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Comptroller General.

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In fiscal year 1978, the Air Force estimated its peacetime requirements for reparable (or investment-type) aircraft spare parts at \$586 million and its war reserve requirement at about \$1 billion. Congressional committees have continually questioned the basis for and validity of the Department of Defense's war reserve requirements for spare and repair parts. A review was conducted of 199 randomly selected aircraft spares and repair parts having a war reserve requirement as of June 30, 1977, which the Air Force planned to buy, to determine if the buy requirement was valid, the items were critical to wartime missions, items supported the more important weapons systems, and items with the greatest critical deficiencies were given funding priorities.

Findings/Conclusions: An erroneous requirement of more than \$1 million to support a weapons system that was ineligible for that type of support was generated because invalid factors were not deleted from the requirements computation system. Between 194 and 533 of the 2,423 war reserve investment items managed by Warner Robbins Air Logistics Center had an invalid requirement. Essentiality designations were incorrect for 13 of the items sampled. The Air Force's documentation used to justify its essential spare part needs is incomplete and based on erroneous data which causes annual budget submissions to be overstated. The Air Force does not have an effective method of assigning priorities to war reserve items in terms of their importance to wartime missions. Deficiencies in investment and stock fund items occurred because: data are not checked for accuracy before being used; heavy workloads make checking data difficult; good sources are not readily available for some data needed; personnel are not thoroughly trained in system operations; and policies and procedures are unclear. Recommendations: The Secretary of the Air Force should: make sure that the new system can adequately establish priorities for war reserve items before

funds are requested to purchase additional spares and repair parts, require that the highest priority war reserve items are funded first, and provide additional training and guidance to item managers on the importance of using supportable data so that war reserve requirements for spares and repair parts are not overstated and errors are immediately corrected. (RRS)

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REPORT BY THE

# Comptroller General

OF THE UNITED STATES

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## Essentiality Of Air Force War Reserve Items

The cost of acquiring spare and repair parts that the Air Force considers essential for war reserve stockage far exceeds available funds. This report identifies improvements needed to ensure that accurate and reliable data is used to compute valid spare part requirements.



LCD-78-421

JULY 25, 1978



COMPTROLLER GENERAL OF THE UNITED STATES  
WASHINGTON, D.C. 20548

3-133396

The Honorable John C. Stennis  
Chairman, Subcommittee on Defense  
Committee on Appropriations  
United States Senate

Dear Mr. Chairman:

A Senate Appropriations Committee report (95-325, July 1, 1977) asked us to review the Department of Defense's war reserve procurement program. This study was to build on previous GAO reviews of this subject.

In discussions with representatives from your office in August 1977, we agreed to review certain aspects of each service's war reserve program separately rather than evaluate the entire program at one time. It was agreed that this course of action would respond to the Committee's request for our assistance in this area.

This report deals with the Air Force's methods for selecting items and computing requirements and with other management factors that relate to justifying requests for aircraft war reserve spares and repair parts. It identifies improvements needed to ensure that accurate, reliable data is used to compute valid spare part requirements.

At your request, we did not take the time to obtain written comments from the Department of Defense. However, we met with Office of the Secretary of Defense and Air Force officials on June 19, 1978, obtained their oral comments, and have considered them, where appropriate, in preparing the report.

As arranged with your office, we are sending copies of this report to the Secretary of Defense; the Secretary of the Air Force; and the Director, Office of Management and Budget. We will also provide copies to the Chairmen, House Committee on Government Operations, Senate Committee on Governmental Affairs, House and Senate Committees on Appropriations, and House and Senate Committees on Armed Services. Copies will also be made available to others upon request.

Sincerely yours

A handwritten signature in cursive script, appearing to read "James B. Stuck".

Comptroller General  
of the United States

COMPTROLLER GENERAL'S  
REPORT TO THE  
SUBCOMMITTEE ON DEFENSE  
SENATE COMMITTEE  
ON APPROPRIATIONS

ESSENTIALITY OF AIR FORCE  
WAR RESERVE ITEMS

D I G E S T

The Air Force invests millions of dollars annually in aircraft spares and repair parts, both for peacetime operating stocks and for war reserve materiel. In fiscal year 1978 the Air Force estimated its total peacetime requirement for investment (reparable) items at about \$586 million and its war reserve requirement for such items at about \$1 billion. Defense Department war reserve programs have had serious problems for a number of years. Congressional committees have continually questioned the basis for and validity of Defense's war reserve requirements for spares and repair parts.

GAO reviewed 199 randomly selected aircraft spares and repair parts having a war reserve requirement as of June 30, 1977, which the Air Force planned to buy, to determine if

- the buy requirement was valid,
- the items were critical to wartime missions,
- the items were supporting the more important weapon systems, and
- the items with the greatest critical deficiencies were given funding priorities.

INVESTMENT ITEMS

GAO randomly selected and reviewed 100 investment-type items (economically reparable) from a total of 2,423 such items managed by Warner Robins Air Logistics Center and included in the fiscal year 1978 and 1979 budget requests. GAO found that:

- A more than \$1 million requirement was included in the Air Force's fiscal year 1979 budget submission for war reserve items to support a weapons system that was ineligible for this type of support. The erroneous requirement was generated because invalid factors had not been deleted from the requirements computation system. The Air Force took corrective action. (See p. 14.)
- For 15 of the investment items sampled, there were errors in the data used to compute the requirements. These errors caused requirements to be overstated by about \$823,000. Based on GAO's projections, between 194 and 533 of the 2,423 war reserve investment items managed by Warner Robins have an invalid requirement. For 10 of the items sampled, the item managers were not sure of the exact location or serviceability of the spare parts. The loss of these assets generated a \$617,000 requirement for additional assets. (See p. 10.)
- Essentiality designations were incorrect for 13 of the items sampled. About \$5 million in funds for these items could have been reallocated to more essential items. One item, for example, an ultra-high frequency radio digital readout used on the F-15, A-7, and A-10 aircraft, is a piece of auxiliary equipment the pilot may use to determine the frequency the radio is operating on. However, the radio is in the cockpit and the pilot can simply look at the frequency setting to determine the same thing. (See p. 15.)

All five of the air logistics centers have at least 81 percent of the items they manage identified as highly critical. As a result, logistics managers are unable to effectively use the system to help them manage the following functions:

- Scheduling repair and maintenance of war reserve items.
- Distributing war reserve items to combat and support forces.
- Evaluating logistics support performance.
- Accurately assessing logistics readiness.

Equipment specialists said assigning item essentiality codes correctly under the present system is difficult because they are not always sure how important an item is to wartime missions.

The Air Force is working on a new system for determining item essentiality that will consider the type of aircraft the spare part supports, the aircraft's mission, and the relative importance of the item to the aircraft's operation. The proposed method is a more realistic way of determining an item's essentiality to a wartime mission.

#### STOCK FUND ITEMS

GAO randomly selected 99 stock fund items to review. Such items lose their identity when incorporated into an airplane system or other weapon system, such as electronic components, and are commonly known as bits and pieces, consumables, and expense items.

In December 1976, GAO notified the Air Force that many C-5 and C-141 stock fund items were not eligible for stockage as war reserves. The Air Force decided not to buy C-5 and C-141 stock fund war reserve items for fiscal year 1977 until this situation was corrected. After completing its review, the Air Force eliminated about \$10.3 million from its fiscal year 1978 budget request for items not essential to a wartime mission.

The Air Force later determined that it could reduce procurements by over \$2 million from its \$10.8 million fiscal year

1977 C-141 stock fund war reserve appropriation because the items were no longer needed. In one instance, the Air Force planned to buy war reserve spare parts for a radio system already scheduled to be removed from most aircraft. (See p. 23.)

In making a random check of the reduced \$8.8 million planned procurement, GAO found that:

--Twenty-three of the 99 stock fund items sampled were not eligible for purchase as war reserve spare parts. These items included cargo bay trim panels and locking mechanisms for a cargo ramp door. The locking mechanisms will not be needed after the Air Force completes an ongoing modification. Errors on the 23 items caused the \$465,000 buy requirement for the 99 sample items to be overstated by \$58,500. (See p. 23.)

--None of the 99 randomly selected stock fund war reserve items were properly screened to determine their relative importance to wartime mission accomplishment. In fact, the Warner Robins Air Logistics Center had mechanically assigned all 99 items a high mission essential item designation. After reviewing the items at GAO's request, the equipment specialists who were supposed to be responsible for determining the items' essentiality said 35 were incorrectly classified and 15 did not even qualify for war reserve funding. The items' users felt that 88 were incorrectly classified and 46 would not qualify for war reserve funding. (See p. 25.)

Deficiencies in investment and stock fund items occurred because (1) data is not checked for accuracy before being used, (2) heavy workload makes checking data difficult, (3) good sources are not readily available for some data needed, (4) personnel are not thoroughly trained



in system operations, and (5) the policies and procedures, particularly regarding the selection of war reserve items, are unclear.

### RECOMMENDATIONS

The Secretary of Defense should direct the Secretary of the Air Force to:

- Make sure that the new system can adequately establish priorities for war reserve items before funds are requested to purchase additional spares and repair parts.
- Require that the highest priority war reserve items are funded first.
- Provide additional training and guidance to item managers on the importance of using realistic, supportable data so that war reserve requirements for spares and repair parts are not overstated and that errors identified are immediately corrected.  
(See p. 18.)

### RECOMMENDATION TO THE CONGRESS

The Air Force has limited its fiscal year 1979 appropriations request to just those war reserve investment spares needed to support particular aircraft in the first 30 days of a conflict. No moneys have been requested to support the "sustaining" portion of its war reserve requirement. The request for stock funded items is primarily for aircraft gun system parts, which are manually computed.

The Air Force intends to spend a great deal of money in the future, however, to purchase the "sustaining" portion of its war reserve requirement for both investment and stock fund items. The proposed expenditures will be in addition to the sizable investment already made in peacetime stocks and war reserves earmarked for the initial stages of a conflict. GAO has serious reservations about the current system for identifying mission essential items.

GAO recommends, therefore, that the Congress not authorize or appropriate additional funds for the "sustaining" portion of the war reserve requirement unless the Air Force can demonstrate to the Congress that it is making satisfactory progress in developing and implementing its new system for identifying mission essential items. (See p. 19.)

#### AGENCY COMMENTS AND GAO EVALUATION

GAO discussed the matters in this report with Office of the Secretary of Defense and Air Force officials on June 19, 1978, obtained their oral comments, and considered their comments in preparing it. The officials generally agreed with the recommendations and have taken or planned actions to implement them. However, the officials did not fully concur in the specific findings on investment items. They concurred for the most part in the findings on stock fund items.

The Air Force's basic disagreement seemed to center on the subjectivity of designating essentiality codes for war reserve items. After re-reviewing with their equipment specialists the items GAO reviewed, Air Force officials said that the specialists decided to change the items to a different code. This further illustrates the subjectivity involved in assigning essentiality codes.

The Air Force officials also did not agree with the inaccuracies identified in the requirements computation process and the reasons for them.

Nevertheless, the officials agreed that problems exist in these areas, particularly in the subjectivity of assigning essentiality codes. They gave GAO an impressive briefing, highlighting how the new system would reduce much of the subjectivity. The system is to be implemented in June 1979. (See pp. 20 and 26.)

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ABBREVIATIONS

ALC	air logistics center
DOD	Department of Defense
GAO	General Accounting Office

## CHAPTER 1

### INTRODUCTION

The Air Force's investment in aircraft spares and repair parts, both for peacetime operating stocks and for war reserve materiel, is substantial. The major portion of this investment is for equipment that can be economically repaired either at the air base or at Air Force depots.

In fiscal year 1978 the Air Force estimated its peacetime requirements for reparable (or investment-type) spare parts at \$586 million and its war reserve requirement at about \$1 billion. The Air Force requested funding for about \$831 million of the total \$1.6 billion requirement, and the Congress approved the request. However, the Office of the Secretary of Defense cut approved funding by \$35.7 million, leaving an unfunded deficit of about \$830 million at the close of fiscal year 1978.

The Air Force divides funds appropriated for spares and repair parts into three categories: (1) peacetime operating stocks, (2) a 30-day supply of spares and repair parts for use until combat units can be resupplied, and (3) additional war reserves to sustain combat operations until industry production catches up with wartime consumption. Peacetime operating stocks are funded first, the 30-day unit reserve supply second, and the sustaining portion last.

As of October 1, 1977, the Air Force allocated fiscal year 1978 and 1979 appropriated funds for investment items as follows:

Allocation of Funds for Investment Items

<u>1978</u>	<u>Total</u>	Peacetime operating <u>stock</u>	<u>30-day</u>	<u>Sustaining</u>
	----- (millions) -----			
Unfunded requirement	\$1,627	\$586	\$356	\$684
Requested from the Congress	831	586	200	45
Approved by the Secretary of Defense	796	551	200	45
Difference between amount requested and amount approved	<u>35</u>	-	-	-
 Total unfunded deficit end of fiscal year 1978	 a/\$ <u>830</u>	 \$ <u>35</u>	 \$ <u>156</u>	 \$ <u>639</u>
 <u>1979</u>				
Unfunded requirement	b/\$1,638	\$634	\$293	\$711
Requested from the Congress	<u>857</u>	<u>634</u>	<u>223</u>	<u>0</u>
Planned unfunded deficit if all funds are approved	<u>\$ 781</u>	<u>\$ 0</u>	<u>\$ 70</u>	<u>\$711</u>

a/May not add due to rounding.

b/Requirement increased due to initial spares to support new aircraft.

The Air Force also requests an appropriation from the Congress to purchase war reserve items normally financed through stock fund accounts. These items lose their identity when incorporated into an airplane system or other weapon system, such as electronic components, and are commonly known as bits and pieces, consumables, and expense items.

For the end of fiscal year 1977, the Air Force had an unfunded deficit for aircraft war reserve stock fund spares of about \$111 million. It requested \$35.5 million for fiscal year 1978 and \$25.1 million for fiscal year 1979 to help reduce this deficit.

SCOPE OF REVIEW

The Senate Appropriations Committee asked us to review the Air Force's war reserve procurement program and related funding requests. We examined the policies, criteria, and procedures for determining and managing the war reserve requirements. We reviewed regulations and records and discussed their effect with various operating personnel and management officials.

At the Warner Robins Air Logistics Center (ALC), Warner Robins, Georgia, a special computer list of 3,674 items having a war reserve requirement as of June 30, 1977, was prepared. From this list, we selected a random sample of 199 items scheduled to be bought and reviewed them to determine if (1) the buy requirements were valid, (2) the items selected were critical to wartime missions, (3) the items were supporting the important weapons systems, and (4) the items with the greatest critical deficiencies were given funding priority.

We worked at:

--Air Force Headquarters, Washington, D.C.

--Air Force Logistics Command, Wright-Patterson Air Force Base, Ohio.

--Warner Robins Air Logistics Center, Georgia.

--Tinker Air Force Base, Oklahoma.

--Charleston Air Force Base, South Carolina.

## CHAPTER 2

### JUSTIFYING WAR RESERVE REQUIREMENTS

Congressional committees have continually questioned the basis for and validity of the Department of Defense's (DOD's) war reserve requirements for spares and repair parts. In fiscal year 1976, for example, the Congress denied a large portion of the DOD war reserve funding request for investment-type spares even though the requested funds were to fill a part of the war reserve deficiency.

The Senate Armed Services Committee recommended reducing the Air Force's fiscal year 1976 request for investment spares by \$331.5 million. The Committee recognized that war reserve spares are in addition to the spares required to sustain the peacetime flying hour program and that the total requirement for war reserve spares, in theory, supports a combat tempo of operations until new orders can result in production of wartime spares. However, the Air Force already had an inventory of over half a billion dollars of war reserve spares, and the Committee believed that DOD should study the needs for and volume required of such spares to better justify the size of this inventory.

The Congress has also reacted to several of our reports 1/ indicating that DOD needed to improve its procedures for identifying valid medical, clothing, and textile items for war reserve stockage. Problems identified included selection of items readily available from industry, weaknesses in emergency production planning with industry to meet mobilization needs, and excessive provisioning for safety levels.

For fiscal year 1977, DOD requested about \$358 million to cover stock fund war reserve requirements it considered to be of the highest priority. The Senate Appropriations Committee denied all but \$53 million of the request because it believed that amount represented items it considered combat essential, while the items not funded were largely commercially available.

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1/"Military Clothing and Textiles Required for War Reserves Can Be Reduced" (LCD-77-411, Jan. 24, 1977) and "Defense Supply Agency Could Reduce War Reserve Requirements for Medical Items" (LCD-76-405, Mar. 5, 1976).



## DOD CONCERN OVER WAR RESERVE REQUIREMENTS

Office of the Secretary of Defense (Manpower, Reserve Affairs, and Logistics) officials have studied this program several times. These studies concluded that, although much progress has been made in war reserve management, problems and inconsistencies still remain in the areas of item selection, requirements computation, and high war reserve inventories. The Office of the Secretary of Defense felt these issues required immediate attention if it hoped to improve war readiness and defend war reserve funding requests to the Congress. Based on our report on war reserve medical materiel (see footnote on the previous page), the Office did not include a war reserve request for these items in the Defense Logistics Agency's fiscal year 1977 budget. It required the Agency to improve its procedures for selecting medical items for war reserve stockage and to revalidate its requirements with the other military services.

## COMPLEXITIES IN ADMINISTERING WAR RESERVE PROGRAMS

A great deal of management skill, coordination, and flexibility are needed to adequately plan logistics support for combat units in an emergency. Many changes in scenarios and strategies are developed as a result of perceived threats that require adjustments to logistics planning. The deployment of new and complex weapons systems and the problems supporting them also have an effect. Complicating the planning even further is the lack of transportation assets, critical personnel skills, and spares and repair parts. If logistics planning is not coordinated and adaptable to changing conditions, a lot of money will be spent with little appreciable effect on combat readiness.

War reserve programs must be based on realistic, supportable data, and if circumstances arise that warrant changes in planning requirements, appropriate changes in logistics support objectives should be made to assure the maximum readiness posture with appropriated funds.

In a recent report 1/ to the Senate Appropriations Committee, we dealt with several major concepts that drive Air Force

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1/"Determining Requirements for War Reserve Spares and Repair Parts--Importance of the Wartime Planning Process" SECRET (LCD-78-407, June 7, 1978).

war reserve requirements. We recommended that the Department of Defense (1) consider using sortie rates in place of flying hours to project requirements for aircraft spares and repair parts, (2) reevaluate the capability of key aircraft, such as strategic airlift, in meeting wartime flying hour rates, and (3) recognize the importance that combat aircraft attrition has on reducing the war reserve requirement.

The efficiency of a war reserve program also depends on the ability of the military services to manage their inventory requirements effectively. Since the Air Force manages about 140,000 investment and 501,300 stock fund items supporting weapons systems, this is a considerable task.

In a June 28, 1977, report, the Defense Audit Service concluded that the services and the Defense Logistics Agency needed to improve management and control of war reserve materiel. In some instances, radical changes in items and quantities selected for war reserves resulted in unnecessary procurements. Certain requirements were either understated or overstated because prescribed selection criteria were not applied, and other requirements were not supported by sufficient data to evaluate their validity. Many requirements had not been reported to the applicable integrated materiel managers, thereby jeopardizing readiness. In the Air Force, for example, auditors reported that, for about \$373 million worth of prepositioned assets authorized on base-level records, requirements exceeded or were short of those shown on the ALCs' master item support lists by \$16 million and \$37 million, respectively, and that items in 209 war readiness spares kits valued at \$3.4 million authorized on base-level records were not included on the item support lists.

Causes contributing to the procurement of the wrong items or quantities for war reserves by all the services and the Defense Logistics Agency included (1) inadequate service reviews, (2) clerical errors and the use of outdated or non-representative data, (3) inadequate implementation of DOD guidance, (4) failure to reconcile war reserve assets shown on base-level records with those recorded on the ALCs' item support lists, (5) the lack of procedures to report low cost repair parts requirements, and (6) inadequate planning with industry to obtain war reserve items. The problems were amplified by the fact that 2 or more years elapsed between identification of war reserve needs for budget purposes and the actual procurement of war reserve stocks.

In our current tests of the Air Force system, we concluded that further improvements are needed to assure that

the spares and repair parts identified for war reserve stockage are valid. Requirements for items tested were overstated, and funds were earmarked for items not having a high war reserve priority. Item managers should see that requirements are not overstated and that alternatives for accomplishing the task have been fully considered. Our tests covered both investment and stock fund items depicted below.

Information on Items Sampled

<u>Item category</u>	<u>Total no. managed</u>	<u>Universe of war reserve items at Warner Robins ALC (note a)</u>	<u>Buy requirement for universe (note b)</u>	<u>No. of items sampled</u>	<u>Buy requirement for sample items</u>	<u>Dollars overstatement from errors and deficiencies noted (note c)</u>
Investment	140,000	2,423	\$414,700,000	100	\$28,000,000	\$6,800,000
Stock fund	501,300	1,251	8,800,000	99	465,000	58,500

a/Included items in a buy position or already bought when the universe was determined.

b/Included peacetime and war reserve investment item buys for fiscal years 1978 and 1979. For stock fund items, the \$8.6 million represents fiscal year 1977 funds for parts to be bought for C-141 aircraft.

c/In addition to the \$58,500 we found, the Air Force identified another \$2 million in its fiscal year 1977 C-141 stock fund appropriation which was invalid.

## CHAPTER 3

### FUNDS FOR INVESTMENT SPARES CAN BE BETTER USED FOR MORE CRITICAL NEEDS

In its fiscal year 1978 and 1979 budget submissions, the Air Force requested a total of about \$1.7 billion to help reduce its peacetime and war reserve spare part needs for the approximately 140,000 different investment items that it actively manages. We reviewed the War and Mobilization Plan and the requirements computations for 100 randomly selected war reserve items included in both budget submissions. Our review disclosed that (1) the fiscal year 1979 budget had a requirement for the "sustaining" portion of the war reserve program for a weapons system ineligible for this type of support, (2) inaccurate factors used in the computation process led to overstated requirements for certain items, and (3) some highly critical items were assigned a lower level of essentiality than other, less critical items. The buy requirement for the 100 items sampled was \$28 million. Based on errors and deficiencies noted, about \$6.8 million of this amount could have been diverted for more critical needs. However, if our findings are representative of all the investment items at all ALCs, many more millions of dollars could be so diverted.

Our review and discussions with Air Force officials revealed that errors cited for investment items occurred because (1) data is not checked for accuracy before being used, (2) heavy workload makes checking data difficult, (3) good sources are not readily available for some data needed, (4) personnel are not thoroughly trained in system operations, and (5) the policies and procedures, particularly regarding the selection of war reserve items, are unclear. The same system deficiencies are applicable to the errors cited for stock fund items discussed in chapter 4.

### WHAT ARE INVESTMENT SPARES AND REPAIR PARTS?

Investment spare parts are reparable components with a unit cost of more than \$1,000 that are normally returned to a centralized depot, or base facility, for repair and/or a subassembly. Examples of investment spare parts are radar sets, aircraft launching gears, radios, and gyroscopes. The current Air Force inventory of war reserve investment items is valued at about \$1.5 billion. About 12,500 items have been included in the war reserve materiel program under the following Air Force criteria:

- Items essential to destroy the enemy or his capacity to continue war.
- Items essential to protect personnel on the battle-field.
- Items essential to detect, locate, and maintain surveillance of the enemy.
- Items essential for communication during wartime.
- Items essential for operational effectiveness of combat support forces and the supporting logistics systems.
- Items essential to keep weapon systems operationally effective.
- Items essential for a sudden mobilization or deployment effort.
- Items essential for the survival and protection of personnel.

In addition, items that have special production considerations such as long leadtimes or have a single production source may be selected as war reserve items.

#### HOW ARE REQUIREMENTS COMPUTED FOR AIR FORCE INVESTMENT SPARE PARTS?

The Air Force uses a complex computerized system--called the Recoverable Consumption Item Requirements System (DO41)--to determine both its peacetime and its wartime investment spare parts requirements. This system enables item managers to compute the quantity of each spare part needed. If shortages of usable parts exist, the system identifies the need for repairing unserviceable parts or purchasing new ones. If enough usable parts are available to fill the expected demand, the system forecasts the quantity of each item that can be used as replacement parts before on-hand unserviceable items are scheduled for repair.

Each quarter an item manager computes expected requirements for the next 4-1/2 years for the equipment and spares under his control. Future requirements need to be forecast in order to plan procurement, production, and supply lead-times.

The total requirements computed by the item managers are directly related to (1) the Air Force's peacetime flying program, (2) the peak number of flying hours expected during mobilization or a war, (3) the level of support available at maintenance facilities, and (4) the Air Force's spare parts stockage standards and policies. Demand history for aircraft spare parts is accumulated under the peacetime flying program.

The demand history becomes the common denominator for projecting the quantity of spare parts that will be needed to support the Air Force's planned peacetime flying program and its wartime flying mission. In addition to these basic operating requirements, the Air Force requires spare parts to support its repair and overhaul system at two levels--the operating or base level and the major overhaul or depot level. This system, commonly known as the repair pipeline, is illustrated on the following page.

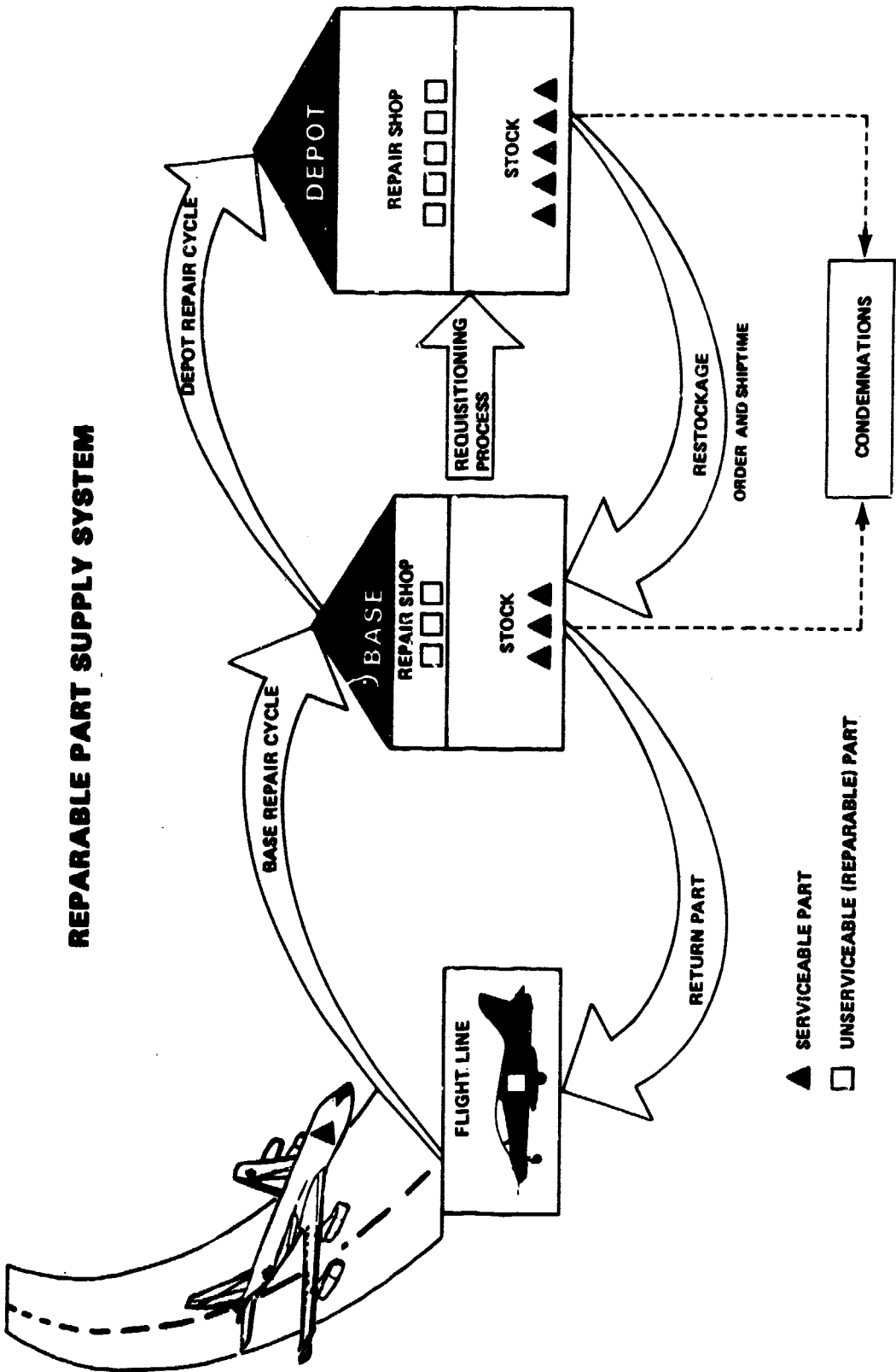
Investment spare parts are expensive. Spare part need estimates must, therefore, be accurate, be reliable, and translate into improved operational readiness. In addition, after entering the inventory system, the spare parts must be carefully managed and controlled by maintaining an awareness of the exact location and condition of each part.

#### INACCURACIES IN THE AIR FORCE'S FISCAL YEAR 1978 AND 1979 BUDGET REQUESTS

To test the data of the Air Force's fiscal year 1978 and 1979 budget submissions, we randomly selected and reviewed 100 of 2,423 investment items that were in both budget requests. Included were all investment items managed by Warner Robins ALC, which provides logistics support for the C-141, the F-15, and other aircraft. The total buy requirement for these items was \$414.7 million. The 100 sample items represented \$28 million of this total--about \$8 million worth in peacetime funds and about \$20 million worth in war reserve funds.

Errors were found in the data used to compute requirements for 15 of the items sampled. (See app. I.) These incorrect computations caused requirements to be overstated by about \$823,000. Projecting this error rate, we estimate that between 194 and 533 of the 2,423 war reserve investment items managed by Warner Robins have invalid requirements. We did not project the dollar impact of our findings because the items in error ranged in unit price from about \$285 to \$31,567, preventing meaningful overall projections from being made.

# REPARABLE PART SUPPLY SYSTEM



Following are the kinds of errors that generated invalid requirements.

#### Loss of asset visibility

After the item manager, through the D041 system, computes the quantity of spares needed, assets already in inventory are offset to meet these requirements. If enough spares are not available to meet the computed requirements, additional spares must be purchased. To ensure that the quantity reported available is accurate, Air Force regulations require item managers to periodically make a physical inventory to reconcile the quantity reported as purchased and available from the system with the spares actually available at the various base and depot levels.

For 10 of the 100 items sampled, item managers were not sure of the exact location or serviceability of assets already purchased. The loss of the unaccountable assets generated a budget requirement of \$617,000. Item managers involved said they did not reduce this requirement because they were not sure of the actual quantity of spare parts available to meet expected demands. Although they had not made a physical inventory in accordance with Air Force regulations, they did not believe the assets were lost or stolen. They attributed the problem to erroneous reporting by bases and contractors and noted that the assets almost always seemed to turn up later.

#### Duplicate stock levels

The Air Force justifies various stock levels for each item on the basis that each level serves a different purpose. For example, demand-supported requirements support normal operating needs; war reserve requirements support a future need in a contingency; safety level requirements recognize demand surges and supply interruptions; and special level requirements allow for stocking items whose need is not based on prior use.

Twenty-six items in our sample had negotiated stock levels, a particular category of special levels established by item managers at inventory control points. Negotiated stock levels are not to duplicate other stock levels. Three items were not justified because they duplicated a safety stock level. In these instances, item managers had established negotiated levels through manual input to the system to allow each base to have at least one item as a form of safety stock. Later, however, the D041 system had automatically computed sufficient safety stocks to cover the



requirement. The item manager should have eliminated the duplication and reduced requirements for these items by about \$3,300.

Both the Air Force and we have previously noted that item managers have been arbitrarily establishing negotiated stock levels. Just before our review, the Air Force Logistics Command reviewed 76 items managed by the Warner Robins ALC and identified 16 that were not supported. Command officials recognized these problems and in March 1978 began working to establish a new policy to alleviate inconsistencies associated with duplicate special and safety level stocks.

#### Base repair cycle times were too long

To support the base repair cycle, enough spares must be available to meet demand during the period that an item is being removed from the aircraft, repaired at the base, and reinstalled. The number of spares needed to satisfy demand is directly related to the base repair cycle time. If the repair cycle time increases, more spares will be needed.

Two sample items had base repair cycle times that were considerably overstated. The erroneous repair cycle times were 15 days and 28 days although the correct times were 4 and 6 days, respectively. One error occurred because base repair personnel had incorrectly added 22 days of repair time to a \$9,995 helicopter blade. The base repair personnel should have added the time to another item that cost only \$1,400. The 28-day repair cycle time generated an unneeded requirement for the \$9,995 item and understated the requirement for the \$1,400 item.

The Air Force said that the 28-day repair cycle was substantiated by actual repair time based on 21 maintenance actions. They pointed out, though, that technical personnel feel that this cycle could be reduced to 15 days, which would still overstate the requirement somewhat.

#### Demand rate too high

The demand for an item is directly related to the item's failure rate. The item manager is responsible for recording the most current usage data (failure rate) for an item in the computation system. The item manager for one sample item had not updated the computation system with the most recent failure rate. Consequently, the system computed an invalid requirement for \$27,350, which was later added to the fiscal year 1979 budget.

In June 1978 the Air Force said that there was now enough data on the item for the failure rate to be converted to actual usage and that this is being done.

IMPROVEMENT NEEDED IN  
CRITERIA FOR ESTABLISHING  
ITEM ESSENTIALITY FOR WAR

The Air Force currently uses the following categories to indicate the technical importance of an investment-type war reserve item to accomplishing wartime missions.

<u>Category</u>	<u>Description</u>
A	An item of supply whose failure, in the absence of a serviceable spare, prevents a mission from being accomplished or a weapon from operating, or presents a hazard to the safety of the occupants or users of the item or end item.
B	An item of supply whose failure, in the absence of a serviceable spare, prevents the primary mission from being accomplished but does not prevent secondary missions from being accomplished.
C	An item of supply whose failure, in the absence of a serviceable spare, prevents secondary missions from being accomplished.
D	An item of supply whose failure, in the absence of a serviceable spare, does not materially affect the accomplishment of primary or secondary missions.
E	An item of supply not fitting into one of the other four categories.

These categories are also used to determine which items should be bought first. Since funds are limited, items designated in the "A" or "B" category are usually purchased first.

Invalid war reserve requirement

In general, the war reserve items selected by the Air Force supported weapon systems identified in the War and Mobilization Plans. However, the Air Force had included about a \$1 million requirement in the fiscal year 1979 budget submission for the sustaining portion of the war

reserve program to support a tactical weapon system that was ineligible for this type of support. The erroneous requirement was generated because invalid factors had not been purged from the requirements computation system. We brought this matter to the Logistics Command's attention in January 1978. The Command agreed the requirement was erroneous and directed the Warner Robins ALC to remove the invalid wartime factors from the affected items. In addition, all other ALCs were instructed to review their war reserve items to determine whether they had made similar mistakes in calculating their war reserve requirements.

Item essentiality is subjective

Equipment specialists assigned to the ALCs are responsible for determining an item's essentiality to the wartime mission. For each of the 100 war reserve items in our sample, we discussed the item's assigned essentiality with the appropriate equipment specialist. For some items, we also discussed their essentiality with the item's users.

The equipment specialists and users were asked to evaluate the correctness of the item essentiality designation. The specialists and/or users agreed that the essentiality designation was incorrect and should be changed for 13 of the items sampled. (See app. II.) The following table shows the changes and their dollar impact on war reserve requirements.

<u>Number of items</u>	<u>Change</u>		<u>Value</u>	<u>Amount reallocable to more essential items</u>
	<u>From</u>	<u>To</u>		
6	A	D	\$4,425,334	\$4,425,334
3	B	D	52,937	52,937
2	B	C	647,336	647,336
1	A	B	8,400	-
<u>1</u>	D	B	175,436	<u>-175,436</u>
<u>13</u>				<u>\$4,950,171</u>

Three of the items were an ultrahigh frequency radio digital readout used on the F-15, A-7, and A-10 aircraft; a 20-millimeter gun drive assembly used on the F-15; and a main rotor blade used on the H-3 helicopter.

The radio digital readout is a piece of auxiliary equipment that the aircraft pilot may use to determine the frequency the radio is operating on. However, the radio is in the cockpit and the pilot can simply look at the frequency setting to determine the same thing.

Although the F-15 could not operate its 20-millimeter gun without the gun drive assembly and the H-3 helicopter could not get off the ground without a main blade, the radio digital readout had a higher item essentiality designation than the other two items until the equipment specialist reviewed it.

Most equipment specialists we talked to said assigning item essentiality codes correctly under the present system was difficult because they did not always know how important an item was to wartime missions. For example, an item may be assigned a high item essentiality because it is very important to the autopilot system; however, this system would probably be used very little on most aircraft in war-time operations.

#### IMPACT OF INACCURATE ITEM ESSENTIALITY CODING

In addition to the 100 items reviewed at Warner Robins, we requested a breakdown of the items each ALC has coded by importance category. (See the following table.) The table shows that 88 percent of the items are identified as highly essential--that is, the primary mission cannot be accomplished without them. All five of the ALCs have at least 81 percent of the items they manage so identified. As a result, logistics managers are unable to effectively use the system to help them manage the following functions:

- Scheduling repair and maintenance of war reserve items.
- Distributing war reserve items to combat and support forces.
- Evaluating logistics support performance.
- Accurately assessing logistics readiness.

Category	Air Logistics Center						Total
	Warner Robins	San Antonio	Ogden	Sacramento	Oklahoma City		
A	7,392	14,961	5,133	6,954	7,820	42,260	
B	<u>11,666</u>	<u>7,683</u>	<u>1,468</u>	<u>4,349</u>	<u>1,489</u>	<u>26,655</u>	
Subtotal	19,058	22,644	6,601	11,303	9,309	68,915	
C	113	585	850	1,010	16	2,574	
D	166	1,454	610	253	160	2,643	
E	<u>540</u>	<u>3,384</u>	<u>62</u>	<u>49</u>	<u>79</u>	<u>4,114</u>	
Total	<u>19,877</u>	<u>28,067</u>	<u>8,123</u>	<u>12,615</u>	<u>9,564</u>	<u>78,246</u>	

Note: The Air Force has coded 78,246 of the approximately 140,000 inventory investment items. All the coded items shown above, however, are not in the war reserve program. There are 12,172 items in prepositioned war reserves and 12,376 items in "sustaining" war reserves. These items are duplicated to some extent since the same item is reflected in both areas.

For example, 24 percent of all inventory purchased for use in the first 30 days of combat and 76 percent of remaining war reserve materiel on-hand is presently in an unserviceable condition. Air Force plans for repairing this inventory call for accelerating the repair activity upon warning of impending hostile actions. Yet, almost all the materiel backlogged for repair is coded as being equally essential to the war effort; thus, the logistics managers have no effective way under the present system to schedule the more critical items first.

### Air Force has found similar problems

Periodically the Logistics Command's Directorate of Materiel Requirements reviews the priorities assigned to selected items and the factors used to compute requirements to determine if the system is using valid and accurate information. The reviews are made at each ALC.

Logistics Command officials had reviewed essentiality coding at Warner Robins ALC just before our review. They found 52 errors in the essentiality assignments of 220 items reviewed, and all 52 assignments were too high. The officials told us that essentiality coding is a continual problem at all ALCs. They said that the new method, discussed below, should correct problems identified with essentiality coding.

### THE AIR FORCE IS TRYING TO IMPROVE ITS ITEM ESSENTIALITY PRIORITY SYSTEM

The Air Force is working on a new method for determining an item's essentiality. This method will consider the type of aircraft that the spare part supports, the aircraft's mission, and the relative importance of the item to the

aircraft's operation. We subjected our 100 sample investment items to the proposed method and found that it is a more realistic way of determining an item's wartime importance.

The number of items in the various essentiality categories were:

<u>Category</u>	<u>Current method</u>	<u>Proposed method</u>
A	23	9
B	75	59
C	1	27
D	1	5
E	<u>0</u>	<u>0</u>
Total	<u>100</u>	<u>100</u>

### CONCLUSIONS AND RECOMMENDATIONS

Particularly critical to assessing the spare part requirements generated by the programs designed to manage these investment items are the methods of item selection, the methods of requirements computation, war reserve needs, and related management factors. In reviewing the Air Force's management of these processes, we noted that:

- The Air Force's documentation used to justify its essential spare part needs is incomplete and based on erroneous data. This causes annual budget submissions to be overstated.
- The Air Force does not have an effective method for assigning priorities to war reserve items in terms of their importance to wartime missions.

The Air Force is working on a new system to assign priorities to war reserve items. This system should eliminate much of the subjectivity associated with the present method. However, the Air Force should assure itself that the new method will consistently categorize war reserve items in order of their importance to the Air Force wartime mission. Additionally, the Air Force needs to act to ensure that accurate, reliable data is used to compute spare part requirements.

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

- Make sure that the new system can adequately establish priorities for war reserve items before funds are requested to purchase additional war reserve spares and repair parts.
- Require that the highest priority war reserve items are funded first.
- Provide additional training and guidance to item managers on the importance of using realistic, supportable data so that war reserve requirements for spares and repair parts are not overstated and that errors identified are immediately corrected.

### RECOMMENDATION TO THE CONGRESS

The Air Force has limited its fiscal year 1979 appropriations request to just those war reserve investment spares needed to support particular aircraft in the first 30 days of a conflict. No moneys have been requested to support the "sustaining" portion of its war reserve requirement. The request for stock fund items is primarily for aircraft gun system parts, which are manually computed.

The Air Force intends to spend a lot of money in the future, however, to purchase the "sustaining" portion of its war reserve requirement for both investment and stock fund items. The proposed expenditures will be in addition to the sizable investment already made in peacetime stocks and war reserves earmarked for the initial stages of a conflict. We have serious reservations about the current system for identifying mission essential items.

We recommend, therefore, that the Congress not authorize or appropriate additional funds for the "sustaining" portion of the war reserve requirement unless the Air Force can demonstrate to the Congress that it is making satisfactory progress in developing and implementing its new system for identifying mission essential items.

### AGENCY COMMENTS AND OUR EVALUATION

We discussed the matters in this report with Office of the Secretary of Defense and Air Force officials on June 19, 1978, obtained their oral comments, and considered their comments in preparing it. The officials generally agreed with our recommendations and have taken or planned actions to implement them. However, the officials did not fully concur in our findings on specific investment items.

The Air Force's basic disagreement seemed to center on the subjectivity of designating essentiality codes for war reserve items. After re-reviewing with their equipment specialists the items we reviewed, Air Force officials said that the specialists decided to change the items to a different code. This further illustrates the subjectivity involved in assigning essentiality codes.

The Air Force officials also did not agree with inaccuracies we identified in the requirements computation process and the reasons for them. During our June 19 discussion, the officials presented additional documentation supporting their nonagreement with certain aspects of our findings, pointing out, however, that this information was not made available to us during our review. We noted that time did not permit us to verify this additional data because of our commitment to the Senate Appropriations Committee. We told the officials that, in accordance with the conditions in effect at the time of our review, we were prepared to stand by our findings.

Nevertheless, Air Force officials agreed that problems exist in these areas, particularly in the subjectivity of assigning essentiality codes. They gave us an impressive briefing, highlighting how the new system would take away much of the subjectivity. The system is to be implemented in June 1979.



## CHAPTER 4

### IMPROVED METHODS ARE

### NEEDED TO IDENTIFY STOCK FUND

### WAR RESERVE ITEMS

In fiscal year 1976 the Senate Armed Services Committee recommended eliminating the Air Force's entire request for stock fund war reserve spare parts because most of the parts requested were ineligible for stockage as war reserves. Before requesting its fiscal year 1977 funding, DOD told the Congress that this situation had been eliminated and that the fiscal year 1977 funds requested were only for spare parts it needed to carry out essential wartime missions until production could catch up with wartime demand. The Congress approved about \$59 million in appropriations for the Air Force's war reserve stock fund needs, including \$10.8 million for the C-141 aircraft managed at the Warner Robins ALC.

In December 1976, we notified the Air Force Logistics Command that most of the C-5 and C-141 stock fund items had not been properly screened and that the Air Force was apparently again planning to buy items not eligible for stockage as war reserves. We suggested that the C-5 and C-141 stock fund appropriations not be spent until the Logistics Command was sure the funds would be spent only on mission essential war reserve spare parts. The Command assured us that the fiscal year 1977 funds would not be spent until this situation had been corrected. Later, replying to a followup inquiry, the Command stated that the review process had been completed, the situation had been corrected, and the Air Force had begun buying only mission essential stock fund war reserves. About \$10.3 million was eliminated from the Air Force fiscal year 1978 budget request as a result.

Although the Air Force reduced the fiscal year 1978 budget, we were interested in the validity of the fiscal year 1977 budgeted items scheduled to be bought at the time of our review in September 1977.

We visited the Warner Robins ALC, which is responsible for managing the C-141 aircraft, and found that the Center had reduced its proposed \$10.8 million fiscal year 1977 C-141 stock fund procurement by \$2 million to eliminate unneeded items. To test the adequacy of the Air Force's action, we selectively reviewed items remaining in the fiscal year 1977 budget. Our test showed that (1) about 23 percent of the

items sampled were not eligible for purchase as war reserves and (2) none of the items sampled had been screened by the ALC to determine their relative importance to wartime missions.

The Air Force needs to correct the problems identified in this chapter so that future requirements are an accurate and reliable indicator of funding needs.

#### WHAT ARE STOCK FUND ITEMS?

Stock fund items are different from investment items in that they are considered consumed when they are incorporated into an airplane or other weapon system. Stock fund items, generally part of a next higher assembly, are commonly known as repair parts, bits and pieces, consumables, and expense items. A common characteristic is that stock fund items are not economically reparable at the depot level.

There are about 501,300 stock fund items in the Air Force inventory. About 272,000 of them have been selected as war reserve items under the same selection criteria used for the investment spare parts discussed in chapter 3.

Peacetime operating requirements for stock fund items are purchased with stock fund capital, while war reserve requirements are purchased with appropriated funds.

#### HOW ARE REQUIREMENTS COMPUTED FOR STOCK FUND ITEMS?

Requirements for stock fund items are computed twice a month at the five ALCs. The computation is done primarily to project requirements into the future so that stocks will be available when they are needed at various Air Force bases, at repair depots, or by other services or countries.

The computation system, called the Economic Order Quantity Requirements System, computes the wholesale stock level requirements and then determines which items are in oversupply, in an adequate position, or scheduled to be bought.

As with investment items, demand history for stock fund items is developed from the Air Force's peacetime flying program. The demand history from the most recent 2-year period is used to determine the quantity of stock fund items that will be needed to support the Air Force's planned peacetime and wartime flying missions. Wartime needs are based on a projection of the peacetime demand rate.

Unlike investment spare parts, stock fund item requirements do not involve repair pipeline factors. However, a number of factors need to be considered to ensure that enough stock fund items are available when and where they are needed. These factors include the procurement leadtime, safety levels, and the reorder point.

Basically the requirements computation consists of updating an item's usage, determining the quantity available, projecting the new demand rate and requirements levels, and comparing the items available to the new requirements levels. The requirements computation system for stock fund items is not as complex as that for reparable spare parts. However, the Air Force needs to compute accurate, reliable requirements and to assign appropriate funding and procurement priorities to the required items.

#### STOCK FUND REQUIREMENTS OVERSTATED

In September 1976, the Air Force Logistics Command directed its five ALCs to review the stock fund items supporting aircraft to be engaged in wartime to determine which items were essential to accomplishing the Air Force's mission. Rather than review each item, the ALC responsible for managing the C-141 war reserve program simply assigned a high essentiality to all unpurchased C-141 war reserve items in its stock fund system. After assuring Logistics Command headquarters that the items had been properly reviewed, the Center received about \$10.8 million to purchase war reserve materiel requirements. In June 1977, before actually spending the funds, the Center reviewed some of the items and found the requirement was overstated by about \$2 million because unneeded items had been included in the computation process. For example, a requirement for about \$1 million included parts for a radio system which would no longer be used on most aircraft and about \$1.2 million for structural panels that were already in oversupply.

To determine if the Center's review of its C-141 requirements was adequate, we randomly selected and reviewed 99 of 1,251 stock fund items in the reduced fiscal 1977 requirement of \$8.8 million. The buy requirement on the 99 items was about \$465,000. We found that 23 items sampled should not have had a war reserve requirement, causing the \$465,000 buy requirement to be overstated by about \$58,500. When this error rate is projected, we estimate that between 189 and 387 of the 1,251 items would not have a valid war reserve requirement. Following are several examples of items that did not have a valid requirement but were scheduled to be purchased as war reserve items:

- Five pulleys were scheduled for purchase even though 33--a 21-year peacetime or 6-year wartime supply--were already in stock, 14 of which had already been declared excess to foreseeable Air Force needs. The five pulleys cost a total of \$1,348.
- The Logistics Command war reserve guidelines provided that items likely to become obsolete within the next 4 years should not be bought. However, 65 fittings--part of the lock system on a C-141 cargo ramp door--costing about \$6,830 were scheduled to be purchased even though they will not be used on the aircraft after 1980. The fittings will be replaced during a modification program scheduled to begin in October 1978. The modification program has been in planning stages for several years and information available when the items were scheduled to be bought showed that the program would be completed in 1980.
- DOD guidance provides that items readily made in the field with available tools and materials should not be selected for war reserves. The Center bought at least one item--an engine vent tube--that apparently does not meet DOD's criteria. The 397 tubes cost a total of \$3,349. Maintenance people at Charleston Air Force Base said that the tube could be readily made at base level with available tools and materials. Base maintenance personnel also identified three other sample items scheduled to be bought that they felt could be made at the base with available tools and materials.
- Five cargo bay trim panels costing about \$696 were scheduled for purchase even though they provide only minor protection to parts in the aircraft wall and are used primarily to improve appearance.

WAR RESERVE REQUIREMENTS FOR ITEMS  
NOT PROPERLY ESTABLISHED

The Air Force uses the same designations or categories to indicate the technical importance of a stock fund type war reserve item as they do on investment items shown on page 14.

For all 99 items in our sample, the equipment specialist at the Warner Robins ALC had not determined their essentiality because the Center assigned all unpurchased C-141 stock fund war reserve spare parts a high essentiality designation

mechanically without consulting individual specialists. To evaluate the correctness of the mechanically assigned item essentiality designations, we discussed the item's assigned essentiality with both the appropriate equipment specialist and users at the air base in Charleston, South Carolina.

The equipment specialists said the essentiality designations were incorrect for 35 of the 99 items, while the users felt the designations were incorrect for 88 items. Based on their responses, the items would be placed in the following categories.

<u>Category</u>	Number originally assigned to category	Number that should be assigned to category	
		<u>Per equipment specialist</u>	<u>Per user</u>
A	0	14	38
B	99	64	11
C	0	6	4
D	0	14	19
E	<u>0</u>	<u>1</u>	<u>27</u>
Total	<u>99</u>	<u>99</u>	<u>99</u>

These responses show that the Center should not have mechanically assigned priorities for funding and purchasing preference to the 99 war reserve items. In fact, 15 of the items would not have even qualified for war reserve funding had the item essentiality designation been completed by the equipment specialists, because Air Force policy is not to request funding for category D and E items (non-mission-essential). We did not project this 15-percent error rate because the unit price of the items ranged from \$1 to \$697, preventing a meaningful projection from being made. Appendix III lists the individual items that equipment specialists or users felt were not mission essential. About \$241,000 was spent to purchase these less critical items.

Most equipment specialists we talked to, however, said that even when they were consulted, assigning item essentiality codes correctly was difficult. This was because, under the present system, they do not always know how important an item is to wartime missions.

As previously mentioned, the Air Force has recognized this problem and is working on a new method for determining item essentiality. This method, which will consider the type of aircraft, its mission, and the relative importance of the

item to the aircraft's operation, should assign more realistic priorities.

## CONCLUSIONS AND RECOMMENDATIONS

In reviewing the Air Force's methods of item selection, methods of requirements computation, war reserve needs, and related management factors, we noted that the Air Force needs

--complete, accurate data to justify its essential spare part needs for budget submissions and

--an effective method for assigning priorities to war reserve items by their essentiality to wartime missions.

The Air Force is working on a new system to assign priorities to war reserve items. This system should eliminate much of the subjectivity associated with the present method. Accordingly, we are not making a recommendation in this area. However, the Air Force should assure itself that the new method will consistently categorize war reserve items in order of their importance to the Air Force wartime mission.

Additionally, the Air Force needs to act to ensure that accurate, reliable data is used to compute spare part requirements. Accordingly, the recommendations on page 18 are equally applicable to stock fund items.

## AGENCY COMMENTS AND OUR EVALUATION

The officials generally agreed with our findings on stock fund items. Although they disagreed with our criticism of the subjectivity of assigning essentiality codes, the new system that the Air Force is developing should reduce much of the subjectivity involved in assigning essentiality codes to stock fund war reserve items.

Since actions are already underway or planned to implement our recommendations on investment items (see p. 19), and since they apply equally to stock fund items, we have no additional recommendations to make.

We have made changes in this chapter of our report, as appropriate, as a result of our meeting with the Air Force.

SAMPLE OF INVESTMENT ITEMS WITH  
ERRORS IN THEIR REQUIREMENTS COMPUTATION

<u>Item number</u>	<u>NSN</u>	<u>Part</u>	<u>Problem identified</u>	<u>Unit cost</u>	<u>Value of error</u>
1	1270-00-090-6792	Circuit card	Unreconciled assets Unsupported negotiated stock level	\$ 800	\$ 3,200 1,600
2	5826-00-249-1098	Circuit card	Unreconciled assets	312	2,808
3	6760-00-237-0826	Magazine	Unreconciled assets	2,363	18,904
4	1005-00-908-3825	Overdrive assembly	Data transcription error	943	165,025
5	5841-00-160-5050	Circuit card	Unreconciled assets	1,049	34,617
6	5841-00-001-7116	Sweep generator	Unreconciled assets	12,354	61,770
7	6610-00-121-9782	Circuit card	Unreconciled assets	522	30,276
8	5841-00-197-9891	Radar altimeter	Unreconciled assets	31,567	220,969
9	1615-00-491-8488	Helicopter rotor blade	Base repair cycle time overstated	9,995	9,995
10	5865-01-009-8356	Circuit card	Failure rate over- stated	912	27,351
11	1270-00-165-9251	Power amplifier	Unreconciled assets	540	1,080
12	5821-00-224-5594	Circuit card	Unsupported negotiated stock level	1,200	540 1,200
13	1280-00-457-0864	Circuit card	Unsupported negotiated stock level	285	-
14	1560-00-738-5512	Leading edge	Base repair cycle time overstated	5,479	38,353
15	6605-00-456-3884	Minicomputer	Unreconciled assets Unreconciled assets	29,329	205,303

SAMPLE OF INVESTMENT ITEMS WITH  
INCORRECT ESSENTIALITY CODES

Item number	NSN	Part	Unit cost	Essentiality coding change		Value (note a)
				From	To	
1	5821-00-455-8389	Amplifier	\$4,227	A	D	\$ 25,362
2	5821-00-621-6466	Frequency indicator	1,210	A	D	2,420
3	5821-01-008-532	Circuit card	1,074	A	D	7,518
4	5895-01-008-454	Control set	856	A	D	8,560
5	5831-01-013-1810	Circuit card	5,155	A	D	30,930
6	5821-01-039-8814	Preset filter	20,816	A	D	4,340,544
7	7025-01-039-7958	Circuit card	2,450	B	D	49,000
8	5841-01-021-1642	Gear head	400	B	D	2,800
9	7025-01-010-1667	Timer	1,137	B	D	1,137
10	6605-00-456-3884	Minicomputer	29,329	B	C	645,238
11	5841-00-160-5050	Circuit card	1,049	B	C	2,098
12	5821-00-224-5594	Circuit card	1,200	A	B	-
13	6610-00-121-9782	Circuit card	522	D	B	-175,436

a/These funds could be reallocated to war reserve items more critical to the wartime mission. Item 13 is an exception, since it should have had a higher priority. It, therefore, becomes a candidate for funds that may be re-allocated.



SAMPLE OF STOCK FUND ITEMS THAT EQUIPMENT SPECIALISTS  
AND/OR USERS FELT WERE NOT MISSION ESSENTIAL

<u>Item number</u>	<u>NSN</u>	<u>Part</u>	<u>Unit price</u>	<u>Number of units purchased</u>	<u>Total (note a)</u>
1	3040-00-012-7642	Rod assembly	\$ 16.06	99	\$ 1,589.94
2	1560-00-738-3296	Jacket assembly	7.61	136	1,034.96
3	1560-00-012-7910	Seal	40.35	175	7,061.25
4	1560-00-075-8984	Guide track	176.79	17	3,005.43
5	1560-00-736-6983	Pracket	35.64	7	249.48
6	1560-00-789-9800	Rod assembly	17.57	232	4,076.24
7	1560-00-789-9802	Ejector assembly	254.95	53	13,512.35
8	6615-00-056-4580	Pully cable	147.88	29	4,288.52
9	1560-00-757-3887	Latch support	12.55	148	1,857.40
10	1560-00-916-0096	CAM, rudder pedal	178.29	12	2,139.48
11	1560-00-919-3927	Panel assembly	164.96	23	3,794.08
12	1560-00-929-1074	Half seal	12.29	67	823.43
13	1560-00-941-4356	Cover assembly	46.41	6	278.46
14	5330-00-943-8948	Seal	1.31	43	56.33
15	5340-00-063-3762	Coupling	12.12	36	436.3
16	5905-00-922-4119	Resistor	78.38	8	627.0
17	6610-00-911-8297	Seal	15.37	245	3,765.65
18	6615-00-056-4579	Hinge assembly	555.55	3	1,666.65
19	1560-00-118-9818	Panel assembly	461.96	1	461.96
20	1560-00-626-9476	Trim panel	65.85	5	329.25
21	1560-00-944-0724	Roller assembly	1.22	2,445	2,982.90
22	5330-00-961-3868	Seal	6.73	10	67.30
23	5355-00-507-0383	Knob	10.61	146	1,549.06
24	5365-00-728-2467	Spacer	10.68	34	363.12
25	6605-00-320-6158	Selector module	101.56	52	5,281.12
26	6605-00-437-9977	Logic indicator module	112.00	22	2,464.00
27	1560-00-789-4652	Skid strip	155.69	135	21,018.15
28	1560-00-760-1640	Seal	82.47	87	7,174.89
29	1560-00-077-1150	Hinge assembly	40.84	1,295	52,887.80
30	1560-00-103-3756	Dapter	9.17	18	165.06
31	1560-00-121-9818	Cover assembly	11.05	50	552.50
32	1560-00-235-8183	Post assembly	6.16	1,822	11,223.52
33	1560-00-739-0814	Sill door	46.45	66	3,065.70
34	1560-00-758-3970	Fitting	274.62	3	823.86
35	1560-00-937-8192	Element	28.00	2	56.00
36	1560-01-005-1995	Door assembly	120.88	51	6,164.88
37	4710-00-116-2346	Tube	8.93	397	3,545.21
38	1560-00-077-0158	Door assembly, engine	36.87	261	9,623.07
39	1560-00-077-1139	Door assembly	287.81	68	19,571.08
40	1560-00-238-2102	Panel assembly	230.33	2	460.66
41	1560-00-241-2569	Fairing assembly	15.75	9	141.75
42	1560-00-738-9789	Flange	9.08	148	1,343.84
43	1560-00-753-1692	Fairing ramp support	64.98	161	10,461.78
44	1560-00-780-3808	Cover assembly	2.07	432	894.24
45	1680-00-238-8285	Reel assembly	232.66	36	8,375.76
46	5330-00-688-9309	Seal, cover surge box	11.47	30	344.10
47	6605-00-726-5722	Module, time delay	132.31	75	9,923.25
48	6605-00-241-8941	Module assembly	472.68	20	9,453.60

a/These funds could be reallocated to war reserve items more critical to the wartime mission.

PRINCIPAL OFFICIALS RESPONSIBLE  
FOR ADMINISTERING ACTIVITIES  
DISCUSSED IN THIS REPORT

Tenure of office  
From                      To

DEPARTMENT OF DEFENSE

SECRETARY OF DEFENSE:

Dr. Harold Brown	Jan. 1977	Present
Donald H. Rumsfeld	Nov. 1975	Jan. 1977
James R. Schlesinger	July 1973	Nov. 1975

ASSISTANT SECRETARY OF DEFENSE  
(MANPOWER, RESERVE AFFAIRS, AND  
LOGISTICS):

Dr. John P. White	May 1977	Present
Dale R. Babione (acting)	Jan. 1977	Apr. 1977
Frank A. Shrontz	Feb. 1976	Jan. 1977
John J. Bennett (acting)	Mar. 1975	Feb. 1976
Arthur I. Mendolia	June 1973	Mar. 1975

SECRETARY OF THE AIR FORCE:

John C. Stetson	Apr. 1977	Present
John C. Stetson (acting)	Jan. 1977	Apr. 1977
Thomas C. Reed	Jan. 1976	Jan. 1977
James W. Plummer (acting)	Nov. 1975	Jan. 1976

ASSISTANT SECRETARY OF THE AIR  
FORCE (MANPOWER, RESERVE AFFAIRS,  
AND INSTALLATIONS):

Antonia H. Chayes	July 1977	Present
Richard J. Keegan (acting)	Feb. 1977	July 1977
J. Gordon Kapp	Mar. 1976	Jan. 1977
Frank A. Shrontz	Oct. 1973	Feb. 1976