherwise, the Air Force may continue to reserve assets for depot maintenance, thereby precluding the Defense Logistics Agency from considering them when making procurement decisions.

With regard to the Navy, DOD stated that both planned program and recurring demand requirements are needed to provide sufficient supply support, but do not result in overstated requirements. However, DOD acknowledged that, in some situations, depot demands are considered twice. We believe that DOD is wrong in stating that this duplication does not result in overstated requirements. Some of the demands to satisfy depot maintenance needs are included once as recurring demands based on past usage and again as nonrecurring demands to meet planned program requirements. The Navy needs to eliminate this duplication to improve the accuracy of procurement and budget requirement computations and to save money.

Scope and Methodology

We reviewed Air Force and Navy policies and procedures relating to periodic requirement and annual budget computations for aviation spare parts. We discussed the rationale for current policies and procedures with officials of the Air Force's San Antonio Air Logistics Center and the Navy's Aviation Supply Office.

At the San Antonio Air Logistics Center, we reviewed 22 consumable F-100 aircraft engine parts for which the Center projected high-dollar buys for fiscal year 1995. At the Aviation Supply Office, we reviewed 12 consumable and reparable F-404 aircraft engine parts for which the Office projected high-dollar buys or repairs for fiscal year 1995. At both locations, we evaluated periodic requirement and annual budget computations. We analyzed related supporting documentation on which these buy or repair projections were based and discussed the computations with inventory managers and their supervisors.

We obtained and reviewed fiscal years 1995 and 1996 buy and repair budgets for the Air Force's aviation spare parts. We obtained and reviewed fiscal years 1995 and 1997 buy and repair budgets for the Navy's aviation spare parts. We also obtained and analyzed Air Force and Navy reserve depot maintenance asset totals for fiscal year 1995.

We performed our review between March and November 1995 in accordance with generally accepted government auditing standards.

The head of a federal agency is required by 31 U.S.C. 720 to submit a written statement on actions taken on our recommendations to the Senate Committee on Governmental Affairs and the House Committee on Government Reform and Oversight not later than 60 days after the date of the report. A written statement also must be sent to the Senate and House Committees on Appropriations with the agency's first request for appropriations made more than 60 days after the date of the report.

We are sending copies of this report to the appropriate congressional committees; the Secretaries of the Navy and the Air Force; and the Director, Office of Management and Budget.

Please contact me at (202) 512-5140 if you have any questions. The major contributors to this report are listed in appendix II.

Sincerely yours,

Mark E. Gebicke
Director, Military Operations
and Capabilities Issues

Comments From the Department of Defense

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

OFFICE OF THE UNDER SECRETARY OF DEFENSE

3000 DEFENSE PENTAGON
WASHINGTON, DC 20301-3000

ACQUISITION AND TECHNOLOGY

13 FEB 1996

(L/MDM)

Mr. Mark E. Gebicke
Director, Military Operations and
Capabilities Issues
National Security and International
Affairs Division
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Gebicke:

This is the Department of Defense (DoD) response to the General Accounting Office (GAO) draft report, "DEFENSE LOGISTICS: Requirement Determinations for Aviation Spare Parts Need To Be Improved," dated December 12, 1995 (GAO Code 703094), OSD Case 1057. The Department partially concurs with the report.

The DoD agrees that actions should be taken to improve the accuracy of requirement determination processes. Both the Navy and Air Force are taking such actions. The DoD does not agree with the GAO position that current Air Force and Navy procedures related to reserving on-hand assets for depot maintenance result in overstated requirements. Assets that are applied to maintenance requirements are not available to be applied to other requirements.

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

Sincerely,

John P. Phillips

John F. Phillips
Deputy Under Secretary
of Defense (Logistics)

Enclosure

**GAO DRAFT REPORT DATED DECEMBER 12, 1995
(GAO CODE 703094) OSD CASE 1057**

"DEFENSE LOGISTICS: REQUIREMENT DETERMINATIONS FOR AVIATION SPARE PARTS NEED TO BE IMPROVED"

DEPARTMENT OF DEFENSE COMMENTS

* * * * *

FINDINGS

FINDING A: Air Force and Navy Policies Result in Overstated Requirements. The GAO explained that the Air Force and Navy budget and spend billions annually to procure and repair aviation spare parts: the Navy budgeted $1.4 billion for FY 1997, while the Air Force budgeted $3.1 billion for FY 1996. The GAO noted that both Services use automated systems to compute requirements and prepare annual aviation spare parts budgets. Those systems base computations on past usage, acquisition lead times, flying hour programs, maintenance replacement factors, and additional special needs. Requirements are then offset by assets on-hand and on-order to arrive at needed amounts.

The GAO reported that although Air Force and Navy policies and procedures related to reserving on-hand assets for depot maintenance differ, both result in overstated requirements. The GAO review of overall budget inventory data and sampling tests of F-100 and F-404 engine parts identified overstated budgeted buys and repairs totaling about $226 million.
(pp. 1-3/GAO Draft Report)

Now on pp. 1-2.

DOD RESPONSE: Nonconcur. As discussed in the DoD responses to Findings B and C below, the Department does not agree with the GAO contention that Air Force and Navy policies and procedures related to reserving on-hand assets for depot maintenance result in overstated requirements. Accordingly, the Department nonconcurs with the entire $226 million that the GAO attributes to overstated budgeted buys and repairs.

See comment 1.

FINDING B: Overstated Requirements: Air Force Examples. The GAO reported that since 1985, Air Force policy has been to reserve on-hand consumable parts for depot maintenance needs and not to use those assets to offset computed requirements when deciding to buy or projecting annual budget buys. The GAO noted that policy is unlike the Navy policy, which does require that assets held for depot level maintenance needs to be applied to computed requirements. According to the GAO, the Congress has

ENCLOSURE

made several attempts to change the Air Force policy in response to prior GAO reports issued in June 1989 (OSD Case 7796) and November 1992 (OSD Case 9238). The GAO found, however, that despite those efforts, the Air Force continues its policy of not considering depot supply level assets in requirements and budget computations. The GAO determined that the Air Force overstated FY 1996 budgeted requirements by $72 million because assets reserved for depot maintenance were not applied to budgeted buy requirements.

The GAO discussed results of its sampling of F-100 engine parts. According to the GAO, of 22 sample items, 10 had depot supply level assets valued at about $1.8 million that the Air Force did not apply to offset recurring depot level maintenance requirements in budget computations. The GAO cited DoD Materiel Management Regulation 4140.1-R, which requires inventory managers to apply all retail and wholesale assets against wholesale requirements. The GAO pointed out, however, that it is the DoD position that depot supply level assets are set aside for depot maintenance and, therefore, are not considered to offset wholesale requirements.

The GAO disagreed with the DoD position, maintaining that depot supply level assets are a part of the wholesale inventory. The GAO stated that the assets have not been issued from wholesale storage and transferred to the depot maintenance activities. In addition, the GAO maintained that, because wholesale requirements are based on past recurring demands, it is reasonable to expect that assets procured to meet those demands should be considered when making future procurement decisions.
(pp. 4-6/GAO Draft Report)

Now on pp. 2-3.

DOD RESPONSE: Nonconcur. The Department has not agreed with this GAO position in four previous reports, and still disagrees. The GAO does not acknowledge that assets and requirements must be considered together. If assets are applied to maintenance requirements, those assets are not available to meet other requirements. The application of those assets to maintenance requirements does not depend on a physical removal of the assets. Furthermore, the Department notes that issues involving Air Force wholesale management of consumable items are being overtaken by the DoD Consumable Item Transfer. Since nearly all consumable items are being transferred to the Defense Logistics Agency for management, issues involving Military Service management of consumable items are becoming moot.

FINDING C: Overstated Requirements: Navy Examples. The GAO found that the Navy policies and procedures related to assets reserved for depot maintenance needs, unlike the Air Force,

require the Navy to apply the assets to computed requirements. The GAO pointed out, however, that the offset is negated when those requirements are duplicated resulting in overstated requirements. Based on its review of FY 1995 budget data and a sampling of 12 F-404 engine parts, the GAO estimated that the Navy overstated FY 1997 stock fund budgets by at least $154 million. The GAO concluded this occurred because the Navy included reserved level requirements in periodic requirements and annual budget computations twice: once as recurring demands based on past depot maintenance usage and again in a planned program requirements category that is not based on recurring demands.

The GAO discussed an example of a FY 1997 budgeted buy requirement for 4,734 nozzle segments. The GAO concluded that the budgeted buy was overstated by 1,008 units, valued at about $1.7 million, because the requirement was included twice: once as a separate, identifiable nondemand-based requirement and again as part of the recurring demand-based requirements. According to the GAO, Aviation Supply Office (ASO) officials said the apparent duplication was offset by the application of assets reserved for depot maintenance to the recurring demand requirements. The GAO disagreed that the duplication of requirements is entirely offset by the application of those assets because the requirements are still included twice, but the assets are only applied once. (pp. 6-8/GAO Draft Report)

Now on pp. 3-4.

DOD RESPONSE: Nonconcur. The Department does not agree with the GAO contention that the Navy is duplicating requirements because planned requirements are maintained in file, and requisitions to replenish these requirements are counted as recurring demand. The Department also disagrees with the claimed monetary benefits of $154 million.

See comment 1.

The planned requirements are necessary to provide a consumer depot level maintenance requirement. Recurring demands are used to develop a wholesale level requirement. Both are justified in accordance with DoD 4140.1-R. Similarly, the Navy has a consumer level of inventory on aircraft carriers, which is a also supported by a wholesale level of inventory. The purpose of the planned requirements and recurring demand are explained separately below to show that both are needed to provide sufficient supply support, but do not result in overstated requirements.

The purpose of recurring demands discussed by the GAO is to develop a wholesale level requirement. Recurring demands are applied in forecasting techniques to determine an average quarterly demand. This average is then applied to procurement/repair lead times, order quantity and safety level

3

with consideration of wearout and survival for repairable items. If the recurring demands were not registered, the wholesale requirement would be eliminated. This would cause the customer to wait a procurement lead time for replenishment of consumer level requirements.

The purpose of the planned requirements discussed by the GAO is to identify a consumer depot level maintenance requirement. A more detailed description of the various planned requirements is provided below. If these planned requirements were removed from the file, there would be no consumer level inventory to support daily operations. The planned requirements discussed by the GAO are identified with a document identifier code of BPR.

For repairable secondary items, depot level V purpose coded BPRs are established to provide a pool of components that permit the timely completion of scheduled depot level aircraft maintenance or major engine repair. Components are generally selected for this pool when their depot repair time exceeds the allowed off aircraft/engine time. In other words, concurrent repair of the component would delay the timely completion of the end item refurbishment. Components are issued from the pool to replace failed installs; the failed component is then repaired locally and placed back in the pool for reissue. These pool issues are not registered as recorded demands upon the supply system and therefore do not affect computations of wholesale inventory levels.

For repairable secondary items, depot level A purpose coded BPRs are established to provide a pool of components that provide for timely completion of repair for the end item aircraft or engine when components cannot be repaired locally. The pool quantity is developed to provide the number of components required for end item replacement during the anticipated time to order, ship, and receive a replacement from the wholesale system. Currently, this period is specified as 17 days. This attrition pool provides for the uninterrupted completion of scheduled depot level aircraft maintenance and major engine repair. Issues from this pool do ultimately result in demands registered upon the wholesale system and the concurrent turn-in of the unserviceable components that was removed form the end item. The demand is used to update wholesale requirements levels, and ultimately determines if the unserviceable carcass will require repair for reissue to meet forecaster customer requirements. While in this scenario the depot demand is considered twice, the applications are unique, as detailed below:

(1) To derive the A purposed BPR requirement that represents the components required to continue uninterrupted completion of the aircraft or engine overhaul during the nominal 17 day period

4

required for component reorder, shipment, and receipt from wholesale.

(2) To establish the wholesale demand base used to forecast total system component repair cycle requirements, wholesale safety level to accommodate fluctuations in that demand, and to forecast total system attrition. If depot demands were not registered at the wholesale level, depot A purpose BPRs would need to be expanded to provide for component retrograde shipment, repair scheduling and off-site repair to compensate for the lack of wholesale system support.

Consumable A purpose BPRs are established to position depot piece parts locally specifically to meet forecasted consumption by the depot in the process of repairing components or end items in order to minimize the associated repair time. The average investment level for consumable items positioned for this purpose is limited to an overall average investment level of one and one-half months of demand. This limitation applies to the aggregate average; individual items will vary in the level authorized. The demands that form the basis for this investment (designed to minimize repair turn-around times) are registered in the wholesale system as the requisitions replenishing the BPRs are submitted. These demands, along with those from other customers, are used to ensure that adequate wholesale stocks are maintained.

FINDING D: Computations Have Inaccuracies: Air Force. The GAO reported that it reviewed a sample of 34 F-100 and F-404 engine parts for FY 1995 and identified inaccuracies in the periodic requirements or budget computations for 22 items, or 64 percent of the sampled items, resulting in under or overstated requirements valued at $33 million. The GAO reported that of 22 F-100 parts sampled, it found inaccuracies in the Air Force computations for 11 items. The GAO reported that the inaccuracies occurred because inventory managers used incorrect requirement and asset information or did not make necessary changes when updating budget requirement computations. The inaccurate information included incorrect (1) lead times, (2) due-out quantities, and (3) asset quantities on-hand on-order.

The GAO discussed an example where the Air Force San Antonio Air Logistics center made changes to the initial buy quantity of F-100 engine ring assemblies to reflect updated information that decreased the lead time and due-out requirements and increased on-hand and on-order assets. The GAO noted that changes made on buy computations also affect budget requirement projections, but found that the Center did not make those changes in the final budget requirements computation, resulting in the budget requirements being overstated by $4.3 million. In another

5

example, the GAO found that the Center made changes to the initial buy quantity of stage compressor blades to reflect updated information that decreased lead time and due-out requirements and increased on-hand and on-order assets. However, the changes were not reflected in the final budget requirements computation, resulting in the budget requirements being overstated by $1.4 million.

The GAO also reported that Air Force Materiel Command Regulation 57-6 assigns primary responsibility for the accuracy and integrity of consumable item requirements to Air Logistics Center management, but allows the authority to be delegated to lower level analysts to carry out certain quality review and control functions. The GAO found that periodic requirements and annual budget computations generally were being signed off at the supervisory level, but that level of review was not ensuring that necessary requirement changes are reflected in the budget requirement computations. The GAO concluded there is a need to strengthen existing procedures and practices for management level review and validation of budget requirement computations. (pp. 8-10/GAO Draft Report)

Now on pp. 4-5.

DOD RESPONSE: Concur. As a result of the 1994 and 1995 budget requirements review, the Air Force Materiel Command (AFMC) decided to reinstate the procedures in the former Air Force Logistics Command Regulation (AFLCR) 57-19, Management Review and Signature Levels for Requirements Actions, that was rescinded in 1992. The new AFMC instruction will re-establish levels of management oversight and review according to the dollar value of the actions. With the new instruction in place, a stronger management overview will ensure that the key elements (on-hand and due-out quantities and lead times) will be more accurately file maintained in the computation. The new instruction will apply to all Air Force requirements computation systems and will be implemented within eight months after receipt of the new AFMC instruction.

FINDING E: Computations Have Inaccuracies: Navy. The GAO found inaccuracies in the Navy computations for 10 of 12 F-404 engine parts reviewed. The GAO determined that the inaccuracies included unsupported or incorrect (1) maintenance replacement rates, (2) demand rates, (3) planned program requirements, (4) repair costs, and (5) lead times.

The GAO discussed one example where the ASO computation of a repair requirement for F-404 engine compressor rotor assemblies was overstated by 76, valued at about $6.1 million, because an incorrect maintenance demand rate and erroneous parts application was used. According to the GAO, the ASO provided data indicating

a lower demand rate should have been used. In addition, the data indicated that the assembly was applicable only to one type of fan and not a second, which was also used in the computation. The GAO also cited an example where the ASO understated the budgeted repair cost for high pressure rotors because an outdated unit repair cost was used.

The GAO reported that ASO procedures for buy computations and budgets provide for graduated higher management level review and validation, but similar higher level review procedures do not exist for repair computations and budgets. The GAO concluded there is a need to (1) adopt uniform procedures for management review and validation of buy and procedures for management review and validation of buy and repair computations and (2) strengthen existing procedures and practices for management level review and validation of requirement and budget computations. (pp. 10-12/GAO Draft Report)

Now on p. 6.

DOD RESPONSE: Partially concur. The DoD agrees that the Navy can improve data element validation. Implementation of an automated system providing an on-line checkoff list of key data element to be validated is scheduled for March 1996. The DoD does not agree with the GAO contention that appropriate review procedures do not exist for repair computations. Those procedures are in ASOINST 4205.9J.

See comment 2.

* * * * *

RECOMMENDATIONS

RECOMMENDATION 1: The GAO recommended that the Secretary of Defense direct the Secretary of the Air Force to revise buy and budget requirement computation policies and procedures to require that on-hand assets reserved for depot maintenance needs be considered in periodic requirement and annual budget computations. (p. 12/GAO Draft Report)

Now on p. 6.

DOD RESPONSE: Nonconcur. As discussed in the response to Finding B, the DoD does not agree with the GAO position that assets applied to maintenance requirements are available to meet other requirements. Furthermore, issues involving Air Force management of consumable items are made moot by the continuing implementation of the DoD Consumable Item Transfer, which will send almost all consumable items to DLA for management.

RECOMMENDATION 2: The GAO recommended that the Secretary of Defense direct the Secretary of the Air Force to strengthen management oversight procedures and internal controls to ensure that key elements (such as on-hand and due-out quantities and

7

Now on p. 6.

lead times) of requirement and budget computations are accurate. (p. 12/GAO Draft Report)

DOD RESPONSE: Concur. As discussed in the response to Finding D, a new AFMC instruction will re-establish levels of management oversight and review according to the dollar value of the action. The new instruction will apply to all Air Force requirements computation systems and will be implemented within eight months after receipt of the new AFMC instruction. Estimated completion date is the first quarter of FY 1997.

Now on p. 7.

RECOMMENDATION 3: The GAO recommended that the Secretary of Defense direct the Secretary of the Navy to revise policies and procedures for buy and budget requirement computations to eliminate duplication of depot maintenance requirements. (p. 13/GAO Draft Report)

DOD RESPONSE: Partially concur. The DoD agrees that any duplication of depot maintenance requirements should be eliminated. However, the Department does not agree that Navy policies and procedures need to be revised. As discussed in the response to Finding C, the DoD does not agree with the GAO position that the Navy is currently duplicating requirements.

Now on p. 7.

RECOMMENDATION 4: The GAO recommended that the Secretary of Defense direct the Secretary of the Navy to strengthen management and oversight procedures and internal controls to ensure that key elements of requirement and budget computations are accurate. (p. 13/GAO Draft Report)

DOD RESPONSE: Concur. The Navy will improve data element validation by implementing an automated system (IM Toolkit) in March 1996. IM Toolkit will provide an on-line checkoff list of key data elements for the item manager to validate for requirements execution and budget development decisions.

See comment 2.

RECOMMENDATION 5: The GAO recommended that the Secretary of Defense direct the Secretary of the Navy to adopt uniform procedures for management level review and validation of buy and repair computations. (p. 13/GAO Draft Report)

DOD RESPONSE: Partially concur. While the DoD agrees that buy and repair actions should have a graduated level of management approval based on dollar thresholds, the Department regards current Navy policy as providing appropriate guidance in this regard.

8

The following are GAO's comments on the Department of Defense's (DOD) letter dated February 13, 1996.

GAO Comments

1. We have decreased the amount of assets reserved for depot maintenance needs from $226 million to $132 million. This reflects a reduction in the Navy's assets from at least $154 million to at least $60 million. We made this reduction because more current information provided by the Aviation Supply Office indicates that the issuance of some reparable reserve assets does not duplicate requirements. These issues do not register as recurring demands in the wholesale supply system.

2. We deleted this recommendation from the final report. Subsequent to the completion of our fieldwork, the Aviation Supply Office furnished us an instruction outlining procedures for management review and approval of buy and repair computations. In reviewing the repair computations, we found that these procedures were not being followed in that the repair computation documents did not show evidence of management level review and approval. Implementation of our recommendation to strengthen management oversight procedures and internal controls should help eliminate this problem.

Major Contributors to This Report

National Security and International Affairs Division, Washington, D.C.	James Murphy Thomas Wells Melvin Wagman
Dallas Regional Office	Calvin Phillips Enrique E. Olivares Bonifacio Roldan-Galarza Richard Madson Donald McCuistion

Ordering Information

The first copy of each GAO report and testimony is free. Additional copies are $2 each. Orders should be sent to the following address, accompanied by a check or money order made out to the Superintendent of Documents, when necessary. VISA and MasterCard credit cards are accepted, also. Orders for 100 or more copies to be mailed to a single address are discounted 25 percent.

Orders by mail:

U.S. General Accounting Office
P.O. Box 6015
Gaithersburg, MD 20884-6015

or visit:

Room 1100
700 4th St. NW (corner of 4th and G Sts. NW)
U.S. General Accounting Office
Washington, DC

Orders may also be placed by calling (202) 512-6000 or by using fax number (301) 258-4066, or TDD (301) 413-0006.

Each day, GAO issues a list of newly available reports and testimony. To receive facsimile copies of the daily list or any list from the past 30 days, please call (202) 512-6000 using a touchtone phone. A recorded menu will provide information on how to obtain these lists.

For information on how to access GAO reports on the INTERNET, send an e-mail message with "info" in the body to:

info@www.gao.gov

PRINTED ON RECYCLED PAPER

United States
General Accounting Office
Washington, D.C. 20548-0001

Bulk Rate
Postage & Fees Paid
GAO
Permit No. G100

Official Business
Penalty for Private Use $300

Address Correction Requested