

GAO

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

July 1993

AIR FORCE SUPPLY

Improvements Needed in Management of Air Mobility Command's Forward Supply System





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

National Security and
International Affairs Division

B-250545

July 21, 1993

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

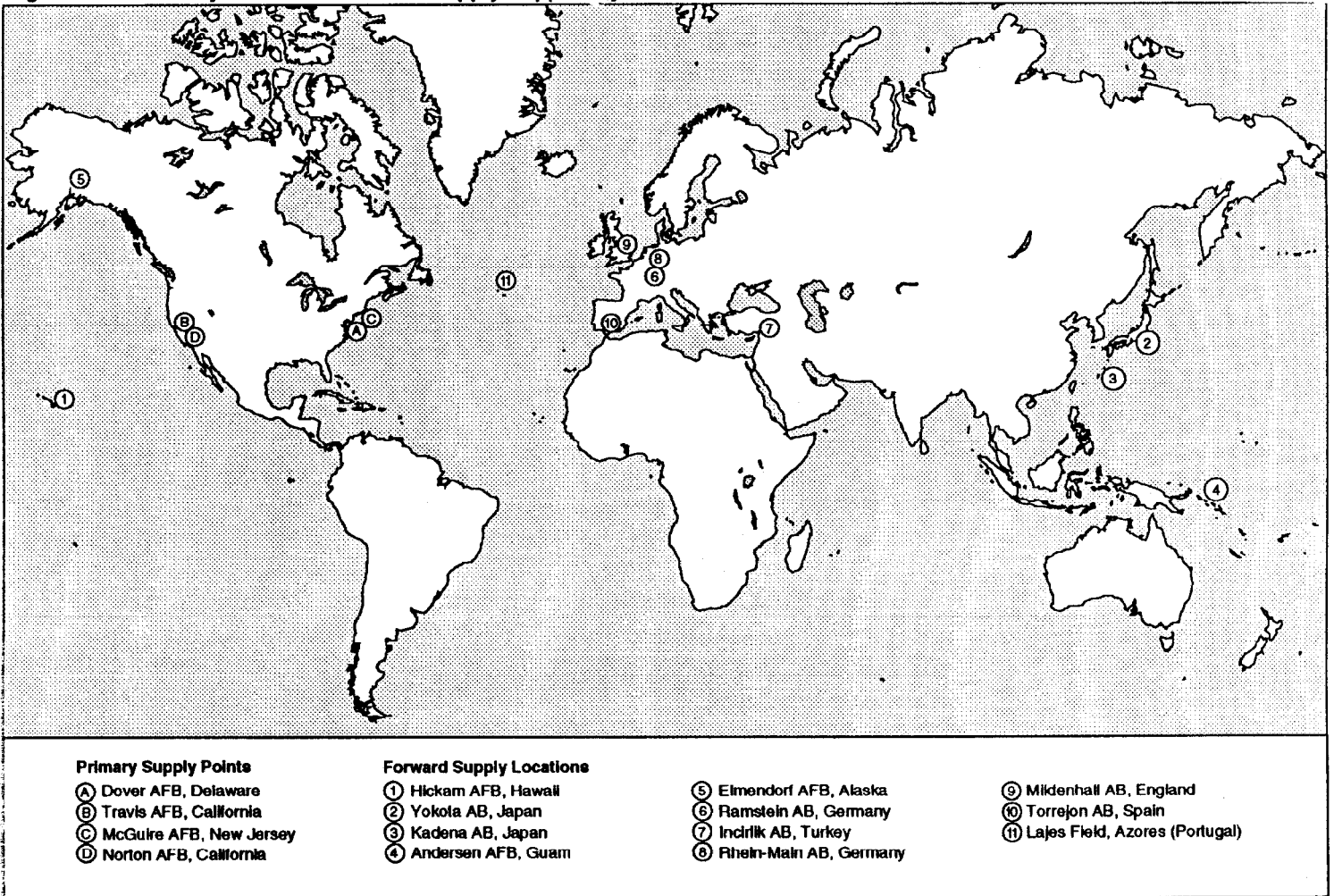
Dear Mr. Chairman:

This report provides information on how the Air Force's forward supply support system, with overseas assets valued at about \$90 million, can be better managed to reduce inventory requirements. The Air Mobility Command uses the forward supply support system to provide spares inventory at overseas bases.

Background

Air Mobility Command aircraft transit the globe to transport supplies and materiel to military units worldwide. The forward supply support system is an Air Mobility Command network of 11 overseas locations that supports airlift aircraft where they routinely land, but are not permanently based. Air Mobility Command units remove and replace failed spare parts stored at these sites. The failed parts are then shipped to four stateside bases, referred to as primary supply points. Figure 1 shows the location of the primary supply points and forward supply locations.

Figure 1: Air Mobility Command Forward Supply Support System



Source: Air Force Air Mobility Command.

The Air Force Materiel Command's worldwide inventory requirements system computes spare part needs based on historical usage. Supply regulations also recognize the use of six special requirement levels that are

added to the computed demand levels. One of these special requirements level is the forward supply support system. The Air Mobility Command develops the forward supply support system requirements that are added to the Air Force Materiel Command's demand-based requirements.

Results in Brief

The Air Force stocks more spare parts than it needs at overseas forward supply locations. While placing some stock at forward supply locations is reasonable, in some instances, the items and/or quantities exceed what is needed for expected usage.

When establishing parts requirements for new weapon systems, adding quantities for forward supply locations duplicates the requirements based on expected failure rates and flying hours. For the C-17 aircraft, these additional requirements increased the Air Force's budget request for initial provisioning in fiscal year 1993 by \$10 million. Although reductions in initial provisioning funding for fiscal year 1993 resulted in no funds for forward supply support in that year, Air Force officials estimate that \$50.6 million in spares for forward support locations will be procured during the C-17 initial provisioning period.

When parts wear out and must be replaced, usage data from forward supply locations is being reported to the Air Force's requirements system in a way that duplicates the requirements previously established by the Air Mobility Command. This reporting results in a double counting of requirements. As of November 1992, the \$90 million of inventory at forward supply locations exceeded the levels supported by historical demands by about \$18 million.

Overseas Inventory Levels Added to Initial Provisioning Quantities

Initial provisioning is the process for determining and acquiring the spare and repair parts needed to support and maintain a new weapon system for an initial period of operation. Initial provisioning requirements are generally computed by applying estimated failure rates to projected flying hours. The Air Force Materiel Command also includes additional quantities for forward supply at overseas bases. These added quantities are not supported by estimated failure rates and flying hours and are unnecessary.

Initial provisioning requirements for the Air Force's new C-17 military transport aircraft, in some instances, include nondemand-based quantities for overseas forward supply support locations. For example, the Air

Force's C-17 initial provisioning computation identified a worldwide requirement of 14 digital computers, including 6 for overseas stock. However, eight computers were the estimated quantity needed to support projected replacement requirements.

Air Force Materiel Command officials told us that because the requirements for forward supply quantities are covered in the total requirement computed from estimated failure rates and flying hours, additional forward supply quantities are not necessary. We reviewed fiscal year 1993 budget documents for C-17 aircraft initial provisioning to determine the portion that specifically requested additional items for forward supply locations—over \$10 million in procurement funds was included for this purpose. We believe the inclusion of additional funds for C-17 forward supply inventory overstated the Air Force's fiscal year 1993 budget requirement.

Recently we reported on C-17 initial provisioning and noted that the Congress may wish to consider denying the Air Force's fiscal year 1993 Aircraft Procurement budget request of \$179.2 million for C-17 initial spares.¹ No funds were authorized for C-17 initial provisioning for fiscal year 1993. However, according to the C-17 Program Office, the \$50.6 million of C-17 forward supply support initial provisioning requirements will probably be procured during subsequent years.

Forward Supply Support Inventory Levels Exceed Computed Demand Levels

According to Air Force policy, the total quantity of spare parts held for peacetime support should generally not exceed the amount needed, based on actual use. As of November 1992, the Air Mobility Command held \$90 million in spare parts at forward supply locations. Air Mobility Command officials assert that inventory levels are often set below what would be computed, based on actual use. To test this assertion, we compared the inventory level computed, based on historical demand, with actual inventory levels for 2,785 stock numbers. We found that the Command had reduced demand-based inventory levels on some items by a total of about \$15 million. However, the inventory levels for 27 percent of the stock numbers stored at forward supply locations exceeded the computed demand levels.

Table 1 shows the number of stock numbers and the dollar value of inventory that we determined to be in excess of demand.

¹1993 Air Force Budget: Potential Reduction for C-17 Initial Spares (GAO/NSIAD-92-293, Sept. 18, 1992).

Nondemand-supported inventory was stocked for 758 different items. Most of the higher-than-supported inventory fell within the range of 1 to 20 parts, with only 7 items having an overage greater than 20 parts. As shown, our analysis determined that about \$18 million of the \$90 million in spare parts inventory held at forward supply locations exceeded the stock levels supported by historical demands.

Table 1: Forward Supply System Items With Inventory Levels Higher Than Supported by Demand

Quantities by which levels stocked exceeded demand-supported inventory levels	Number of stock numbers	Dollar value of inventory in excess of demand
More than 20	7	\$ 916,367
1 to 20	16	2,687,432
6 to 10	42	4,613,934
3 to 5	184	6,227,615
2	186	1,955,172
1	323	1,575,771
Total	758	\$17,976,291

Using a typical item as an example, the Air Force authorized 10 alternating current generators at overseas locations for C-5 aircraft. Historical demand for this item supported an inventory of two at overseas locations—eight less than the quantity stocked. These generators are valued by the Air Force at \$46,407.55 each—approximately \$371,260 for the eight items stocked above demand-supported levels.

We agree with Air Force actions setting forward supply inventory levels below the demand-based inventory level for certain items. However, we believe that by limiting forward supply inventory levels to quantities supported by actual demand, the Air Force can further reduce worldwide stock levels by \$17.9 million.

Erroneous Usage Data Reported in Air Force Requirements System

In addition to excess stockage levels that occur during initial provisioning, overseas usage reporting overstates demand-based requirements. Further, the Air Force has no clear policy on duplicative reporting.

Air Mobility Command officials noted that usage at forward supply locations should not be reported either by the overseas location or by the primary supply points in the United States. They told us that the only legitimate forward supply location requirements are those the Command provides to logistics centers as an input to the worldwide requirements

computation system. Air Force Materiel Command officials disagreed, stating that overseas locations should and do report forward supply usage, but that a mechanism within the requirements computation system eliminates any overstatement of requirements.

We found that overseas forward supply locations are reporting usage and that there is often no mechanism to eliminate the resulting duplication. We reviewed reports in one division of the San Antonio Air Logistics Center and found that 9 of 11 overseas forward supply locations had reported usage involving 95 transactions for 30 different stock numbers. For example, during January to March 1992, Rhein-Main Air Base reported using a C-5 control box assembly and a C-5 electrical tachometer indicator control. Moreover, Air Force Materiel Command officials agreed with us that the mechanism to eliminate such duplicate requirements does not always work. The mechanism—known as the base safety level—is supposed to reduce the projected requirement by the amount at the forward supply location until the safety level is zero. However, Air Force Materiel Command officials told us that not all items carry safety levels and they were unable to quantify the number that do have this mechanism. We believe the number is substantial. For example, in a recent Air Force Audit Agency Report, only 84 of 251 items sampled carried a base safety level sufficient to offset additive levels intended to be addressed by this mechanism.

In August 1990, Air Force Materiel Command officials cited inaccurate reporting of actual usage data as a major problem with the spare parts requirements computation system. Under the stock funding concept now being implemented, complete and accurate usage becomes even more important to the requirements system.² Incomplete and inaccurate usage data lead to erroneous purchase and repair decisions and contribute to excessive surcharges and/or stock fund losses.

In commenting on a draft of this report, DOD disagreed about how the Air Force was using the reported usage data to determine forward supply support system levels and total requirements. Although DOD said it was not aware of any duplication in requirements, it planned to request an Air Force review and analysis of forward supply support system usage reporting. The results of that review were expected by January 31, 1993; however, they had not been provided to us as of late June 1993. DOD

²In November 1989, Defense Management Report Decision 904 transferred all replenishment spares funding to the Air Force Stock Fund. Stock funds operate under a revolving fund concept, under which inventory held by the fund is sold to users. Income from sales is then used to maintain the inventory, either through repair or procurement.

commented that a consistent forward supply support system policy is already in place, but we continue to believe that the disagreement between the Air Force Commands on usage reporting suggests otherwise.

Recommendations

The Air Force management of forward supply support spare parts leads to excessive requirements over and above what can be justified by usage. Therefore, we recommend that the Secretary of the Air Force direct the Commander, Air Force Materiel Command, to

- revise the initial provisioning policy to discontinue the use of additive forward supply levels in initial provisioning requirements for Air Mobility Command aircraft;
- eliminate such additive forward supply support spares for C-17 initial provisioning;
- eliminate requirements duplication for replenishment spares either by eliminating the overseas usage reporting or by removing the added requirement for forward supply locations;
- limit total worldwide stock levels, within the forward supply support system, to quantities supported by actual demand; and
- develop a consistent policy, in conjunction with the Air Mobility Command, regarding forward supply support management.

Agency Comments

The Department of Defense (DOD) generally did not agree with our findings and recommendations. DOD's written comments are printed in their entirety in appendix I.

DOD stated that forward supply system levels (1) were not added to the initial provisioning requirements for the C-17 aircraft and (2) do not increase overall inventory investment but simply reallocate retail inventory assets between the primary supply point and overseas locations to eliminate time spent waiting for parts.

However, we were subsequently contacted by Air Force officials and told that DOD's written response on initial provisioning was inaccurate. Office of Secretary of Defense and Air Force officials now agree that forward supply support levels are added to initial provisioning computations and do increase the projected demand-based requirements. Because removing the forward supply levels from the initial provisioning system would reduce the quantities of these items purchased, we continue to believe that their inclusion increases overall inventory investment and is not

warranted. We recognize that locating spare parts inventory at forward locations to reduce delivery time is reasonable but believe that such allocations by inventory managers should be limited to stocks purchased on the basis of demand.

DOD agreed that forward supply support system stock levels exceeded demand-based requirements for 27 percent of the items stocked at these forward locations, with a total value of about \$18 million. However, DOD contends that forward supply support assets have permitted items in the War Readiness Spares Kits to be reduced by \$25 million. According to DOD, when this reduction is combined with \$15 million in parts stockage below demand-based levels, there is actually a net \$22 million cost avoidance. Although we did not review wartime parts kits requirements, we believe that the \$25 million reduction is a positive step and shows the Air Force is moving in the right direction. It is noteworthy, however, that both an ongoing GAO review and an Air Force study have found significant excesses in wartime parts kits. For two types of strategic lift aircraft managed by the Air Mobility Command, the Air Force study concluded that actual Desert Storm usage was much less than anticipated wartime demands, as reflected in kit stockage levels. Thus, 56 percent of the C-5 stock numbers and 69 percent of the C-141 stock numbers showed excesses. We do not believe that a reduction in one category of stockage levels should be used to justify overages in a different category.

Scope and Methodology

This report is an outgrowth of our review of the Air Force's stock funding of reparable spare parts. We interviewed officials and obtained relevant information at Headquarters, Air Mobility Command, Scott Air Force Base, Illinois; Headquarters, Air Force Materiel Command, Wright-Patterson Air Force Base, Ohio; Dover Air Force Base, Delaware; and the Air Force Logistics Centers at Kelly Air Force Base, Texas, and Tinker Air Force Base, Oklahoma.

Our work was conducted between January 1992 and November 1992 in accordance with generally accepted auditing standards.

We are sending copies of this report to the Secretaries of Defense and the Air Force, the Director of the Office of Management and Budget, selected congressional committees, and other interested parties. We will make copies available to others upon request. Please contact Ms. Julia Denman,

Assistant Director, at (202) 512-8412 if you or your staff have any questions regarding this report. Major contributors are listed in appendix II.

Sincerely yours,



Frank C. Conahan
Assistant Comptroller General



Comments From the Department of Defense

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



PRODUCTION AND LOGISTICS

ASSISTANT SECRETARY OF DEFENSE

WASHINGTON, DC 20301-8000

December 23, 1992

(L/MRM)

Ms. Nancy R. Kingsbury
Director, Air Force Issues
National Security and International
Affairs Division
U.S. General Accounting Office
Washington, DC 20548

Dear Ms. Kingsbury:

This is the Department of Defense (DoD) response to the General Accounting Office (GAO) draft report, "AIR FORCE SUPPLY: Improvements Needed in Management of Air Mobility Command's Forward Supply Support System," Dated October 20, 1992 (GAO Code 392670), OSD Case 9244. The DoD generally nonconcur with the report.

Air Mobility Command missions performed by C-5 and C-141 aircraft (and in the future by the C-17 aircraft) are dependent on the forward supply support system approach, which minimizes customer wait times for parts requirements. In the case of Air Mobility Command users, the forward supply support system virtually eliminates the 8-10 day average wait time for routine replenishment from a home base to a forward base. Forward supply support system stockage levels primarily reallocate retail inventory assets between home bases and forward bases. The concept represents, first a stock positioning decision, secondarily an inventory additive quantity. The relatively small additive is more than offset by reduced mobility spares requirements. That important offset is not made clear in the report.

The fundamental assertion in the report is that forward supply support inventory levels often exceed demand-based levels. The report exaggerates the cases in which actual levels exceed demand-based computations and ignores the cases where the levels stocked are below demand-based authorizations. The Air Force has reassessed the situation and determined \$18 million (rather than the \$35 million reported by the GAO) in inventory exceeds historical demand-based levels. Further, the report ignores over \$15 million in inventory that is below authorized levels, and a \$25 million compensating benefit in Mobility Readiness Spare Kit reductions resulting from stockage of forward supply support assets.

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The report also states that the Air Force requirements system contained duplicated usage reporting. Disagreement remains between the DoD and the GAO regarding how the Air Mobility Command and the Air Force Materiel Command are reporting forward supply support usage. Accordingly, the Office of the Assistant Secretary of Defense (Production and Logistics) will request the Department of the Air Force to perform a detailed technical validation to ensure no duplicate demands are included in the forward supply support requirements determination process. That action is to be completed by January 31, 1993.

The DoD fundamental commitment remains to meeting materiel system operational readiness requirements at least cost. Reducing inventory continues to be a primary logistics initiative. To reduce the lead times that can compromise readiness, stockage of critical parts nearest the user is often appropriate. The Air Force forward supply support system is an example of optimizing stock positioning to improve mission support at an overall lower cost.

The detailed DoD comments to the draft report findings and recommendations are provided in the enclosure. Suggested technical changes were separately provided to the GAO staff. The DoD appreciates the opportunity to comment on the GAO draft report, but would appreciate prior notification when the scope of an audit changes, as was the case with this report.

Sincerely,



David J. Berteau
Principal Deputy Assistant Secretary of
Defense (Production and Logistics)

Enclosure

Appendix I
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GAO DRAFT REPORT - DATED OCTOBER 20, 1992
(GAO CODE 392670) OSD CASE 9244

"AIR FORCE SUPPLY: IMPROVEMENTS NEEDED IN MANAGEMENT OF AIR MOBILITY
COMMAND'S FORWARD SUPPLY SUPPORT SYSTEM"

DEPARTMENT OF DEFENSE COMMENTS

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FINDINGS

- FINDING A: Overseas Inventory Levels Added To Initial Provisioning Quantities. The GAO reported that Air Force initial provisioning requirements are generally computed by applying estimated failure rates to projected flying hours, while the Air Force Materiel Command also includes additional quantities for forward supply at overseas bases. The GAO found, however, that the added quantities are not supported by estimated failure rates and flying hours. As an example, the GAO stated that the initial provisioning computation for the C-17 aircraft identified a worldwide requirement of 14 digital computers, including six computers for overseas stock. The GAO pointed out, however, that eight computers were the estimated quantity needed to support projected replacement requirements.

The GAO reported that Air Force Materiel Command officials said requirements for forward supply quantities are covered in the total requirement computed from estimated failure rates and flying hours, and that the additional forward supply quantities, therefore, are not necessary. The GAO identified over \$10 million in procurement funds included for that purpose in FY 1993 budget documents for the C-17. The GAO concluded, therefore, that the inclusion of those additional funds for C-17 forward supply overstated the FY 1993 Air Force budget requirement.

The GAO noted that, in response to the draft of a recently issued GAO final report discussing C-17 initial provisioning (GAO/NSIAD-92-293, OSD Case 9161), DoD officials provided the most recent spending forecast for C-17 initial spares for FY 1993. According to the GAO, the revised spending plan did not separately identify forward supply support requirements. The GAO reported, however, that C-17 program officials said some of the \$50.6 million in forward supply support initial provisioning requirement will probably be procured during FY 1993, with additional quantities procured throughout the initial provisioning years. (pp. 3-5/GAO Draft Report)

Enclosure

Now on pp. 3-4.

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DOD RESPONSE: Nonconcur. A forward supply support system level is included in, not added to, initial provisioning quantities to support the unique requirements of the Air Mobility Command mission. Air Mobility Command missions performed by C-5 and C-141 aircraft (and, in the future, by the C-17 aircraft) are dependent on the forward supply support system approach, which minimizes customer wait times for parts requirements. In the case of Air Mobility Command users, the forward supply support system virtually eliminates the eight to ten day average wait time for routine replenishment from a primary supply point (home base) to a forward supply location. Even a costly, priority shipment would cause a two to three day wait time.

See comment 1.

Further, forward supply support system stockage levels do not increase overall inventory investment, but instead reallocate retail inventory assets between home bases and forward bases. That concept represents a stock positioning decision, not an inventory additive quantity. Requirements are based on historical and predicted demand factors (mean time between failure rates and projected aircraft landings), in conjunction with initial provisioning decisions. Provisioning computations fully consider the need for the lay in of spares at forward operating locations.

Frequent, routine periodic stops are made by Air Mobility Command aircraft at the eleven forward (overseas) locations that have been identified in the GAO report. Numerous take-offs and landings occur at those forward locations, necessitating the need for spares. Lessons learned from the accumulation of demand history of Command aircraft have led to the formation of the forward supply support system policy, for both initial provisioning and replenishment requirements. An adverse impact on the Air Mobility Command mission would result if spares were not stocked at those enroute locations. Significant downtimes would be caused by drawing spares from the main Command operating bases.

- **FINDING B: Forward Supply Support Inventory Levels Exceed Computed Demand Levels.** The GAO reported that, according to Air Force policy, the total quantity of spare parts held for peacetime support should generally be no more than the amount needed, based on actual use. The GAO found that as of June 1992, the Air Mobility Command held \$70 million in spare parts at forward supply support locations.

The GAO reported that the Air Mobility Command says it often sets inventory levels below what would be computed based on actual use. The GAO compared the inventory level based on historical demand with actual inventory levels for selected items and found

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Now on pp. 4-5.

the Command had reduced demand-based inventory levels on some items by a total of about \$6 million. The GAO also found, however, that the inventory levels for 39 percent of the items reviewed stored at forward supply locations exceeded the computed demand levels, which the GAO estimated amounted to at least \$34.8 million of the total \$70 million in spare parts inventory. (p. 3, pp. 5-6/GAO Draft Report)

DOD RESPONSE: Partially concur. The GAO estimates were based, in part, on erroneous data provided to the GAO by the Air Force. Numerous demand levels were reported incorrectly, because they were extracted from the Air Force Materiel Command master National Stock Number file, instead of from the local base master file. The Air Force Materiel Command file significantly understated the demands against forward supply support system assets. That problem has been corrected, and the Air Force estimates that the data base is now at least 98 percent accurate.

See comment 2.

Due to price changes, the dollar value of forward supply support system requirements has increased to \$90 million, rather than the \$70 million stated in the report. Based on corrections made to the data base, Air Force analysis has determined that only \$18.0 million (rather than \$34.8 million stated in the draft report) of the \$90 million in spare parts requirement held at the forward supply locations exceed the stock levels supported by historical demands. Using the corrected data base as of October 1992, Table 1 from the GAO report would be revised, as follows:

TABLE 1: Forward Supply Support System Items With Inventory Levels Higher Than Supported by Demand

<u>Quantities By Which Levels Stocked Exceeded Demand-Supported Inventory Levels</u>	<u>Number of Stock Numbers</u>	<u>Dollar Value Inventory In Excess of Demand</u>
More than 20	7	\$ 916,367
11 to 20	16	\$ 2,687,432
6 to 10	42	\$ 4,613,934
3 to 5	184	\$ 6,227,615
2	186	\$ 1,955,172
1	323	\$ 1,575,771
TOTAL	758	\$ 17,976,291

Forward supply support system levels that exceed demand-supported levels are due to conscious inventory management decisions. Those decisions are generally driven by the need to position assets at more specific forward locations than can be accomplished using quantities based strictly on demand levels.

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Low demand items will not generate sufficient requirements to stock at all required locations. An example would be engine cowlings. Demand levels justify a forward supply support system stockage quantity of two, but because a cowling is required wherever an engine is replaced (three locations for left engines and four locations for right engines), engine cowlings are stocked at corresponding locations.

A breakout and analysis for those stocked levels exceeding demand-supported levels reveal the following:

- 530 items, valued at \$1.5 million, are C-5 and C-141 peculiar expendable items that are classified as additives, because bench stocks are not authorized in Forward Supply Location supply accounts.

- 66 items, valued at \$3.5 million, are required to provide spares to six additional forward supply points.

- 49 items, valued at \$6.5 million, are C-17 provisioning levels established. Since the aircraft is not yet operational, there are no demands, only authorizations for deployment planning purposes.

- 7 items, valued at \$1.8 million, are wheel and tire built-up assemblies, necessary to preclude pipeline time to build up, lead check, and transport these items.

- 2 items, valued at \$1.3 million, are engine cowlings required for complete engine change-outs. If those items were not in the forward supply support system level, they would be included in the Readiness Spares Package.

- 104 items, valued at \$3.3 million, are items which have not met the two-year, no consumption criteria for deletion from forward supply support system.

Additional Air Force analysis has determined that 49 percent of the forward supply support system authorized items are stocked in quantities for which the authorized level is actually less than the demand level. Again, inventory managers have made conscious business decisions, generally based on effectively managing the lead time associated with high demand items, to authorize less than supported based on demand levels. Table 2 below indicates stockage cost avoidance of over \$15 million.

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TABLE 2: Forward Supply Support System Items With Inventory Levels Less Than Supported by Demand

<u>Quantities By Which Levels Stocked Less Than Demand-Supported Inventory Levels</u>	<u>Number of Stock Numbers</u>	<u>Dollar Value Inventory In Excess of Demand</u>
More than 20	80	\$ 177,298
11 to 20	104	\$ 4,428,905
6 to 10	207	\$ 3,151,608
3 to 5	375	\$ 3,336,971
2	256	\$ 1,953,063
1	343	\$ 2,160,050
TOTAL	1365	\$ 15,207,895

Furthermore, due to the stockage of forward supply support system assets, items in the Mobility Readiness Spares Kit (formerly War Readiness Spares Kit) have been reduced \$25 million for the C-5 and C-141 aircraft. That offset is required by Air Force Manual 67-1, "U.S. Air Force Supply Manual."

- **FINDING C: Erroneous Usage Data Reported in Air Force Requirements System.** The GAO found that the Air Force recognizes that a spare part failure should only be counted towards historical usage once. In that regard, the GAO found that the Air Force attempts to suppress the reporting of overseas usage from the requirements system, since the requirement is added to the computation as a special level through the forward supply support system. The GAO found, however, that usage data from overseas bases are sometimes recorded in requirements usage reports, thereby duplicating projected requirements.

The GAO reported that in August 1990, Air Force Materiel Command officials cited inaccurate reporting of actual usage data as a major problem with the spare parts requirement computation system. The GAO also pointed out that under the stock funding concept now being implemented, complete and accurate usage becomes even more important to the requirements system, since incomplete or inaccurate usage data may lead to erroneous purchase and repair decisions, and contribute to excessive surcharges and/or stock fund losses.

The GAO reported that Air Mobility Command officials said that usage at forward supply locations should not be reported by overseas locations or primary supply points. On the other hand, the GAO reported that Air Force Materiel Command officials said that overseas locations should and do report forward supply usage, with duplication of overseas requirements avoided by a

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mechanism within the worldwide requirements computation system called a base safety level. According to the GAO, the Materiel Command officials said the base safety level is reduced by any forward supply level until the safety level is zero -- which, in effect, would eliminate any duplication of requirements. The GAO also pointed out, however, that the Air Force Audit Agency recently reported that only 84 of 251 sampled items carried a base safety level sufficient to offset additive levels. According to the GAO, Materiel Command officials agreed requirements are duplicative in instances where there is no safety level, or it is less than the overseas level. Overall, the GAO concluded that the Air Force is stocking more parts than it needs to support expected usage. (p. 3, pp. 7-8/GAO Draft Report)

Now on pp. 5-7.

See comment 1.

DOD RESPONSE: Partially concur. The Department has not identified duplication of forward supply support system usage reporting. However, disagreement remains between the DoD and the GAO regarding how the Air Mobility Command and the Air Force Materiel Command are using the reported usage data to determine forward supply support system levels and total requirements levels, respectively. Accordingly, the Office of the Assistant Secretary of Defense (Production and Logistics) will request the Air Force Deputy Chief of Staff for Logistics (Supply Management) to perform a review and analysis of the forward supply support system usage reporting, to determine whether any duplication in requirements determination is occurring. That action is expected to be completed by January 31, 1993. The results of the review will be made available to the GAO.

The following is provided as clarification of the current usage reporting procedures and this usage's relationship to the forward supply support system requirements process:

- The Air Mobility Command forward supply location inventory usage is not included in demand reporting to the primary supply points, but is reported by the primary supply points to the Air Force Materiel Command. That reporting references the forward supply location where the usage occurred.

- Next, the usage is included in the requirements determination process accomplished by the Air Force D041 system. Included in the D041 process is the computation of the base safety level (retail safety level). Generally, the forward supply support system level is a one-to-one offset of the base safety level, so that the forward supply support system level, plus the revised safety level, is equal to the former safety level. In cases where the safety level is zero or less than the forward

supply support system level, the forward supply support system level becomes, in effect, the safety level used in the requirements computation. In cases where the computed safety level is greater than the forward supply support system level, the safety level is reduced (offset) by the forward supply support system level amount. It is the Air force view that the process does not lead to a duplication of requirements. Instead, sometimes there are valid levels required by the Air Mobility Command, which as explained previously, may exceed the demand-driven requirement.

* * * * *

RECOMMENDATIONS

- **RECOMMENDATION 1:** The GAO recommended that, because (1) initial provisioning computations for new Air Force weapon systems include forward supply inventory quantities that duplicate requirements that are based on projected usage, and (2) the Air Force forward supply support system establishes inventory levels that exceed usage supported inventory levels and duplicates the Air Force requirements computation system, the Secretary of the Air Force should direct the Air Force Materiel Command to revise initial provisioning policy to discontinue the use of forward supply levels in initial provisioning requirements for Air Mobility Command aircraft. (pp. 8-9/GAO Draft Report)

Now on p. 7.

DOD RESPONSE: Nonconcur. Forward supply support system spares are required to support initial aircraft fielding. The objective of the forward supply support system system is to reduce mission delay time. That is consistent with DoD policy, which states that stockage should be optimized to achieve customer wait time goals at the least cost. Further it is the objective of DoD policy to make provisioning requirements processes consistent with replenishment requirements. It would not be a sound life cycle support management practice to restrict forward supply support system concepts to only replenishment supply actions.

See comment 1.

- **RECOMMENDATION 2:** The GAO recommended that the Secretary of the Air Force should direct the Air Force Materiel Command to eliminate additive spares for forward supply support for C-17 initial provisioning. (pp. 8-9/GAO Draft Report)

Now on p. 7.

DOD RESPONSE: Nonconcur. For the reasons stated in the DoD response to Recommendation 1 above, the DoD supports the use of forward supply support system levels for the provisioning of the C-17 aircraft. Elimination of that sparing approach would result

See comment 1.

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in significant delay times at enroute locations once the C-17 is operational.

- **RECOMMENDATION 3:** The GAO recommended that the Secretary of the Air Force should direct the Air Force Materiel Command to eliminate requirements duplication for replenishment spares, by either (1) eliminating the overseas usage reporting, or (2) removing the added requirement for forward supply locations. (pp. 8-9/GAO Draft Report)

Now on p. 7.

DOD RESPONSE: Partially concur. The Department has identified no duplication in forward supply support system usage reporting. However, there is some disagreement between the DoD and the GAO about how the Air Mobility Command and Air Force Materiel Command are using the reported usage data to determine forward supply support system levels and total requirements levels, respectively. Accordingly, the Office of the Assistant Secretary of Defense (Production and Logistics) will request the Air Force Deputy Chief of Staff for Logistics (Supply Management) to perform a review and analysis of forward supply support system usage reporting to determine whether any duplication in requirements determination is occurring and take corrective actions as necessary. That action is expected to be completed by January 31, 1993.

See comment 1.

- **RECOMMENDATION 4:** The GAO recommended that the Secretary of the Air Force should direct the Air Force Materiel Command to limit total worldwide stock levels, within the forward supply support system, to quantities supported by actual demand. (pp. 8-9/GAO Draft Report)

Now on p. 7.

DOD RESPONSE: Nonconcur. As stated in the DoD response to Finding B, it is not appropriate to restrict forward supply support system levels to that supported by actual demand. Generally, decisions to authorize forward supply support system levels greater than demand-based levels are based on the need to position assets at additional forward locations. Further, the Air Force analysis of forward supply support system levels indicates about \$18 million in stockage above authorized levels and \$15 million below levels authorized by historical demands. Together with a \$25 million compensating benefit in Mobility Readiness Spare Kit reductions resulting from stockage of forward supply support assets, in its total context, the forward supply support concept yields a net \$22 million cost avoidance.

See comments 1 and 2.

- **RECOMMENDATION 5:** The GAO recommended that the Secretary of the Air Force should direct the Air Force Materiel Command to develop a consistent policy, in conjunction with the Air Mobility

Appendix I
Comments From the Department of Defense

Now on p. 7.

See comment 1.

Command, regarding forward supply support management.
(pp. 8-9/GAO Draft Report)

DOD RESPONSE: Partially concur. A consistent forward supply support system policy is already in place. Air Force Manual 67-1, "U.S. Air Force Supply Manual" (Volume One, Part One, Chapter 11, Section B) fully prescribes the forward supply support system policy. Procedures that are consistent with that policy are included in Air Mobility Command supplements to Air Force Manual 67-1.

Appendix I
Comments From the Department of Defense

The following are GAO's comments on the Department of Defense letter dated December 23, 1992.

GAO's Comments

1. We have addressed this comment in the report text.
2. We have revised our report to include this information.

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