

**GAO**

Report to the Chairman,  
Subcommittee on Defense,  
Committee on Appropriations,  
House of Representatives

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June 2003

# DEFENSE INVENTORY

## Air Force Plans and Initiatives to Mitigate Spare Parts Shortages Need Better Implementation





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Highlights of [GAO-03-706](#), a report to the Chairman, Subcommittee on Defense, Committee on Appropriations, House of Representatives

### Why GAO Did This Study

Despite reporting \$10.5 billion in appropriations spent on spare parts since fiscal year 2000, the Air Force continues to report shortages of spare parts. The service has taken numerous actions to address these shortages.

GAO examined whether the Air Force's strategic plan addresses the mitigation of spare parts shortages, whether key initiatives are likely to mitigate the shortages, and the impact on readiness identified from increased investments for spare parts.

### What GAO Recommends

GAO recommends the Secretary of Defense

- incorporate *Strategic Plan's* performance measures and targets relating to spare parts into its subordinate plans,
- start remaining initiatives to address the causes of parts shortages or show how they were incorporated into others,
- adopt performance measures and targets to show impact of initiatives on parts shortages,
- direct the Innovation and Transformation Directorate to operate consistent with the *Strategic Plan*, and
- request funds in the Air Force budget consistent with results of its spare parts requirements determination process.

In its written comments on a draft of this report, the Department of Defense concurred with the intent of our recommendations, but not all actions.

[www.gao.gov/cgi-bin/getrpt?GAO-03-706](http://www.gao.gov/cgi-bin/getrpt?GAO-03-706).

To view the full product, including the scope and methodology, click on the link above. For more information, contact William M. Solis at (202) 512-8365 or [solisw@gao.gov](mailto:solisw@gao.gov).

### What GAO Found

The *Air Force Strategic Plan* generally provides an appropriate framework for mitigating spare parts shortages. However, one of two subordinate plans does not contain performance measures and targets linked to the strategic plan, and the other does not contain any performance targets. Therefore, the Air Force is not in a position to determine if the actions taken pursuant to its subordinate plans overcome spare parts shortages and provide assurance that it is getting the greatest readiness return on its spare parts investment.

Key logistics initiatives under the Spares Campaign and Depot Maintenance Reengineering and Transformation (DMRT) efforts may help to mitigate spare parts shortages, but the initiatives' potential effectiveness is limited because of some key problems. First, the Air Force is not starting all identified initiatives that relate to the causes of shortages because it did not have needed personnel and funding. It assessed its logistics processes and identified more than 80 initiatives to solve more than 300 deficiencies; 43 initiatives were to improve processes that affect spare parts shortages, with about half relating to depot maintenance and the other half to supply. As shown below, although all depot maintenance-related initiatives have been started, 12 of the supply related initiatives have not been started. Second, 23 of the 31 initiatives lack both output-related performance measures and targets. Without output-related measures and targets to assess the initiatives' impact, the Air Force has little means of determining the extent to which it has successfully mitigated spare parts shortages and improved readiness. Third, the Air Force chose not to use the results of one of its initiatives, which identified a new total spares requirement as the basis for its fiscal year 2004 budget request. This decision resulted in a \$578 million unfunded spare parts requirement. Finally, management problems—including failure to articulate the need for change, a lack of top-level commitment, and failure to address organizational issues—have hampered implementation of the initiatives. In February 2003, the Air Force established the Innovation and Transformation Directorate to address these problems, but its plans and priorities have not been set.

The Air Force can estimate the impact of increased funding on individual weapon systems' supply availability and has done so. Based on its approximately \$5.3 billion fiscal year 2004 spare parts budget request, the Air Force reported that aircraft supply availability would range from 73 to 100 percent. However, it cautioned that higher supply availability does not automatically result in higher mission capable rates because of other factors.

Air Force Initiatives Identified and Started			
	Initiatives identified	Parts-related initiatives	Initiatives started
Spares Campaign	20	19	7
DMRT	64	24	24
<b>Totals</b>	<b>84</b>	<b>43</b>	<b>31</b>

Source: GAO Analysis.

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## Abbreviations

DMRT	Depot Maintenance Reengineering and Transformation
GPRA	Government Performance and Results Act of 1993

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G A O

Accountability \* Integrity \* Reliability

United States General Accounting Office  
Washington, DC 20548

June 27, 2003

The Honorable Jerry Lewis  
Chairman, Subcommittee on Defense  
Committee on Appropriations  
House of Representatives

Dear Mr. Chairman:

Since fiscal year 2000, the Air Force reportedly has spent approximately \$10.5 billion from its annual operations and maintenance appropriations for spare parts, including additional supplemental funding totaling approximately \$745 million.<sup>1</sup> The Air Force has reportedly exceeded the Department of Defense's overall supply performance goal of having parts available 85 percent of the time when they are requested. Nevertheless, the Air Force continues to report spare parts shortages. While recognizing that spare parts shortages may never be eliminated, it is reasonable to expect the services to place a priority on efforts to mitigate (reduce) those shortages that adversely impact readiness. This priority should be inherent in their overall stewardship of funds they request from Congress and their accountability for making spare parts investment decisions that provide a good readiness return.<sup>2</sup> In numerous reports, we have stated that DOD's inventory management is a high-risk area because of long-standing management weaknesses that could result in unnecessarily spending funds that could be directed to higher priorities, such as modernization or readiness.<sup>3</sup>

This report is one in a series that responds to your request that we assist your committee in determining ways to improve the availability of spare

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<sup>1</sup>These figures are based on the Air Force's fiscal year 2002 through 2004 OP-31 Budget exhibits about which GAO recently reported concerns. U.S. General Accounting Office, *Defense Inventory: Better Reporting on Spare Parts Spending Will Enhance Congressional Oversight*, [GAO-03-18](#) (Washington, D.C.: October 2002).

<sup>2</sup>Office of Secretary of Defense, *Inventory Management Study* (Washington, D.C.: August 2002)

<sup>3</sup>U.S. General Accounting Office, *Major Management Challenges and Program Risks: Department of Defense*, [GAO-03-98](#) (Washington, D.C.: January 2003) and U.S. General Accounting Office, *Air Force Inventory: Parts Shortages Are Impacting Operations and Maintenance Effectiveness*, [GAO-01-587](#) (Washington, D.C.: June 27, 2001).

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parts.<sup>4</sup> As agreed with your office, this report focuses on the following issues:

1. Does the Air Force's strategic plan address the mitigation of critical spare parts shortages—those that adversely affect readiness?<sup>5</sup>
2. How likely will key Air Force initiatives mitigate critical spare parts shortages?
3. Does the Air Force have the ability to identify the impact on readiness of increased investments for spare parts?

To address these questions, we visited the Air Force Headquarters' Logistics Directorate and the Air Force Materiel Command, and we interviewed officials responsible for strategic planning, initiatives development and implementation, and requirements determination for spare parts funding. We also analyzed the strategic plans and key initiatives identified by the Air Force that address spare parts shortages and logistics support. We used the Government Performance and Results Act of 1993, prior GAO reports, and other key DOD documents as criteria to evaluate the Air Force's strategic plans and initiatives.<sup>6</sup>

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<sup>4</sup>U.S. General Accounting Office, *Defense Inventory: The Department Needs a Focused Effort to Overcome Critical Spare Parts Shortages*, [GAO-03-707](#) (Washington, D.C.: June 27, 2003); U.S. General Accounting Office, *Defense Inventory: The Army Needs a Plan to Overcome Critical Spare Parts Shortages*, [GAO-03-705](#) (Washington, D.C.: June 27, 2003); U.S. General Accounting Office, *Defense Inventory: Navy Logistics Strategy and Initiatives Need to Address Spare Parts Shortages*, [GAO-03-708](#) (Washington, D.C.: June 27, 2003); U.S. General Accounting Office, *Defense Inventory: Several Actions Are Needed to Further DLA's Efforts to Mitigate Shortages of Critical Parts*, [GAO-03-709](#) (forthcoming); and U.S. General Accounting Office, *Defense Inventory: Air Force Item Manager Views of Repair Parts Issues Consistent With Issues Reported in the Past*, [GAO-03-684R](#) (Washington, D.C.: May 21, 2003).

<sup>5</sup>In the Air Force, critical spare parts are those that would prevent a weapon system from accomplishing its assigned mission. For example, the Air Force routinely reports the top items that prevent an aircraft from being mission capable, such as hydraulic manifolds for the C-5.

<sup>6</sup>Pub. L. 103-62, Aug. 3, 1993.

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## Results in Brief

The *Air Force Strategic Plan*, issued between April 1998 and May 2000, generally provides an appropriate framework for mitigating critical spare parts shortages that affect readiness. However, its two subordinate logistics plans do not incorporate the same performance measures and targets, key elements of this framework. As a result, the Air Force is not in a position to determine if the actions taken pursuant to its subordinate plans mitigate the critical spare parts shortages, giving it the greatest readiness return on its spare parts investment. The *Strategic Plan* contains three long-term strategic goals, output-related performance measures, and performance targets. Goal 2 of the plan addresses two mission critical tasks that relate to mitigating spare parts shortages and identifies 19 performance measures, many specifically related to improving spare parts inventories. For example, one mission critical task is “to improve mission effectiveness while minimizing risk.” To measure progress in implementing this task, the plan cites the need to track the percentage of time that aircraft cannot perform their mission because spare parts are not available. Moreover, the plan specifies performance targets for reducing the frequency at which this should occur, such as 9 percent for the F-15E and 22 percent for the B-1. Rather than use these performance measures and targets to guide its efforts, the Air Force in its subordinate *Logistics Support Plan* usually cited measures, such as the need to develop and apply combat support doctrine, without reference to a particular output that could be used to measure progress.<sup>7</sup> Although the other subordinate logistics plan, the *Supply Strategic Plan*, cited output-related performance measures like those in Goal 2 of the *Air Force Strategic Plan*, it did not contain any performance targets against which to measure progress.

While key Air Force logistics initiatives that are intended to improve logistics processes might help mitigate spare parts shortages, their potential is limited for several reasons. First, the Air Force has not started 12 of the 43 initiatives it had identified as necessary to address the causes of spare parts shortages nor have they demonstrated that all key aspects of these 12 have been incorporated into other initiatives. According to the Air Force, it intends to reevaluate when and which of these initiatives should be started but has not specified a date for doing this. Without a commitment to implement all of the necessary initiatives, the Air Force is not assured that all the causes of shortages will be sufficiently addressed. Second, 23 of the 31 initiatives implemented lack both performance

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<sup>7</sup>Output means the tabulation, calculation, or recording of activity or effort and can be expressed in a quantitative or qualitative manner.

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measures and targets. Without output-related performance measures and targets to assess the initiatives' impact, the Air Force has little means of determining the extent to which it has successfully mitigated spare parts shortages and improved readiness. Third, the Air Force chose not to use the results of one of its initiatives, which compiled all of the service's spare parts requirements to identify a total requirement of approximately \$5.9 billion. Instead, in its fiscal year 2004 budget request, the Air Force asked for approximately \$5.3 billion and identified a \$578 million unfunded requirement, thereby raising questions about the validity of its new requirements computation process and its budget request. Finally, in 2002 an Air Force review team identified several management problems, which have hampered implementation of its initiatives. These problems include failure to clearly articulate the need for change, a lack of strong top-level commitment, and failure to address organizational issues. Although a directorate established in February 2003 is intended to address these issues, it has not established its plans or priorities. If concerns about these initiatives are not resolved, the Air Force cannot be assured that it has taken all the actions necessary to address the causes of spare parts shortages, measured the affect of its initiatives, and established effective management oversight.

The Air Force can estimate the impact of increased spare parts funding on individual weapon systems' supply availability and has done so. In its fiscal year 2004 budget request, the Air Force reported how its spare parts funding request would allow each of its major weapon systems to achieve a specified aircraft supply availability rate (see app. I for the rate for each aircraft).<sup>8</sup> Based on its approximately \$5.3 billion fiscal year 2004 budget request, the Air Force reported that aircraft supply availability would range from 73 percent for the H-60 helicopter to 100 percent for the F-111 attack aircraft. This information came from the service's Funding/Availability Multi-Method Allocator for Spares model, which was developed to predict the affects of supply funding on mission capable rates. Using this model, the Air Force can also estimate how 1 percent increments in additional funding could increase spare parts availability. The Air Force cautioned, however, that increased supply availability does not automatically result in increased mission capable rates because other factors, such as maintenance and transportation can affect these rates.

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<sup>8</sup>The Air Force defines aircraft supply availability as 1 minus the total not-mission capable supply rate. For example, a not-mission capable supply rate of 9.6 percent would equate to 90.4 percent aircraft supply availability.



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Due to the critical impact of spare parts shortages on readiness as well as the Air Force's need to make good investment decisions, we are making recommendations to the Secretary of Defense aimed at ensuring that the *Air Force Strategic Plan*, subordinate plans, and initiatives have consistent performance measures and targets to show how successful the service has been at improving spare parts availability and readiness. We also recommend that the Air Force commit to starting the remaining initiatives that are aimed at addressing the causes of spare parts shortages or clearly identify how the initiatives are included in other initiatives already started. In addition, we recommend the Air Force request funds in its budget consistent with its spare parts requirements determination process. In written comments on a draft of this report, the Department of Defense concurred with the intent of our five recommendations, but not all actions cited in our second recommendation. In concurring with the second recommendation related to starting the remaining initiatives, the Department of Defense's position was that the initiatives were either already incorporated into other initiatives or overtaken by other events. Given the importance of overcoming causes of shortages that reduce the overall effectiveness of the Air Force's logistics efforts, the thrust of our recommendation is for the service to show clearly which initiatives have been incorporated into those already started and what events have overtaken the others to ensure that all causes of spare parts shortages identified by the Air Force are adequately addressed. Therefore, we continue to believe the actions prescribed in the recommendation are needed. In concurring with the funding recommendation, the Air Force stated that its 2004 budget request was developed consistent with its new requirements process, but its funding was constrained. This response confirms our statement that the Air Force has underfunded its spare parts requirements and thereby created the potential for a supplemental budget request or for additional shortages that could negatively affect readiness. The department's comments and our evaluation are on pages 17 and 18 of this report.

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## Background

The Air Force recognized that reductions in spare parts inventories since the early 1990s have negatively affected aircraft readiness indicators such as mission capable rates, not-mission-capable supply, not-mission-capable maintenance, and cannibalizations.<sup>9</sup> Recognizing the need to reverse this trend and that previous attempts to pinpoint specific spare parts shortages were piecemeal, temporary, and lacked adequate personnel to implement, the Air Force began a 5 to 7 year logistics transformation effort in 1999 aimed at improving the efficiency and economy of the entire logistics process to enhance support to the warfighter. Rather than focusing on fully eliminating specific spare parts shortages, the Air Force chose to focus on addressing the process disconnects that caused the shortages. This included an end-to-end look at all aspects of the logistics process including commercial supply chain management, supply, maintenance, transportation, logistics planning, and financial management. The Spares Campaign initiated in February 2001 and the Depot Maintenance Reengineering and Transformation (DMRT) effort started in July 2001 were two key parts of the end-to-end review.<sup>10</sup> In total, they identified the need for 84 initiatives, 43 of which related to spare parts.

The Spares Campaign focused on supply process deficiencies, and it was intended to improve parts supportability to weapon systems and reverse declining readiness related to spares management. This was considered a major transformation effort and included five teams that reviewed the processes needed to produce spares and identified disconnects and solutions that would improve mission capability and manage cost (see table 1).

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<sup>9</sup>Mission capable rates indicate the percentage of aircraft that can perform at least one of its assigned missions. Not-mission-capable supply and not-mission-capable maintenance are indicators that aircraft cannot perform any of their assigned missions because of supply shortages and maintenance requirements, respectively. Cannibalizations represent the removal of a good part from one aircraft in order to install it on another aircraft.

<sup>10</sup>Originally called Depot Maintenance Review Team.

**Table 1: Focus of Spares Campaign Review Teams**

<b>Spares campaign teams</b>	<b>Team focus</b>
Programming and financial management	Reviewed how spares budgets are determined, funding obtained, and cost managed
Requirements determination	Reviewed processes for identifying spares requirements
Requirements allocation, execution, and distribution	Analyzed the processes and policies involved in getting spares and repair parts to depots and field locations
Spares command and control	Studied management control of the spares processes
Supplier relationships	Explored options for improving how the Air Force deals with suppliers of parts

Source: U.S. Air Force.

Each team developed a flowchart showing how it believed processes related to its focus area should function and be managed to improve weapon system availability and cost management. The teams also identified disconnects or barriers preventing the processes from functioning as they should and recommended solutions to correct these disconnects. Twelve major deficiencies were noted, and more than 190 corrective actions were identified, which resulted in 20 initiatives, 19 of which were related to spare parts shortages. As of February 2003, 7 of 19 spare parts initiatives have been started.

The DMRT effort, focused on deficiencies in depot maintenance processes. Various teams identified disconnects and barriers in these processes, reviewed Air Force current initiatives that affected depot maintenance, and identified industry best practices and benchmarking, receiving input from Air Force management, major commands, and Air Logistics Centers. More than 300 barriers to depot maintenance operational and financial performance were identified and consolidated into more than 40 major issues organized around 8 overarching focus areas. This resulted in 64 initiatives, 24 of which were related to spare parts. All 24 of the spare parts related initiatives have been started. Table 2 below summarizes the status of the Spares Campaign and DMRT initiatives as of February 2003. Appendix II provides a description of the 31 Spares Campaign and DMRT initiatives that have been started and estimated completion dates.

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**Table 2: Summary of Initiatives Related to Spare Parts**

	<b>Initiatives identified</b>	<b>Initiatives related to spares</b>	<b>Initiatives started</b>
Spares campaign	20	19	7
Depot maintenance reengineering and transformation	64	24	24
<b>Totals</b>	<b>84</b>	<b>43</b>	<b>31</b>

Source: U.S. Air Force.

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### *Strategic Plan Has an Appropriate Framework but Is Not Adequately Supported by Subordinate Plans*

The *Air Force Strategic Plan* is appropriately structured to provide a framework for mitigating spare parts shortages, but its two subordinate plans are not aligned with it in terms of performance measures. Consistent with sound management principles underlying the Government Performance and Results Act of 1993 (GPRA), the strategic plan includes a mission statement, long-term goals, and performance measures and targets, and some of these elements relate to spare parts shortages. However, the performance measures and targets in the subordinate plans are not consistent with those in the strategic plan or none are stated. This lack of alignment with the *Air Force Strategic Plan's* performance measures and targets means that the service cannot measure the contribution of the actions it takes in response to the subordinate plans toward overcoming spare parts shortages and be assured that implementing the subordinate plans will mitigate critical spare parts shortages and give the Air Force its greatest readiness return on investment.

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### *Strategic Plan Complies with Most GPRA Requirements*

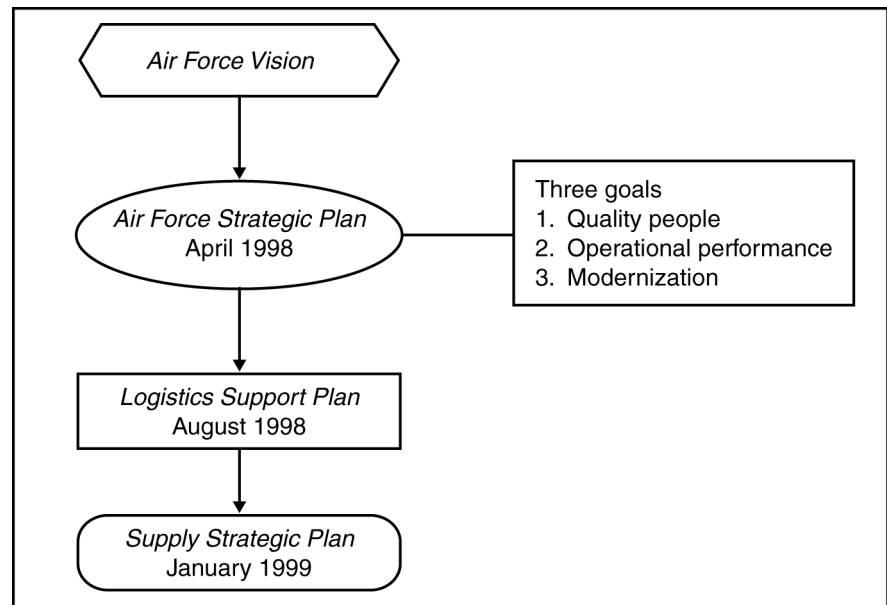
The *Air Force Strategic Plan*, issued between April 1998 and May 2000, generally includes an effective strategy consistent with GPRA guidelines, and it generally represents an effective framework for reducing spare parts shortages. The plan applies to the Air Force as a whole and contains a mission statement, strategic goals, and output-related performance measures and targets. Specifically, the strategic plan has three goals: Goal 1 is to ensure a high quality force of people, Goal 2 is to enable commanders to respond to all types of crises, and Goal 3 is to prepare for an uncertain future by pursuing a modernization program. Each goal contains mission critical tasks (such as "Maximize the efficiency of operating and maintaining Air Force resources") along with related performance measures and targets for determining progress toward achieving its strategic goals.

Of the three strategic goals, Goal 2 addresses the mitigation of spare parts shortages. It has two mission critical tasks and 19 performance measures, many specifically related to improving spare parts inventories. One mission critical task, to “improve mission effectiveness while minimizing risk,” cites the percentage of aircraft that cannot perform their mission because spare parts are not available as a performance measure. It also cites performance targets for each aircraft. For example, the target for the F-15E is 9 percent and for the B-1 it is 22 percent, meaning that percent of the aircraft cannot perform their mission because of spare parts shortages (see appendix III for the not mission capable supply rate targets). The second mission critical task, to “maximize the efficiency of operating and maintaining the Air Force resources,” has the elapsed time between when a customer submits an order and receives the part as a performance measure.

**Performance Measures and Targets in Subordinate Plans Are Not Consistent with Strategic Plan**

The major subordinate plans for implementing the *Air Force Strategic Plan* include goals similar to those in the strategic plan. However, their performance measures and targets are not linked to those in the strategic plan. The subordinate plans are the *Logistics Support Plan* and the *Supply Strategic Plan* (see fig. 1).

**Figure 1: Relationship between Air Force Strategic Plan and Major Subordinate Plans**



Source: GAO.

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The *Logistics Support Plan* was developed to provide authoritative, strategic direction and front-end guidance for Air Force logistics capabilities planning. It includes the same goals as the higher plan, and it contains objectives for accomplishing these goals. The plan does not include quantitative or qualitative output-related performance measures and targets that will yield the performance information needed to assess goal accomplishment at either the subordinate or strategic plan levels in order to measure results. Instead, it includes measures that will only yield information about whether or not a specific process was implemented. For example, the completion of combat support doctrine is the performance measure cited for accomplishing the objective to improve combat support to warfighters by developing and applying an Agile Combat Support doctrine. Another nonquantitative or qualitative performance measure was full fielding of identified total asset visibility capabilities for the objective to fully implement total asset visibility.

The *Supply Strategic Plan* was intended to (1) create an integrated process for Air Force supply planning, (2) establish the planning infrastructure to facilitate information exchange throughout Air Force Supply, and (3) improve Air Force Supply's measures of effectiveness. This plan contains five long-term goals that are consistent with the higher plan's goals, and it has 19 objectives, 71 tasks to accomplish these objectives, and a projected end-state for some of these tasks.<sup>11</sup> Some end-states are similar to the strategic plan's output-related performance measures, but do not have corresponding performance targets. For example, one end-state discusses incidents of aircraft being not mission capable due to the lack of spare parts, but it does not specify a target (i.e., the desired percentage of incidences) against which to measure improvement. Other end-states did not discuss performance measures at all. For example, one end-state is completion of the new *Air Force Supply Stockage Policy Guide* and making it available to supply officers worldwide.

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<sup>11</sup>An end-state is the desired outcome of the task.

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Without effective quantitative and qualitative measures that flow from the *Strategic Plan* structure to the subordinate plans, the Air Force cannot determine the extent to which the implementation of these plans is contributing to its overall strategic goal relating to overcoming spare parts shortages. Furthermore, the Air Force cannot be assured that implementing the subordinate plans will give them the greatest readiness return on their investment.

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### Initiatives Might Help Mitigate Spare Parts Shortages, but Their Potential Effectiveness Is Limited

Key logistics initiatives being implemented by the Air Force may help to mitigate spare parts shortages, but their potential effectiveness is limited for several reasons. The Air Force has begun a major logistics transformation effort intended to improve the entire logistics process and identified numerous initiatives to improve its logistics process by addressing deficiencies, barriers, or disconnects. However, it has not implemented 12 of the 43 initiatives it identified as needed to address spare parts shortages nor demonstrated that all key aspects of these 12 have been incorporated into other initiatives underway. In addition, 23 of the 31 initiatives being implemented lack performance measures and targets. The Air Force also chose not to use the results of one of its initiatives, which identified a new consolidated requirement for spare parts; consequently, additional spare parts shortages could occur. Lastly, management problems identified by an Air Force review team in 2002 have hampered implementation of the initiatives, and its new directorate, established in February 2003, has not established a plan or priorities to address these problems.

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### Air Force Has Not Started All Initiatives

In 2001, the Air Force identified 43 initiatives to improve processes related to spare parts shortages—19 as part of the Spares Campaign and 24 as part of the DMRT. As of February 2003, 31 of the 43 initiatives have been started. The Air Force has started all 24 DMRT initiatives that relate to improving spare parts shortages, but has started only 7 of the 19 initiatives that relate to spare parts shortages arising from the Spares Campaign. Table 3 shows the implementation status of Spares Campaign initiatives.

**Table 3: Status of Spares Campaign Initiatives**

<b>Initiatives</b>	<b>Started</b>	<b>Not started</b>
Improve depot-level repair throughput		X
Establish virtual single inventory control point	X	
Improve spares budgeting	X	
Improve item demand and repair workload forecasting	X	
Develop alternative stockage policies to support warfighter		X
Ensure a competent and skilled workforce		X
Improve financial management	X	
Create common operating view and improve data accuracy		X
Designate a single authority for spares management		X
Implement integrated supply chain management		X
Develop process to manage and reduce demands		X
Align supply chain management focus	X	
Improve/restructure working capital fund		X
Develop appropriate metrics		X
Actively manage suppliers and supply base		X
Enable a single logistics proponent		X
Standardize use and role of regional supply squadrons	X	
Adopt improved purchasing and supply chain management	X	
Develop e-business strategy		X

Source: U. S. Air Force.

According to the Air Force, it chose to start the seven Spares Campaign initiatives that reflected its highest priorities, provided greatest impact to the logistics processes, and resulted in highest payback to the Air Force. The remaining 12 initiatives have not been started because the Air Force said it did not have the needed personnel and funding. Although the Air Force provided a document showing that some aspects of the remaining initiatives had been embedded into the Ten Focus Initiatives of the Spares Campaign, we could not verify that all of these initiatives had been started. Also, we could not validate that all of the deficiencies, disconnects, or barriers intended to be addressed by the remaining 12 initiatives were actually being addressed. Consequently, some of the process problems identified in the Spares Campaign that cause spare parts shortages may not be addressed, thereby reducing the overall effectiveness of the Air Force's efforts to mitigate spare parts shortages.



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## Most Initiatives Lack Output-Related Performance Measures and Targets

Twenty-three of the 31 Air Force initiatives that have been started lack output-related performance measures and targets. One of the 23 initiatives, the Material Policy initiative, has revision of all policies as its performance target. The other 22 initiatives were part of the DMRT effort and did not have any performance measure or any performance targets. Air Force officials said they are still trying to develop measures and targets for each of these initiatives. The other eight initiatives—such as the Weapon System Supply Chain Manager, Regional Supply Squadron, and Demand and Repair Workload Forecasting—have output-related measures, including how effective they are in making weapon systems available, the amount of cannibalization done to keep aircraft available, and the amount of aircraft that are not mission capable due to supply or maintenance problems. Without quantitative or qualitative performance-related measures and targets relating to improving spare parts availability, the Air Force lacks the means to determine the extent to which these initiatives have improved readiness by reducing spare parts shortages.

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## Air Force Did Not Apply the Results of a Completed Initiative

One Spares Campaign initiative recently established a new total requirement for spare parts, but the service chose not to request all the funds to meet the requirement. The Spares Campaign's Improve Spares Budgeting initiative created a Spares Requirement Review Board to identify a single, consolidated requirement for spare parts and consumable items. In the past, the Air Force had budgeted for spares based on annual flying-hour requirements with little consideration for the spares needed to meet non-flying-hour requirements, such as the pipeline or safety stock.<sup>12</sup> As a result, the Air Force experienced parts shortages because demands for non-flying-hour spare parts had not been sufficiently budgeted. The review board compiled flying-hour and non-flying-hour requirements into a single, agreed upon requirement to be used for planning, programming, and budgeting.

The Air Force's new process yielded a new total spare parts requirement of approximately \$5.9 billion for the fiscal year 2004 budget submission. However, in its fiscal year 2004 budget the service chose to only request \$5.3 billion. After the service submitted its fiscal year 2004 budget, the Secretary of the Air Force reported \$578 million in unfunded spares

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<sup>12</sup>Pipeline represents the process flow from the source of procurement of a part to its point of use. Safety stocks represent the quantity of parts, in addition to amounts needed for day to day operations, required to be available to permit continuous operations should normal replacement systems become interrupted.

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requirements: \$166 million of this was for pipeline and other requirements, and \$412 million was for the flying-hour program. The Air Force's decision to request less funding than identified in their most recent requirements determination process raises concerns. Either the Air Force's new spare parts requirements determination process is not a valid basis for future budget decisions, or by not requesting the full amount to meet the requirement, the Air Force has created the potential for additional spare parts shortages that could negatively affect readiness or has created the need for a supplemental budget request. Air Force officials said they took a risk that the \$5.3 billion budget request would be sufficient based on the actual flying-hour cost experienced in fiscal year 2002. That year, they said, the flying-hour program was executed at a cheaper rate than budgeted.

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## Management Weaknesses Impeded Implementation of Initiatives

The Air Force recently established a new directorate to address several management issues that it believes adversely affects its logistics transformation initiatives, but the extent to which this directorate will improve overall management of these initiatives is not clear. In 2002, the Air Force formed a review team composed of retired general officers, senior executives, and industry leaders that assessed initiative implementation plans, identified problems with its logistics transformation efforts, and developed recommendations to solve these problems. The team concluded that a high risk of failure existed for the transformation efforts because (1) the Air Force is not clearly articulating throughout its organization the need for changes, (2) top-level commitment to implementing initiatives is not as strong as needed as evidenced by schedule slippage and lack of funding for initiatives, and (3) clear roles and responsibilities concerning the Spares Campaign are not being addressed. One of the team's recommendations was to merge the Spares Campaign and DMRT efforts into a single, full-time logistics transformation program. In February 2003, the Air Force established the Innovation and Transformation Directorate, a new organization under the Logistics Division, which according to an Air Force briefing, consolidated the two efforts and placed oversight responsibility for all Air Force logistics transformation efforts on top-level leadership within one office.

According to the Air Force, some of the first steps for the new directorate will be to review existing Spares Campaign and DMRT initiatives, resolve deficiencies in the two efforts, set aggressive timelines, goals, objectives, and performance measures, and obtain senior leadership approval of their actions. However, according to Air Force officials, the plans and priorities of this new directorate had not been set as of April 2003. Without such

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plans, priorities, and senior leadership commitment guiding the Air Force's efforts to overcome these problems, the potential benefits from its initiatives to mitigate spare parts shortages that impact readiness may be delayed or possibly not achieved.

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## The Air Force Can Identify the Impact of More Funding on Supply Availability, but Not on Readiness

The Air Force can show that additional funding for spare parts would improve aircraft supply availability if the funds were provided directly to the working capital fund. However, the Air Force does not link funding for spare parts directly to readiness because other factors also affect readiness. In its fiscal year 2004 budget request for spare parts funding, the Air Force included information on how spare parts funding in the working capital fund affected the supply availability for various types of aircraft (see app. I for projected aircraft availability rates).<sup>13</sup> The budget request indicated that spare parts funding of approximately \$5.3 billion would allow for aircraft supply availability ranging from 73 percent for the H-60 to 100 percent for the F-111.

The Air Force drew this data from its Funding/Availability Multi-Method Allocator for Spares model, which estimates how many and which additional parts (i.e. supply availability) it can procure with different amounts of operating authority.<sup>14</sup> The Air Force said that the model has some weaknesses, but it does provide a good mechanism for projecting aircraft supply availability. One weakness, according to DOD, is that while the model attempts to optimize supply parts availability, it is generally biased towards the purchase of low cost/high-demand items versus those critical spare parts that would most improve mission capable rates.

The Air Force can also use this model to show how additional funding could increase spare parts availability by estimating the cost of additional supply availability in 1 percent increments by weapon system. For example, in 2002 the cost for the F-15E to achieve an 88 percent supply availability rate was approximately \$237 million. To increase this availability 1 percent would have cost an additional \$7 million. Similarly, it cost the Air Force approximately \$301 million for the C-5 to achieve an

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<sup>13</sup>The 2004 budget request included supply availability data consistent with modifications in the budget exhibit, see Office of Secretary of Defense, *Inventory Management Study* (Washington, D.C.: August 2002).

<sup>14</sup>We did not independently verify the quality or validity of the Air Force's model to predict supply availability.

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82 percent supply availability rate. To achieve an additional 1 percent supply availability would have cost an additional \$3.6 million.

According to the Air Force, additional supply availability results in improved stockage effectiveness and reduced customer wait time, back orders, and cannibalization rates, which all contribute to increased readiness. However, the Air Force cautioned that increased supply availability does not automatically result in increased mission capable (readiness) rates because other factors, such as maintenance and transportation, affect these rates. For example, if maintenance staffing levels at depots are inadequate, then even with 100 percent supply availability, mission capability will not be at its highest possible level.

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## Conclusions

An Air Force strategic goal is to address problems that adversely affect mission accomplishment, such as critical spare parts shortages that reduce readiness. While it has a strategic plan that provides a good management framework, places emphasis on mitigating spare parts shortages, and cites performance measures and targets for assessing progress, the Air Force's potential for successful implementation of the plan is hindered by several problems. Subordinate plans have not adopted the *Strategic Plan's* readiness-related performance measures and targets; all identified initiatives to deal with the causes of spare parts shortages have not been started or key aspects clearly incorporated into other initiatives; and many of those that have been started lack effective performance measures and targets. Additionally, some management weaknesses could significantly impede successful initiative oversight and implementation. By not adopting specific performance measures and targets related to mitigating the critical spare parts shortages into subordinate plans and initiatives, following through on initiatives to address the causes of parts shortages and determine spare parts requirements, and resolving program management deficiencies, the Air Force has little assurance that its program emphasis and initiatives will improve spare-parts-related readiness. Furthermore, as part of its stewardship and accountability for funds, the Air Force will not be assured that the service's spare parts spending is yielding the best readiness return on investment.

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## Recommendations for Executive Action

We are recommending that the Secretary of Defense direct the Secretary of the Air Force to take the following steps:

- Incorporate the *Air Force Strategic Plan's* performance measures and targets into the subordinate *Logistics Support Plan* and the *Supply Strategic Plan*.
- Commit to start those remaining initiatives needed to address the causes of spare parts shortages or clearly identify how the initiatives have been incorporated into those initiatives already underway.
- Adopt performance measures and targets for its initiatives that will show how their implementation will affect critical spare parts availability and readiness.
- Direct the new Innovation and Transformation Directorate to establish plans and priorities for improving management of logistics initiatives consistent with the *Air Force Strategic Plan*.
- Request spare parts funds in the Air Force's budget consistent with results of its spare parts requirements determination process.

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## Agency Comments and Our Evaluation

In written comments on a draft of this report, the Department of Defense concurred with the intent of all five recommendations, but not all actions. The Department of Defense's written comments are reprinted in their entirety in appendix IV.

In concurring with our first, third, and fourth recommendations concerning incorporating and adopting performance measures and targets into subordinate plans and initiatives, the Department of Defense responded that the establishment of the Directorate of Innovation and Transformation, the directorate's efforts to develop a balanced scorecard and supporting metrics, and its draft campaign plans which spell out and track milestones for each initiative were consistent with the direction of the *Strategic Plan*.<sup>15</sup> We believe that if the Department of Defense follows through with its plans for the new directorate, as laid out in its written response, these planned actions should meet the thrust of our recommendations.

The Department of Defense concurred with the intent of our second recommendation related to starting those remaining initiatives needed to address the causes of shortages, but not the specific actions. In its

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<sup>15</sup>The balanced scorecard links goals, strategies, objectives and measures to an organization's plan.

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comments the Department of Defense stated the original 19 initiatives have been either consolidated into the Ten Focus Initiatives or overtaken by other events making it unnecessary to separately track progress for each of the individual actions. Based on this action, the Department of Defense concluded that it had complied with this recommendation. We disagree that the department's actions fully respond to our recommendation. The thrust of our recommendation is that the Air Force identify which of the 12 remaining initiatives that were not started were incorporated into the Ten Focus Initiatives and what events have overtaken the others to ensure that all causes of spare parts shortages identified by the Air Force are being adequately addressed.

In concurring with our fifth recommendation that the Air Force request spare parts funds consistent with results of its spare parts requirements determination process, the Department of Defense responded that the Air Force's spare parts budget was developed consistent with the new requirements determination process, but the amount of funding requested was constrained. This response confirms our statement that the Air Force has underfunded its spare parts requirements and thereby created the potential for a supplemental budget request or for additional spare parts shortages that could negatively affect readiness.

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## Scope and Methodology

To accomplish our three objectives, we visited the Air Force Headquarters' Logistics Directorate, in Washington, D.C., the Air Force Material Command, in Dayton, Ohio and contractor representatives at Bearing Point (formerly KPMG Consulting) in McLean, Virginia.

To determine whether the strategic plans address the mitigation of spare parts shortages, we reviewed the *Air Force Strategic Plan*, its two subordinate plans—*Logistics Support Plan* and *Supply Strategic Plan*—as well as other strategic planning documents and interviewed officials to determine whether these plans included key actions targeted at mitigating critical spare parts shortages and improving readiness. We also reviewed these plans to determine if performance measures and targets in the subordinate plans were similar and linked to those in the higher-level strategic plan. Additionally, we reviewed these plans to determine whether they included the elements of a strategic plan as defined by the GPRA.

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To determine the likelihood of whether key initiatives would mitigate spare parts shortages to improve readiness, we interviewed Air Force officials to identify the initiatives that they believe will mitigate spare parts shortages and improve readiness. We obtained and reviewed documents related to the 31 spare-parts-related initiatives that have been started to determine the likelihood of whether they would mitigate spare parts shortages. We evaluated these initiatives to determine whether they included quantifiable and measurable performance targets as described by GPRA that would allow an assessment of how implementation of the initiatives would impact spare parts shortages. We also assessed whether these initiatives included all identified actions needed to overcome the causes of spare parts shortages. In addition, we obtained a briefing and discussed with Air Force officials the results of an Air Force review team's assessment of its logistics transformation efforts that identified management weaknesses.

To determine what impact the Air Force could identify from additional funding for spare parts, we interviewed officials and obtained documents related to the Air Force's fiscal year 2004 budget submission. We also discussed with Air Force budget officials their Funding/Availability Multi-Method Allocator for Spares model, which includes projected supply availability rates based on estimated funding amounts and was used to provide the budget information.<sup>16</sup>

We performed our review from August 2002 to March 2003 in accordance with generally accepted government auditing standards.

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We are sending copies of this report to the Secretary of Defense; the Secretary of the Air Force; the Director, Office of Management and Budget; and other interested congressional committees and parties. We will also make copies available to others upon request. In addition, the report will be available at no charge on the GAO Web site at <http://www.gao.gov>.

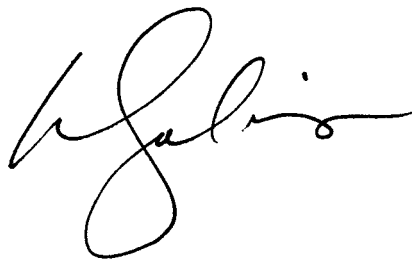
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<sup>16</sup>We did not independently verify the quality or validity of the Air Force's model to predict supply availability.

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Please contact me on (202) 512-8365 if you or your staff have any questions concerning this report. Major contributors to this report are included in appendix V.

Sincerely,

A handwritten signature in black ink, appearing to read "W. Solis". The signature is fluid and cursive, with a large initial "W" and a distinct "S" at the end.

William M. Solis, Director  
Defense Capabilities and Management



# Appendix I: Air Force Projected Aircraft Supply Availability Rates for Fiscal Year 2004

In response to a recommendation in the Inventory Management Study of the Office of the Secretary of Defense, the Air Force included supply availability rates for its weapons systems in its fiscal year 2004 budget submission. As shown in table 4, the Air Force projected aircraft supply availability rates ranging from 73 percent to 100 percent based on requested funding of approximately \$5.3 billion.

**Table 4: Projected Air Force Aircraft Availability Rates**

<b>Aircraft</b>	<b>Budget request (dollars in millions)</b>	<b>Availability rate (percent)</b>
A-10	177.702	85.70
B-1B	258.001	77.60
B-2	109.886	93.60
B-52	147.867	88.20
C-5	371.571	81.30
C-130	310.825	85.70
C-135	367.465	89.40
C-141	16.009	84.50
E-3	82.819	89.90
E-4	0.121	89.00
E-8	0.000	95.10
F-4	5.659	94.40
F-15	572.037	89.30
F-16	392.210	86.90
F-111	0.26	100.00
F-117	0.067	95.10
H-1	9.413	100.00
H-53	51.095	87.30
H-60	5.101	73.20
Trainers	64.592	95.00
Other Aircraft	9.842	94.00
Special Operations Forces	30.765	88.60
Other <sup>a</sup>	2,358.843	
<b>Total</b>	<b>\$5,342.150</b>	

Source: U. S. Air Force.

<sup>a</sup>Engines, missiles, electronic warfare, etc. The Air Force does not compute supply availability for these items.

# Appendix II: Description and Estimated Completion Dates of Spares Campaign and Depot Maintenance Reengineering and Transformation Spare-Parts-Related Initiatives

**Table 5: Spares Campaign Spare-Parts-Related Initiatives**

<b>Initiative</b>	<b>Description</b>	<b>Estimated completion date<sup>a</sup></b>
1. Establish virtual inventory control point	Provide single visibility over buy and repair requirements and distribution.	Feb. 2004
2. Align supply chain manager focus (Weapon system supply chain manager)	Single weapons system manager to execute buy and repair priorities and other management decisions.	Mar. 2003
3. Standardize use and expand role of regional supply squadron	Provides for supply management on a regional basis, visibility of items in region.	Sept. 2004
4. Improve financial management	Tracks weapons system support against plans and budget	Sept. 2002
5. Improve demand & repair workload forecasting	Predict more accurately number and type of items needing repair and number of new items.	Sept. 2007
6. Improve spares budgeting (Spares requirement review board)	Consolidated requirements determination.	Jan. 2003
7. Adopt improved purchasing and supply chain management	Implement commercial best practices into Air Force supply management.	Mar. 2006

Source: U. S. Air Force

<sup>a</sup>This represents reported completion dates as of February 2003. The Innovation and Transformation Directorate plans to review each initiative and determine what further actions should be taken.

**Appendix II: Description and Estimated Completion Dates of Spares Campaign and Depot Maintenance Reengineering and Transformation Spare-Parts-Related Initiatives**

**Table 6: Depot Maintenance Reengineering and Transformation Spare-Parts-Related Initiatives**

<b>Initiative</b>	<b>Description</b>	<b>Estimated completion date<sup>a</sup></b>
1. Standard process improvement strategy	Establish and implement a corporate strategy for directing, overseeing, coordinating, improving, and facilitating depot maintenance operations.	Sept. 2003
2. Maintenance training	Develop a maintenance training organization as a single training entity for all depot maintenance training. Build maintenance orientation and technical training plans.	Sept. 2003
3. Maintenance first line supervisory training	Establish program that will train first line supervisory candidates prior to assumption of duties.	Oct. 2003
4. Maintenance professional development	Train and develop maintenance workers and leaders.	Oct. 2002
5. Awards/appraisal systems	Establish performance plans that focus on cost, schedule, performance and quality goals. Motivate work force by establishing incentive programs, which instill a desire to excel.	Sept. 2003
6. Unresponsive hiring process	Establish hiring authorities to appoint the best qualified candidates and streamline the staffing process (external & internal).	June 2003
7. Engineering hiring/retention	Develop compensation packages competitive with the commercial market.	Sept. 2004
8. Multi-skilling	Determine how to employ multi-skilling for best value implementation.	Jan. 2003
9. Supervisor's distractors	Continue to assess impact of data systems on 1st level supervisor's time. Review regulatory mandates assigning additional duties to first levels.	Feb. 2003
10. Formalize the depot integrated infrastructure master plan	Formalize the depot infrastructure strategic planning process.	Sept. 2004
11. Incentivize infrastructure investment in maintenance and repair	Incentivize infrastructure investment in maintenance and repair.	Sept. 2003
12. Train the depot workforce in capital purchase program and economic analysis processes	Train the depot workforce in capital purchase program and economic analysis.	Apr. 2004
13. Improve preventative/ predictive maintenance programs	Improve preventative maintenance program.	Oct. 2003
14. Identify and remove impediments to facility and equipment maintenance system usage	Remove impediments to broad use of facility and equipment maintenance system.	May 2003
15. Streamline maintenance & repair process and procedures	Improve maintenance and repair facility project delivery process.	June 2003
16. Provide greater flexibility for implementing workload changes	Provide greater flexibility for implementing workload changes.	Oct. 2003
17. Add surge requirements to infrastructure planning and programming	Add surge requirements to infrastructure planning and programming.	Sept. 2004

**Appendix II: Description and Estimated Completion Dates of Spares Campaign and Depot Maintenance Reengineering and Transformation Spare-Parts-Related Initiatives**

<b>Initiative</b>	<b>Description</b>	<b>Estimated completion date<sup>a</sup></b>
18. Improve capital purchase program process	Improve capital purchase program process.	Apr. 2003
19. Create a depot capital investment funding appropriation	Create two depot capital investment funding appropriations lines—new system investments and recap of existing systems (legacy).	Nov. 2002
20. Information technology master plan	Establish a comprehensive vision for managing information resources	Sept. 2002
21. Automated information technology initiative	Insert devices used to automate data collection on the shop floor to enhance depot productivity.	Mar. 2003
22. Depot X	Establish a lab environment across air logistics centers, which will enhance the ability to rapidly test solutions to meet user requirements/ enhancements across depot maintenance systems.	Apr. 2003
23. Improve stock level processes	Improve stock levels for low demand items through policy changes.	Sept. 2002
24. Improve material support policies	Clarify material support policies to better state objectives and establish standards.	Jan. 2004

Source: U. S. Air Force.

<sup>a</sup>This represents reported completion dates as of February 2003. The Innovation and Transformation Directorate plans to review each initiative and determine what further actions should be taken.

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# Appendix III: Not-Mission-Capable Supply Rate Targets by Weapon System

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Goal 2 of the *Air Force Strategic Plan* cites the percentage of aircraft that cannot perform their mission because spare parts are not available, referred to as not-mission-capable supply, as a performance measure. Table 5 provides the not-mission-capable supply rates for the Air Force's weapons systems.

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**Table 7: Not-Mission-Capable Supply Rate Targets by Weapon System**

<b>Aircraft</b>	<b>Target (percent)</b>
A-10	8
B-1	22
B-52	12
C-5	8.5
C-130	12
C-141	6
C-17	4.6
E-3	6
F-15	9
F-15E	9
F-16	8
F-117	7
KC-135	8.5

Source: U. S Air Force

Note: Not-mission-capable supply rate is the percentage of time a weapon system is down because parts are not available.

# Appendix IV: Comments from the Department of Defense



DEPUTY UNDER SECRETARY OF DEFENSE FOR  
LOGISTICS AND MATERIEL READINESS  
3500 DEFENSE PENTAGON  
WASHINGTON, DC 20301-3500

JUN 24 2003


Mr. William Solis, Director  
Defense Capabilities and Management  
U.S. General Accounting Office  
441 G Street, N.W.  
Washington, DC 20548

Dear Mr. Solis:

This is the Department of Defense (DoD) response to the GAO draft GAO-03-706, "DEFENSE INVENTORY: Air Force Plans and Initiatives to Mitigate Spare Parts Shortages Need Better Implementation," dated May 15, 2003 (GAO Code 350249). The DoD generally concurs with the intent of the recommendations.

Detailed comments on the draft report recommendations are included in the enclosure. The DoD appreciates the opportunity to comment on the draft report.

Sincerely,

  
for Allen W. Beckett  
Principal Assistant

Enclosure



GAO CODE 350249/GAO-03-706

**“DEFENSE INVENTORY: AIR FORCE PLANS AND INITIATIVES  
TO MITIGATE SPARE PARTS SHORTAGES NEED  
BETTER IMPLEMENTATION”**

**DEPARTMENT OF DEFENSE COMMENTS  
TO THE RECOMMENDATIONS**

**RECOMMENDATION 1:** The GAO recommended that the Secretary of Defense direct the Secretary of the Air Force to incorporate the Air Force Strategic Plan’s performance measures and targets into the subordinate Logistics Support Plan and the Supply Strategic Plan. (Page 16/Draft Report)

**DoD RESPONSE:** Concur with intent. Air Force Directorate of Innovation and Transformation (AF/ILI) is currently developing a balanced scorecard and supporting metrics to measure the performance of each of the Air Force (AF) Logistics Transformation initiatives. In addition, AF/ILI is reviewing both higher and lower level strategic plans to ensure initiatives and performance measures are in agreement throughout the tier of planning documents. For instance, a review of the AF Materiel Management Strategic Plan has been conducted and comments provided will be incorporated and initiatives will be updated. Therefore, no further direction is required and action consistent with this recommendation is complete.

**RECOMMENDATION 2:** The GAO recommended that the Secretary of Defense direct the Secretary of the Air Force to commit to start those remaining initiatives needed to address the causes of spare parts shortages or clearly identify how they have been incorporated into those initiatives already underway. (Page 16/Draft Report)

**DoD RESPONSE:** Concur with intent. The AF Spares Campaign has been refined into the Ten Focus Initiatives that are being tracked. The original 19 initiatives were developed through the periodic roll up of related problem sets under a number of themes and many of the issues were redundant in terms of problem or solution set. These initiatives were refined and either consolidated under the ten focus initiatives or were overtaken by other events. In either case, the Ten Focus Initiatives of the Spares Campaign correctly encompasses the entire supply chain process and adequately addresses areas requiring improvement. Therefore, it would be inefficient and unnecessary to track progress on individual actions from the original 19 initiatives separately. Action consistent with this recommendation is complete.

**RECOMMENDATION 3:** The GAO recommended that the Secretary of Defense direct the Secretary of the Air Force to adopt performance measures and targets for its initiatives that will show how their implementation will affect critical spare parts availability and readiness. (Page 16/Draft Report)

**DoD RESPONSE:** Concur with intent. The establishment of the Directorate of Innovation and Transformation (AF/ILI) with the mandate to drive logistics transformation is consistent with the direction of the AF Strategic Plan. The key is weapon system availability and readiness, not parts availability. As part of the logistics transformation mandate, AF/ILI will measure all initiatives in terms of meeting the following weapon system availability (WSA) and cost stretch goals:

- 20 percent increase in aircraft availability within the next three years
- Zero real Operation and Support (O&S) growth over the FY 04-09 Future Years Defense Plan (FYDP)

AF/ILI has also directed that all subordinate goals for each of the individual initiatives be tied to these overall targets. Therefore, no further direction is required and action consistent with this recommendation is complete.

**RECOMMENDATION 4:** The GAO recommended that the Secretary of Defense direct the Secretary of the Air Force to direct the new Innovation and Transformation Directorate to establish plans and priorities for improving management of logistics initiatives consistent with the Air Force Strategic plan. (Page 16/Draft Report)

**DoD RESPONSE:** Concur with intent. AF/ILI is committed to ensure that Air Force logistics initiatives plans and priorities are established and harmonized with the Air Force Strategic Plan. Campaign plans are currently in draft, which spell out and track milestones associated with each initiative to execution. Therefore no further direction is required and action consistent with this recommendation is complete.

**RECOMMENDATION 5:** The GAO recommended that the Secretary of Defense direct the Secretary of the Air Force to request spare parts funds in its budget consistent with results of its spare parts requirements determination process. (Page 16/Draft Report)

**DoD RESPONSE:** Concur with intent. The Air Force is committed to identifying the total spares requirement for funding and advocating full funding for the requirement. In the instance cited in the draft GAO report, the spares budget was projected consistent with the new requirements determination process; however, funding is constrained. No further direction is required and action consistent with this recommendation is complete.



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# Appendix V: GAO Contacts and Staff Acknowledgments

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## GAO Contact

Richard G. Payne, (757) 552-8119  
Connie W. Sawyer, Jr., (757) 552-8140

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## Acknowledgements

In addition to the names above, Gina O. Ruidera, Alfonso Q. Garcia, Susan K. Woodward, and Barry L. Shillito also made significant contributions to this report.

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