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REPORT BY THE U.S.

General Accounting Office

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Increased Use Of Available Aviation Assets In New Production Can Save Millions

The Navy is ~~continuing to~~ incur procurement and inventory holding costs amounting to millions of dollars annually which could be avoided by furnishing aviation items in long or surplus supply to contractors for use in producing new aviation equipment.

F/C

GAO identified a minimum of about $14 million of long supply aviation parts in ready-for-issue condition which could be furnished to contractors for fiscal year 1980 production of aircraft airframes, engines, and aerial target drones. Also identified were $1.2 million of long supply aviation parts that were available but not furnished for fiscal year 1977-78 production of aircraft parts.

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report

LCD-79-201

MARCH 5, 1979

UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

LOGISTICS AND COMMUNICATIONS
DIVISION

B-132989

The Honorable Harold Brown (5)
The Secretary of Defense

Dear Mr. Secretary:

This report shows that the Navy could realize procurement and inventory holding cost savings estimated at millions of dollars annually. This can be done by placing greater emphasis on and improving methods for supplying available aviation system assets to contractors for use in producing new aviation equipment.

Chapter 4 of this report contains a number of recommendations for corrective action. As you know, section 236 of the Legislative Reorganization Act of 1970 requires the head of a Federal agency to submit a written statement on actions taken on our recommendations to the House Commmittee on Government Operations and the Senate Committee on Governmental Affairs not later than 60 days after the date of the report, and to the House and Senate Committees on Appropriations with the agency's first request for appropriations made more than 60 days after the date of the report.

We are sending copies of this report to the Director, Office of Management and Budget; the Senate Committee on Governmental Affairs; the House Committee on Government Operations; the Senate and House Committees on Appropriations and Armed Services; and the Secretary of the Navy.

Sincerely yours,

R. W. Gutmann
Director

GENERAL ACCOUNTING OFFICE
REPORT TO THE
SECRETARY OF DEFENSE

INCREASED USE OF AVAILABLE AVIATION ASSETS IN NEW PRODUCTION CAN SAVE MILLIONS

D I G E S T

The Navy needs to improve its procedures and practices for identifying long supply quantities of items that could be used in new production of aviation equipment by

--determining the availability of these long supply items and

--advising and furnishing them to contractors.

(Long supply items are those in inventory excess of current requirements plus the succeeding two years' requirements.) Substantial savings would then be available by using the long supply inventories and avoiding unnecessary procurement.

GAO reported previously in 1963 and 1969 that the Navy could realize substantial savings by identifying and making items in long supply available for use in the production of new equipment.

For fiscal year 1980 alone, a minimum of about $14 million of long supply spare aviation assets in ready-for-issue condition were available to satisfy production requirements for naval aircraft airframes, engines, and aerial target drones.

During the past 5 years, the Navy supplied production contractors with only $1.2 million of long supply spare aviation assets, whereas tens of millions of dollars worth of such assets were identified as available and needed to satisfy production requirements.

During this same period the Navy disposed of millions of dollars of excess aviation assets which could have been used to satisfy production requirements. This condition existed because of:

--Lack of management emphasis and interest on the part of personnel responsible for administering the program.

--Ineffective implementation of and noncompliance with existing policies.

--Weaknesses in existing procedures and practices.

--Lack of visibility and feedback systems at Navy and Department of Defense (DOD) top management levels for monitoring and measuring the success of the Navy's program for making maximum use of available aviation system assets in new production.

In contrast to the Navy's poor performance, the Air Force furnished $90 million of long supply spare aviation assets to contractors for use in new production over a similar 5-year period. It realized significant economies because of more timely and effective screening and making available to contractors long supply spare aviation assets needed to satisfy new production requirements.

Corrective action is needed at all levels of the Navy in order to achieve maximum savings. Accordingly, the Secretary of Defense should direct the Navy to:

--Establish a monitor at the Naval Air Systems Command (NAVAIR) to assure that screening is being performed as required and that results are measured.

--Have NAVAIR and the Navy Aviation Supply Office (ASO) work with contractors to establish guidelines that will assure greater use of available long supply assets.

--Have NAVAIR and ASO adopt the more desirable features of the Air Force system for supplying available

aviation system assets to production contractors.

--Revise ASO's computer program to provide a means for screening long supply assets applicable to aircraft components.

--Educate ASO's inventory managers as to the objectives of long supply screening and establish management review procedures of actions taken or not taken by inventory managers.

--Have ASO furnish the listings of candidates of long supply assets to the Government representatives at contractors' plants at the same time they are furnished to NAVAIR to speed up the review and acceptance process.

--Revise ASO's disposal screening program to prevent the disposal of assets needed for new production requirements.

--Have ASO and NAVAIR maintain statistics on costs incurred in identifying and providing contractors with long supply assets. Also, ASO and NAVAIR should perform periodic cost-benefit analyses of the results of the program to determine whether their current criteria for long supply screening and selection provides the maximum return for the effort expended.

--Have NAVAIR and ASO submit with their annual budget requests for appropriated funds for aircraft purchases a report for the budget year showing (1) the number, value, and condition of long supply aviation assets applicable to new production aircraft, (2) number, value, and condition of long supply assets identified as potential production candidates, and (3) the prior year's number, value, and condition of long supply assets offered and those furnished to production contractors.

The Navy and DOD expressed general agreement with GAO's findings and recommendations.

Tear Sheet

Contents

ABBREVIATIONS

ASO	Aviation Supply Office — 159
DOD	Department of Defense
GAO	General Accounting Office
GFM	Government Furnished Material
NAVAIR	Naval Air Systems Command — 455

CHAPTER 1

INTRODUCTION

Within the Department of the Navy, the Naval Air Systems Command (NAVAIR) is responsible for the procurement of Navy aircraft, aircraft engines, and certain major aeronautical equipment. The Navy Aviation Supply Office (ASO) is responsible for the supply management of some 340,000 aeronautical spare parts and assemblies used to support the NAVAIR procured items. ASO's supply management function includes determining the types and quantities of spare parts and assemblies needed to support the operations of Navy aircraft and arranging for the purchase, distribution, and repair of needed items and the disposal of unneeded items.

The aircraft or equipment of a new model are ordinarily purchased in annual increments extending over as many as 5 to 7 years. ASO procures an initial supply of spare parts at the time of purchase of new aircraft, engines, target drones, and related aeronautical equipment, and it continues to procure parts for operational support. ASO bases its procurement of items for initial support on various factors such as anticipated replacement rates and projected operations. Subsequently, purchases are based on experience. From experience, however, ASO has found that the quantities of some of the parts needed to support operations has decreased from that projected initially. This decrease in need is primarily due to reduction in usage from that anticipated and/or reductions in operations from that projected originally. Consequently, many of the parts procured initially and onhand become long supply; i.e, excess to current requirements and the succeeding 2 years' replacement requirements.

The annual cost of carrying inventory for a wholesale distributor has been estimated by the Department of Defense (DOD) and industry to range from 20 to 25 percent of the average inventory value. The major cost elements include obsolescence, interest, deterioration, handling, transportation, and storage. The Navy will incur these same costs for the inventory managed by ASO. Because of the costs involved to hold inventory for long periods of time, it is incumbent upon the Navy to assure maximum and timely utilization of long supply assets whenever possible. Using such assets as Government Furnished Material (GFM) in new production contracts is a good way to do this.

Our February 1963 report pointed out the need for the Navy to identify and use its excess spare parts in the

production of new aircraft. We identified $2.3 million in long supply parts which could have been furnished to the contractor as GFM for new aircraft production. As a result of our bringing this matter to the Navy's attention, about $1.2 million in parts were transferred to the contractor. The report also pointed out that the Navy was establishing a permanent program for the use of excess parts and assemblies in the production of aircraft.

In our followup report issued in December 1969, we pointed out that there was a continuing need for improvement in the Navy's procedures and practices. ASO had not been screening for the availability of long supply and excess aeronautical spare parts for use as GFM in the production of new aircraft. Also, existing procedures and practices did not provide for utilizing such available assets in the production of aircraft support items. We recommended that ASO screen available assets on a systematic basis in order to identify those that could be used in new aircraft production. These assets were to be offered to contractors at the earliest possible stage of the contractual process. Similar procedures were recommended for the identification of releasable assets for use as GFM in contracts for the production of aircraft support items.

In response to these recommendations NAVAIR issued NAVAIR Instruction 4340.3 effective December 23, 1970, which requires screening and furnishing components and parts for use as GFM by contractors in producing airframes, engines, and target drones. The instruction defined long supply and established the criteria for selecting long supply assets. In addition, the latest version of ASO Instruction 4340.3 dated August 12, 1974, which implements the NAVAIR instruction, also provides for screening for availability of GFM for repairable components procured by ASO.

These instructions require that in May of each year, NAVAIR shall request ASO to screen the inventory it manages for available long supply parts applicable to the items to be procured. This is over 1 year prior to the award of the contract for additional aircraft, engines, and target drones. ASO is then required to screen all repairable major assemblies and subassemblies having direct application to the item being procured and offer both serviceable and unserviceable assets in long supply as potential GFM.

Consumable repair parts in long supply, which were procured from the pending equipment contractor and which have an extended value per aircraft over $50, shall also be offered as potential GFM.

ASO instructions also require ASO to screen for available parts that are useable on repairable assemblies with a unit price of $750 or more, being procured from only one or two procurement sources with a total procurement value of $100,000 or more. This screening includes both serviceable and unserviceable repairable components with extended line item values of $1,000 or more, and consumable parts with extended line item values of $100 or more.

Using the computer, ASO is supposed to screen its inventory and identify those items in long supply which are component parts of the aircraft, engines, and target drones being procured. When these long supply GFM candidates are identified, they are to be reviewed by the responsible inventory managers to determine if there is any reason to eliminate them as potential GFM candidates. ASO officials informed us that it was not possible to use the existing computer program to screen for parts applicable to ASO repairable components being procured; therefore, such screening is performed manually.

The potential for optimum utilization of available Government-owned material as GFM, in lieu of contractor furnished material, in production contracts for major systems and equipments has been recognized and promoted by DOD. DOD Instruction 4140.41 dated July 26, 1974, provides this policy to the military departments and defense agencies. The Air Force, Army, and Navy have issued procedures to implement this policy and to utilize computer technology for identifying the long supply material, and for providing such material to contractors as GFM.

Furthermore, the Armed Services Procurement Regulations 13-201 states that the Government should furnish material to a contractor when it is determined to be in the best interest of the Government by reason of economy, standardization, the expediting of production, or other appropriate circumstances.

CHAPTER 2

IMPROVEMENTS NEEDED IN PROCEDURES AND PRACTICES FOR SUPPLYING ASSETS THAT ARE IN LONG SUPPLY TO CONTRACTORS FOR USE IN NEW PRODUCTION

The Navy is continuing to incur procurement and inventory holding costs amounting to millions of dollars annually which could be avoided by furnishing aviation items in long supply to contractors for use in production of aviation equipment. We identified a minimum of about $14 million of long supply aviation parts in ready-for-issue condition which could be furnished to contractors for use in fiscal year 1980 production of aircraft airframes, engines, and aerial target drones. Also, we identified $1.2 million of long supply aviation parts that were available but not furnished for use in fiscal year 1977-78 production of aircraft parts. (See app. I.)

During the past 5 years, the Navy supplied production contractors with only $1.2 million of long supply spare aviation assets, whereas tens of millions of such assets were available to satisfy production requirements. Also, the Navy disposed of millions of dollars of excess aviation assets which could have been used to satisfy production requirements. (See app. I.)

In contrast to the Navy's poor performance, the Air Force furnished $90 million of long supply aviation system assets to contractors for use in new production over a similar 5-year period.

IMPROVEMENTS NEEDED IN SUPPLYING LONG SUPPLY AIRFRAME PARTS TO PRODUCTION CONTRACTORS

As shown in the table below, the Navy supplied production contractors with only $1.2 million of long supply airframe assets during fiscal years 1972 through 1976, whereas about $59 million of such assets were identified as available and probably could have been used to satisfy production requirements.

Long Supply Airframe Assets
Available for And Used In Production Contracts
1972-76

Fiscal year	Identified as candidates available for use in production	Used by production contractors
	(millions)	
1972	$12.415	$.353
1973	9.287	.212
1974	a/	.410
1975	21.817	.257
1976	15.541	.016
Total	$59.060	$1.248

a/Records of screening not available.

We found that a minimum of $9.7 million of long supply airframe assets were available for use to satisfy fiscal year 1980 aircraft production requirements. We believe the Navy's continuing failure to achieve the maximum economies obtainable through use of long supply airframe assets in new production is due to (1) lack of management emphasis and interest; (2) ineffective implementation of and noncompliance with existing policies; and (3) lack of visibility and feedback systems at top management levels of the Navy and DOD for monitoring and measuring the success of the Navy's program for making maximum use of available aviation system assets in new production. These conditions are detailed below.

Problems with fiscal year 1976 screening of long supply items for use in new production

On June 26, 1976, NAVAIR requested ASO to use its computerized program to screen its inventories to identify aviation airframe assets in long supply that could be used to satisfy fiscal year 1978 aircraft production requirements. NAVAIR requested that ASO complete the screening and provide them with a listing of long supply production candidates for GFM within two months. NAVAIR considered this time frame essential to allow them sufficient time to obtain contractors' acceptance of the long supply assets before contract price negotiations.

On August 30, 1976, ASO provided NAVAIR with a listing of long supply assets available for use on fiscal year 1978 aircraft production contracts. This listing identified $15.5 million of long supply assets of which $11 million were in ready-for-issue condition. Despite the fact that NAVAIR was advised of the potential long supply production candidates sufficiently in advance of contract negotiations, we found little or no evidence that responsible NAVAIR officials advised production contractors of the availability of these assets or attempted to obtain their acceptance. Of the $15.5 million of long supply production candidates, only $16,000 of long supply assets were furnished to one contractor. The Navy could not furnish any evidence that other contractors had been contacted. We were advised by one contractor, who was responsible for 3 of the 11 types of aircraft being produced, that he was not contacted by NAVAIR regarding the fiscal year 1976 availability of long supply assets for fiscal year 1978 production requirements.

Problems with fiscal year 1977 screening of long supply items for use in new production

On May 19, 1977, NAVAIR requested ASO to screen long supply assets for potential GFM that could be made available for production of aircraft to be produced in fiscal year 1979. The letter requested that the listing be submitted by July 29, 1977. On August 10, 1977, ASO informed NAVAIR that it was reviewing potential long supply items, and the review would be completed by September 30, 1977. We contacted ASO officials on September 20, 1977, and again on November 14, 1977 and found the screening had not been initiated. Also, we found no evidence that responsible NAVAIR officials had expressed any concern over the delay in screening or followed up to ascertain the reason for the delay. Subsequent to our inquiry, ASO accomplished the computerized screening of long supply assets on January 31, 1978.

The computerized produced listing of long supply assets applicable to aircraft to be procured in fiscal year 1979 revealed that 6,700 airframe items had long supply assets valued at $171 million in both a ready-for-issue and in-need-of-repair condition. Inasmuch as this screening was accomplished too late to transfer long supply assets to contractors for their use in fiscal year 1979 aircraft production, we requested NAVAIR and ASO to identify and make available to contractors long supply airframe assets needed for fiscal year 1980 aircraft production.

In order to expedite the manual review and selection of these assets needed to satisfy fiscal year 1980 aircraft airframe production requirements, NAVAIR authorized ASO to waive the normally required selection criteria--namely (1) all repairable airframe assemblies and subassemblies in both ready-for-issue and unserviceable, but economically repairable condition, and (2) airframe repair parts valued in excess of $50 in both ready-for-issue and unserviceable condition. Instead, ASO was directed to select only those long supply airframe items with sufficient quantities in ready-for-issue condition to satisfy 100 percent of production requirements and having an extended value of $1,000 or more.

On July 14, 1978, ASO provided NAVAIR with a listing of long supply candidates in ready-for-issue condition that were available and needed to satisfy fiscal year 1980 production requirements. The number and value of long supply items by type of aircraft is shown in the following table.

Number and Value of Long Supply Items Available For Fiscal Year 1980 Aircraft Production

Aircraft	Number of items	Dollar value (millions)
A6E	148	$ .576
A7E	376	1.560
EA6B	145	.588
E2C	54	.293
F14A	2	.202
P3C	213	1.381
CH53E	0	0
Total	938	$4.600

Questionable rejection of potential long supply candidates by ASO

Inasmuch as ASO identified only $4.6 million of the $171 million of long supply assets as potential production GFM candidates, we examined the effectiveness of ASO's review.

We reviewed the items which had been rejected by the inventory managers, and categorized them by their annotated reasons. The results are shown in the following table:

ASO's Reasons for Rejection as Long Supply Production Candidates	Percent
No reason given	42
Available assets insufficient to cover contract	26
Ground support equipment items	6
Total value of item is under $1,000	8
Planned requirements preclude long supply	9
Items in long supply are in unserviceable condition	4
Items not on current aircraft	2
Miscellaneous reasons	3
Total	100

We reviewed the reasons stated or not stated on several items and determined from the information available that the reasons did not appear to be valid. Based on this review, 171 of the items had sufficient quantities in long supply to satisfy 100 percent of the production requirements, and had extended values of over $1,000. This material valued at $1.5 million should have been offered to production contractors.

The errors made by various inventory managers which precluded selection of potential long supply production candidates included considering (1) only quantities representing potential excess which is the level exceeding long supply quantities, (2) twice the planned requirements which reduced or eliminated the actual long supply quantities, and (3) only stocks in Navy supply centers and not recalling those in the process of being disposed. See appendix II, items 5 and 8, for examples of these situations.

Additional potential for use of long supply

In order to determine the potential for making maximum use of the $171 million in long supply, we reviewed all additional items of long supply in ready-for-issue condition which did not meet NAVAIR's revised criteria but had significant value per item. We identified 847 with long supply assets valued at $3.550 million in ready-for-issue condition. Of the 847 items, 378 did not qualify under NAVAIR's revised criteria because their average extended value was $743, vice $1,000 or more, and 469 items of long supply with an average value of $6,970 did not qualify because there were not sufficient long supply assets to satisfy 100 percent of production requirements. See appendix II, items 4, 6, and 7 for examples of the items we identified.

IMPROVEMENTS NEEDED IN SUPPLYING LONG SUPPLY SPARE ENGINE AND TARGET DRONE PARTS TO PRODUCTION CONTRACTORS

ASO had parts valued at $4.3 million in long supply which, in our opinion, could be offered to contractors for fiscal year 1980 procurements of aircraft engine and target drones. Although NAVAIR instructions require screening for identification of potential GFM applicable to engine and target drones, the cognizant NAVAIR officials were not aware that they had to contact ASO and request it to perform the required screening. Screening for engine parts has not been performed since 1965 and for target drones since 1971.

At our request, ASO screened for long supply items which could be offered as GFM for the engines and target drones to be procured in fiscal year 1980. This screening for items applicable to engines being procured, which we requested on February 17, 1978, was completed on March 16, 1978. The computer listings identified 547 items with long supply of over $82 million. The listings for items applicable to target drones which we requested on November 4, 1977, was completed on January 31, 1978. They identified 249 items with long supply values at over $5 million.

ASO officials reviewed the listings utilizing the same criteria they used on the aircraft items. They identified 89 engine parts valued at $751,000 and 10 target drone parts valued at $261,000, which could be offered as GFM on production contracts.

Because of the significantly larger number of engines and target drones than airframes to be procured during fiscal year 1980, there were not as many items that had sufficient assets in long supply to satisfy 100 percent of the production needs for these items. Accordingly, as was the case with long supply airframe assets, we reviewed the listings in an attempt to identify additional production candidates in ready-for-issue condition which did not meet the Navy's revised selection criteria, but had significant value.

We identified additional items with long supply assets at $3.3 million which could be offered to contractors as GFM for use in fiscal year 1980 procurements. The following table summarizes the items identified by ASO and GAO that could be offered by equipment type. See appendix II, items 9 through 11, for examples of the items we identified.

Potential Long Supply Candidates
Identified by ASO and GAO

Item	Quantity procured	100 Percent Item	100 Percent Value	Partials Item	Partials Value
			(millions)		(millions)
Engines					
J52 P408	20	41	$.180	10	$.074
TF30 P414	78	11	.305	31	.624
T56 A14G	58	11	.093	5	.016
T56 425G	16	18	.052	12	.039
T64 CE415	63	7	.116	24	.271
J69 T29	69	1	.005	4	.055
400 WR400	280	-	-	12	.495
Subtotal			$.751		$1.574
Drones					
BQM 34S	90	9	$.203	65	$1.440
AQM 37A	140	1	.058	10	.177
MQM 74C	162	-	-	7	.111
Subtotal			$.261		$1.728
Total			$1.012		$3.302

The contractor who produces the BQM 34S drone agreed that it was possible and economical to accept partial quantities depending on the item involved. Detailed comments are contained in chapter 4.

IMPROVEMENTS NEEDED IN SUPPLYING LONG SUPPLY AVIATION REPAIRABLE COMPONENT PARTS TO PRODUCTION CONTRACTORS

ASO has not been screening to identify long supply parts as potential GFM for repairable components it procures. We examined a limited number of procurements awarded in 1977 and 1978 to identify parts of the procured components that the contractors furnished but which could have been furnished by ASO because it had like items in its inventory. We then reviewed ASO's long supply quantities for these parts and identified $1.2 million which could have been offered as GFM to contractors. In most instances it was too late for such action, but in one instance, ASO was able to transfer $34,051 worth of parts as GFM to contractors.

Although instructions require such screening, ASO has not screened for available long supply items that could be used as GFM for procured repairable components since 1972. The reason given by ASO personnel in addition to not being aware of the need to screen was that it was too time-consuming.

The instructions provide that the inventory manager shall screen to identify component parts in long supply which could be offered to the contractor when the procurement of repairable components is expected to exceed $100,000 and there are no more than two procurement sources. Although this is a requirement, we could not find any instance in the files of the Requirements Evaluation Committee, which reviews all buys in excess of $100,000, that screening had been done or that the absence of screening had been questioned. In addition, in those instances where we had identified potential GFM available for use in pending procurements, the inventory managers were not aware of the procedures to make such material available to the contractors.

We identified $1.1 million of long supply assets in ready-for-issue condition that could have been used in 1977 production contracts for nine repairable components valued at $5.3 million. However, these contracts were in various stages of completion and it was too late to use these long supply assets. As shown in the table below, we also identified about $161,000 of long supply assets in ready-for-issue condition that were available for use as GFM on 1978 production contracts for three repairable components valued at $530,000.

Long Supply Assets Available For Use in 1978 Production of Repairable Components

Repairable component being procured	Procurement value	Value of long supply assets
Gearbox Assembly	$149,242	$65,024
Receiver Transmitter	167,687	52,736
Fuel Control	213,500	42,810
Total	$530,429	$160,570

Inasmuch as ASO was still in the process of awarding contracts for these three items, we brought the long supply assets to ASO's attention and requested that they be furnished to the contractors. For two items, the gearbox

assembly and receiver transmitter, ASO contacted the contractors and offered them the long supply assets identified by us. Of the $65,024 of long supply assets identified for use in production of the gearbox assembly, $34,051 of these assets were accepted by and transferred to the contractor. See appendix II, item 13, for an example of one item for which long supply assets were transferred for use in production of gearbox assemblies.

The contractor for the receiver transmitter refused to accept any of the long supply assets despite the fact that he had manufactured and supplied them to the Navy under a past contract. This contractor could not offer any valid reasons for his rejection of the long supply assets offered. See appendix II, item 14, for an example of long supply item assets offered and refused.

ASO advised us that they anticipated future increased usage for components of the fuel control assembly currently in long supply and would therefore not transfer the long supply quantities for use in current production. ASO advised us that the Navy had been repairing this item only since September 1977 and had not accumulated sufficient usage data.

AIR FORCE PROGRAM PROVIDES FOR BETTER UTILIZATION OF LONG SUPPLY SPARE AVIATION ASSETS IN NEW PRODUCTION

For fiscal years 1973-77, the Air Force provided about $90 million worth of long supply assets as GFM to its contractors. The Air Force's success is attributable to the policies and procedures employed in identifying and managing its long supply assets.

The Air Force computerized screening of long supply for use as GFM is mandatory whenever the extended value of a proposed procurement is estimated to be $20,000 or more. Materials identified as long supply, that can be made available to contractors as GFM, are physically segregated and are placed under the control of the Material Utilization Control Office. The Control Office is an organization within the Logistics System Management Division, Directorate of Material Management at selected Air Force Logistics Centers, and is the single point of contact for the management of releasable assets. Assets placed under the Control Office to satisfy GFM requirements are held as inviolate and will not be released for any purpose without concurrence of the activity for which the assets are being held.

In addition to acting as custodian of the long supply assets, the Control Office accounts for the assets, inspects them to see if they are in proper condition to be shipped to the contractors, takes action to modify or repair assets as needed, and ships the assets to the contractor as directed.

The Navy does not have a comparable technique for physically segregating potential GFM from system stocks. When a requisition has been prepared to ship the items to the contractors, the material may no longer be onhand.

CHAPTER 3

CONTRACTORS' VIEWPOINTS

Companies having Navy production contracts generally agree that if the Navy adheres to certain conditions they will accept and use long supply items as GFM in the production of aircraft, engines, target drones or component assemblies. We asked 10 major contractors producing items for the Navy to respond to a questionnaire on their past and/or anticipated problems relatd to Navy furnished GFM and on their requirements related to timely identification and transfer of acceptable GFM. We also obtained the viewpoints of two contractors on their acceptance of quantities of GFM which would be sufficient for only a portion of the items to be produced.

The problems indicated by contractors who had received GFM from the Navy were

--receipt of obsolete items;

--items offered to contractors that were no longer available when shipment was requested;

--receipt of items requiring extensive repair and/or modification;

--items that were not provided in time to meet manufacturing schedules;

--incomplete shipment and receipt of wrong item; and

--listing of potential GFM items furnished to contractors which did not contain sufficient descriptive data making identification difficult and time-consuming.

We also asked the contractors to suggest improvements that should be made to improve the effectiveness of the program. Contractors suggested that the Navy

--establish special instructions for the handling of parts received which are not usable;

--perform a physical inventory to verify part numbers, quantity, and condition of items; and

--provide candidate lists of parts sooner.

The problems presented by the contractors are, in our opinion, within the capability of the Navy to resolve. Therefore, we believe the Navy should work with contractor personnel to identify revisions needed to the current process to make it more effective.

REPLIES BY CONTRACTORS REGARDING UTILIZATION OF LONG SUPPLY INCLUDING PARTIAL QUANTITIES

During the period June 28, 1978, through August 14, 1978, listings of the $14 million of long supply aviation assets identified by GAO and the Navy were forwarded to the seven applicable production contractors for their consideration for acceptance and use in fiscal year 1980 production of aircraft, engines, and aerial target drones. As of November 22, 1978, six of the seven contractors had responded to the Navy's offer.

These contractors advised the Navy that the majority of the long supply assets had been offered too late for use in fiscal year 1980 production. In this respect, they advised the Navy that they had placed purchase orders for the applicable items 2 to 5 months before the Navy's offer. However, the contractors accepted $1.3 million of the offered assets for use in fulfilling their remaining fiscal year 1980 and follow-on 1981 production requirements.

In those instances where the long supply assets were offered in time to fill fiscal year 1980 production needs, the contractors indicated their willingness to accept the majority of the long supply offered. For example, the Pratt and Whitney Corporation advised the Navy that they could still use about $428,000 of the $659,000 of engine parts offered for fiscal year 1980 production of TF30-P414 and J52-P-408 engines.

The contractors also indicated their willingness to accept long supply assets in less than full production requirements. For example, Teledyne Ryan Aeronautical, the manufacturer of the BQM34S aerial target drone, advised the Navy that it would accept, for use in fiscal year 1980 production, six items with long supply assets valued at $17,000 which were identified by GAO as available and needed to fill a portion of the fiscal year 1980 production requirements.

On the basis of the contractors' replies, we believe that a majority of the $14 million of long supply assets would have been acceptable to the contractors for use in fiscal year 1980 production had these assets been identified and offered by the Navy on a more timely basis. The contractors' replies indicate that the Navy's 1-year time frame for identifying and making available long supply assets for use in succeeding years' production is too restrictive and should be expanded by 6 or more months.

CHAPTER 4

CONCLUSIONS AND RECOMMENDATIONS

The Navy needs to improve its procedures and practices for (1) identifying long supply quantities of items that could be used in new production of aviation equipment, (2) advising contractors of the availability of these long supply items, and (3) having these items furnished to contractors with equitable reductions in the appropriate contract prices. Substantial savings are available in inventory holding and procurement costs through timely utilization of long supply assets.

Our review of the Navy performance showed:

--Lack of management emphasis and interest on the part of personnel responsible for administering the program.

--Ineffective implementation of and noncompliance with existing policies.

--Weaknesses in existing procedures and practices.

--Lack of visibility and feedback systems at top management levels of the Navy and DOD for monitoring and measuring the success of the Navy's program for making maximum use of available aviation system assets in new production.

Corrective action is needed at all levels of the Navy in order to achieve maximum savings. Accordingly, we recommend that the Secretary of Defense direct the Navy to:

--Establish a monitor at NAVAIR to assure that screening is being performed as required and that results are measured.

--Have NAVAIR and ASO work with contractors to establish guidelines that will assure greater use of available long supply assets.

--Have NAVAIR and ASO adopt the more desirable features of the Air Force system for supplying available aviation system assets to production contractors, such as (1) more timely identification of the availability of aviation system assets in relation to milestones for contract negotiations and production

schedules; (2) physical verification of available asset quantities and conditions before offering them to contractors; and (3) reservation of those assets offered to and accepted by contractors.

--Revise ASO's computer program to provide a means for screening long supply parts applicable to aircraft components.

--Educate ASO's inventory managers as to the objectives of long supply screening and establish management review procedures of actions taken or not taken by inventory managers.

--Have ASO furnish the listings of candidate items to the Government representatives at the contractor's plant at the same time the listings are furnished to NAVAIR to speed up the review and acceptance process.

--Revise ASO's disposal screening program to prevent the disposal of assets needed for new production requirements.

--Have ASO and NAVAIR maintain statistics on costs incurred in identifying and providing contractors with long supply assets. Also, ASO and NAVAIR should perform periodic cost-benefit analyses of the results of the program to determine whether their current criteria for long supply screening and selection provides the maximum return for the effort expended.

--Have NAVAIR and ASO submit with their annual budget requests for appropriated funds for aircraft purchases a report for the budget year showing (1) the number, value, and condition of long supply aviation assets applicable to new production aircraft, (2) number, value, and condition of long supply assets identified as potential production candidates, and (3) the prior year's number, value, and condition of long supply assets offered and furnished to the production contractors.

CHAPTER 5

AGENCY COMMENTS AND OUR EVALUATION

On October 27, 1978, we provided the Navy and DOD with advance copies of a preliminary draft of this report. On November 22, 1978, we met with cognizant Navy and DOD officials to obtain their views on our findings and recommendations.

The DOD and Navy conferees expressed general agreement with our findings and recommendations. However, they had some reservations concerning (1) $2.5 million of the $16.5 million of long supply aviation assets which we identified in our preliminary report as available and needed for use in fiscal year 1980 production of aviation equipments, (2) the reasonableness of the relationship between the $90 million and $1.2 million of long supply aviation assets identified by us as furnished by the Air Force and Navy, respectively, to production contractors over a 5-year period, and (3) our statement that the annual cost of carrying inventory has been estimated to range from 20 to 25 percent of the average inventory value. Also, the DOD and Navy conferees suggested a limited number of editorial changes.

The Navy conferees advised us that our preliminary draft figure of $16.5 million for long supply assets available for fiscal year 1980 production included $2.5 million of long supply assets for four components of the ALR-42 electronic countermeasure system used in the EA6B aircraft. They stated that the ALR-42 system would not be used in the 1980 production model of the EA6B. Accordingly, we have reduced this figure to $14 million.

The Navy conferees expressed some concern that we had included in the $90 million of long supply assets furnished by the Air Force to contractors over a 5-year period, yet excluded from the $1.2 million of long supply assets furnished by the Navy over the same period--the value of items normally procured by the services and routinely supplied to production contractors. We advised the Navy conferees that both the $90 million figure cited for the Air Force and the $1.2 million figure cited for the Navy included, according to available Air Force and Navy records, only the value of long supply assets furnished to production contractors.

We asked the DOD and Navy conferees whether they had specific knowledge and supporting documentation showing that (1) the $90 million figure cited for the Air Force included other than the value of long supply assets, or

(2) the Navy had furnished more long supply to production contractors than the $1.2 million cited. These conferees advised us that they did not have such knowledge or supporting documentation.

The DOD and Navy conferees said that a recently completed Defense audit indicated that annual inventory carrying costs at the wholesale level could be as low as 1 percent, versus the 20 to 25 percent figure cited by us and recognized by DOD and industry. Our followup inquiries into this matter revealed that the 1-percent figure cited by the Defense audit applied only to storage cost. Storage cost is only one of several cost elements that are normally recognized as making up total inventory carrying costs. Others normally recognized are interest, obsolescence, and deterioration.

CHAPTER 6

SCOPE OF REVIEW

Our examination was directed toward determining the Navy's progress since 1969 in establishing and implementing procedures for identifying and utilizing long supply assets as GFM for new production. We examined past and current screenings of long supply assets applicable to scheduled production of aviation equipments. Our efforts were concentrated on those airframes, engines, and target drones scheduled for production in 1980 and repairable components being procured in 1977 and 1978. For comparison purposes, we obtained Air Force policies aand procedures relating to the use of long supply as GFM in new production and statistics on their transfers of long supply to contractors. We also obtained data from contractors relating to their experiences in accepting and using long supply offered by the Navy and their analysis of long supply items available for 1980 production.

During the course of this review, we visited:

Naval Materiel Command, Washington, D.C.

Naval Supply Systems Command, Arlington, Virginia

Naval Air Systems Command, Arlington, Virginia

Naval Weapons Engineering Support Activity, Washington, D.C.

Aviation Supply Office, Philadelphia, Pennsylvania

Headquarters, Aeronautical Systems Division, Wright-Patterson Air Force Base, Ohio

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

Grumman Aerospace Corporation, Bethpage, New York

APPENDIX I

VALUE OF NAVY AVIATION SYSTEM ASSETS

AVAILABLE FOR USE IN NEW PRODUCTION

	NAVAIR contracts for FY 1980 production			ASO contracts for FY 1977-78 production	
	Aircraft	Engines	Target drones (millions)	Aircraft Components	Totals
Per computer listings	$170.658	$82.029	$4.849		$257.536
After manual screening of listings					
ASO identified	$ 4.600	$ .751	$ .261	-	$ 5.612
GAO identified					
100 percent of production need	-	-	-	$1.269	$ 1.269
Extended value under $1,000	$ .281	-	-	-	$ .281
Extended value over $1,000	$ 1.533	-	-	-	$ 1.533
Partial quantities	$ 3.269	$1.574	$1.728	-	$ 6.571
Total	$ 9.683	$ 2.325	$1.989	$1.269	$15.266
FY 1980 production		$13.997			
FY 1977-78 production				$1.269	
Prior RFI disposals	$ 2.621	$ .557	$ .050	$ .736	$3.964

EXAMPLES OF NAVY AVIATION SYSTEM ASSETS AVAILABLE FOR USE IN NEW PRODUCTION

Item	Unit price	Production item	Production requirement	Assets onhand	Disposals Prior	Disposals Recent	Long Supply	Available for production use Quantity	Available for production use Value
ASO identified airframe items									
1 Aircraft fuel tank	$1,050.00	A7E	12	38	-	-	37	12	$12,600.00
2 Actuator link assembly	243.00	A6E	15	3	-	22	22	15	3,645.00
3 Mechanical actuator	1,010.00	EA6B	12	54	-	-	32	12	12,120.00
GAO identified items:									
Airframes									
4 Waveguide assembly	1,500.00	F14A	42	19	-	-	16	10	15,000.00
5 Tail door assembly	398.00	A6E	15	12	-	15	24	15	5,970.00
6 Duct assembly	82.00	P3C	12	34	-	-	30	12	984.00
7 Panel assembly	102.00	E2C	6	15	69	-	13	6	612.00
8 Eccentric pink	124.00	E2C	12	23	-	-	23	12	1,488.00
Engines and target drones									
9 Sequential timer	291.00	BQM34S	90	18	-	-	18	18	5,238.00
10 Sheet metal assem.	2,720.00	400WRA00	280	21	44	4	18	22	59,890.00
11 Bearing support	161.00	T64GE415	63	20	53	-	13	13	2,093.00
ASO procured components									
12 Speed weight assem.	101.58	Fuel control	40	1974	88	-	937	40	4,063.20
13 Grasshaft spur	1,133.90	Gearbox assm.	10	66	-	-	58	10	11,339.00
14 Circuit card assem.	1,508.02	Receiver, transmitter	16	80	-	-	73	16	24,128.32
15 Fuel case assembly	152.80	Fuel control	7	22	-	-	20	7	1,069.60

APPENDIX II

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