DEPOT MAINTENANCE

Accurate and Complete Data Needed to Meet DOD's Core Capability Reporting Requirements
## Depot Maintenance: Accurate and Complete Data Needed to Meet DOD's Core Capability Reporting Requirements

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Why GAO Did This Study

DOD uses both military depots and contractors to maintain many complex weapon systems and equipment. Recognizing the key role of the depots and the risk of overreliance on contractors, Section 2464 of Title 10 of the U.S. Code requires DOD to maintain a core maintenance capability—a government-owned and operated combination of personnel, facilities, equipment, processes, and technology that is needed to meet contingency and other emergency requirements. Section 2464 requires DOD to provide a Biennial Core Report to Congress that includes three elements: (1) core capability requirements, (2) planned workload, and (3) a detailed rationale and mitigation plans for any shortfalls between core capability requirements and planned workload. Section 2464 mandated that GAO review DOD’s Biennial Core Report for compliance and completeness.

GAO assessed the extent to which the report complies with the three elements of the statute and the completeness of the report. GAO reviewed relevant legislation, DOD’s 2014 Biennial Core Report, the military services’ submissions to support the report, and related DOD guidance.

What GAO Found

The Department of Defense’s (DOD) 2014 Biennial Core Report to Congress complies with two of the three required reporting elements of Section 2464—core capability requirements and planned workload. It partially complies with the third element—a detailed explanation or rationale for shortfalls and accompanying mitigation plans. Specifically, the report includes mitigation plans for the Marine Corps’ shortfall but does not clearly provide an explanation of the identified shortfall. In February 2013, GAO recommended that DOD improve its Biennial Core Report by including detailed explanations of why the military services do not have the workload to meet core capability requirements for each identified shortfall. DOD concurred and stated that it would include such explanations in future reports. Fully implementing the recommendation would provide Congress visibility into whether the military services’ plans will address the causes of the shortfalls.

Regarding completeness—including accurate data and supporting information from the military services—the report contains data errors for the first two elements and incomplete information for the third element. The information on core capability requirements is complete for the Army and the Air Force. However, the information on core capability requirements for the Navy and Marine Corps is incomplete due to errors such as under stated or misidentified data. For example, DOD incorrectly identified and included workload for the Marine Corps’ Sea Ships category as a core capability requirement. DOD reports complete information for the Air Force’s planned workload available for supporting its core capability, but GAO identified data errors in the information for the other military services. Specifically, the planned workload reported for both the Navy and Marine Corps are inaccurate, as are the estimated costs of planned workload reported for the Army, Navy, and Marine Corps. According to DOD officials, the data errors in its report resulted from inadvertently not obtaining data from subordinate military service organizations, transposing numbers, and unintentionally misidentifying information when preparing the final report. While the report provides an explanation for the Air Force’s identified shortfall, it does not provide detailed information in the mitigation plan about how the Air Force’s intended actions will address the effects of the shortfall. Officials from the Office of the Secretary of Defense stated that they had reviewed each military service’s information submission and, before DOD’s final report was issued, the military services had been given the opportunity to review and correct the report. By assessing the processes used to review the military services’ submissions and prepare the final report, DOD would be better positioned to ensure that the report is complete and accurate.

What GAO Recommends

GAO recommends that DOD assess its review processes and implement needed improvements to ensure that future submissions of the Biennial Core Report will be more accurate and complete. DOD concurred with this recommendation.

View GAO-14-777. For more information, contact Zina Merritt at (202) 512-5257 or merrittz@gao.gov.
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Abbreviations

DOD Department of Defense
OSD Office of the Secretary of Defense

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September 18, 2014

Congressional Committees

The Department of Defense (DOD) maintains many complex weapon systems (such as aircraft and ships) and equipment (such as generators and radars) that require regular and emergency maintenance to continue being available for DOD to meet national security goals. To sustain these systems and equipment, at the depot level, the department uses a combination of military depots—public-sector facilities that are government-owned and government-operated—and private-sector contractors. Depots have a key role in sustaining the complex weapon systems and equipment both in peacetime and during a mobilization, contingency, or other emergency. Through these depots, DOD has what is referred to as the “capability” to perform needed repair work by maintaining a combination of skilled personnel, facilities, equipment, processes, and technology for each category of maintenance work being done.

Recognizing the important role of the depots in supporting U.S. forces, and the risk of overreliance on private contractors for vital military needs, Congress enacted legislation in 1984 that exempts certain core maintenance activities identified by the Secretary of Defense from being contracted out. The statute was later codified at Section 2464 of Title 10

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1There are two levels of DOD maintenance: field level and depot level. Field level maintenance includes organizational and intermediate maintenance and requires fewer skills, but it occurs more frequently. Depot level maintenance occurs less frequently but requires greater skills. Maintenance ranges in complexity from daily system inspection, to rapid removal and replacement of components, to the complete overhaul or rebuild of a weapon system.

2Depot maintenance is an action performed on materiel or software in the conduct of inspection, repair, overhaul, or the modification or rebuild of end-items, assemblies, subassemblies, and parts, that, among other things, requires extensive industrial facilities, specialized tools and equipment, or uniquely experienced and trained personnel that are not available in lower-echelon-level maintenance activities. Depot maintenance is a function and, as such, is independent of any location or funding source and may be performed in the public or private sectors.

of the United States Code and has been amended several times. Among other things, Section 2464 requires DOD to

- maintain a “core depot-level maintenance and repair capability”—a maintenance and repair capability that is government-owned and – operated—to provide a ready and controlled source of technical competence and resources to ensure effective and timely response to mobilizations, contingencies, or other emergencies and

- assign these government-owned and -operated facilities (the depots) sufficient workload to ensure that the department can maintain cost efficiency and technical competence during peacetime while preserving the ability to respond to a mobilization, contingency, or emergency.

The military services are required by DOD policy to use a computational methodology to identify their essential core capability requirements and their planned workload to support this core maintenance capability. The military services must submit biennially an internal report that shows the results of this analysis and any identified shortfalls between requirements and planned workload to the Secretary of Defense.

The National Defense Authorization Act for Fiscal Year 2012 amended Section 2464 to require DOD to, among other things, submit a biennial report to Congress, no later than April 1 of each even-numbered year. The statute states that DOD is required to identify the following three elements for each military service, for the subsequent fiscal year:

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4While the statute does not define workload in this context, DOD defines workload as an amount of depot maintenance work related to specific weapon systems, equipment, components, or programs and to specific services, facilities, and commodities. Department of Defense Instruction 4151.20, Depot Maintenance Core Capabilities Determination Process (Jan. 5, 2007).

5DOD Instruction 4151.20.

6In this report, we refer to what DOD calls “sustaining workload” as “planned workload to support core capabilities.”

1. The core depot-level maintenance and repair capability requirements and sustaining workloads, organized by work breakdown structure expressed in direct labor hours;\(^8\)

2. The corresponding workloads necessary to sustain core depot-level maintenance and repair capability requirements, expressed in direct labor hours and cost; and

3. In any case where core depot-level maintenance and repair capability requirements exceed or are expected to exceed sustaining workloads, a detailed rationale for the shortfall and a plan either to correct or mitigate the effects of the shortfall.

In this report, we summarize these three elements as (1) core capability requirements—this refers to the workload required to sustain core maintenance capability; (2) the planned workload available; and (3) in any case where the required workload exceeds the planned workload—where there are shortfalls—a detailed rationale or explanation of why planned workload is insufficient and a plan to correct or mitigate the effects of the shortfall.\(^9\)

The statute mandates us to analyze DOD’s Biennial Core Report for compliance with Section 2464. In addition, the statute mandates us to assess the completeness of the report and provide findings and recommendations after DOD submits its report to Congress. We assessed the extent to which DOD’s 2014 Biennial Core report complies with Section 2464 and assessed the accuracy and completeness of the information in the report.

In February 2013, we found that DOD’s first Biennial Core Report, which was issued in 2012, complied with two of the three biennial reporting elements of Section 2464 by including information on core capability requirements and planned workload available for maintaining these requirements. We also found that the report partially complied with the third biennial reporting element. Specifically, DOD’s report included

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\(^8\)While the statute does not define direct labor hours in this context, DOD defines a direct labor hour as one hour of effort directly attributed to a category of work. DOD Instruction 4151.20.

\(^9\)We have used this summary of the three elements in our prior work. For example, see GAO, Depot Maintenance: Additional Information Needed to Meet DOD’s Core Capability Reporting Requirements, GAO-13-194 (Washington, D.C.: Feb. 11, 2013).
information on shortfalls, as well as plans to mitigate all shortfalls where requirements exceeded planned workload. However, the report did not include required information on the rationale for some of these shortfalls—reasons why the military services did not have the workload to meet core requirements. We recommended that DOD improve its Biennial Core Report by including detailed explanations of why the military services did not have the workload to meet core maintenance requirements for each identified shortfall.\textsuperscript{10} DOD agreed with our recommendation and stated that it would include an explanation and mitigation plan for each workload shortfall identified in all future reports. For a listing of relevant past GAO work, see the Related GAO Products list at the end of this report.

DOD submitted its second Biennial Core Report to Congress on June 6, 2014. This report assessed the extent to which DOD’s 2014 report complies with the three reporting elements required by Section 2464 and is complete.

To assess the extent to which DOD’s 2014 Biennial Core Report complies with Section 2464, we analyzed the text of the report, compared the text of the report with the elements in the statute, and obtained information on the core determination process by which DOD identified its essential core capability requirements and the workload needed to support this core maintenance capability for fiscal year 2015. When the report explicitly included all parts of the required reporting element, we determined that DOD “complied” with the element. When the report did not explicitly include any part of the element, we determined that DOD “did not comply.” If the report included some aspects of an element, but not all, then we determined that DOD “partially complied.” In those cases where we had determined that the report did not include some aspects of a required element, we discussed our preliminary analyses with the Office of the Secretary of Defense (OSD) and military service officials to seek additional information. To assess the report’s completeness, we obtained and analyzed fiscal year 2015 data, including core capability requirements and sustaining workload expressed in direct labor hours and cost, and other information such as workload shortfall explanations that OSD required the military service headquarters to submit in support of the report. In order to determine this data and information’s

\textsuperscript{10}GAO-13-194.
completeness, we performed a number of data check steps to identify inconsistencies or errors and discussed our analyses with OSD and military service officials, which led us to conclude that the data were sufficiently reliable for the purposes of this report. We assessed the accuracy and completeness of the information in DOD’s 2014 Biennial Core Report with criteria outlined in *Standards for Internal Control in the Federal Government*.\(^{11}\)

We conducted this performance audit from June 2014 to September 2014 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. We discuss our scope and methodology in more detail in appendix I.

### Background

| Determining Core Maintenance Capability | DOD Instruction 4151.20\(^{12}\) prescribes a depot maintenance core capabilities determination process to identify, in part, the (1) required core capabilities for depot maintenance and (2) planned workload needed to support those capabilities. Within OSD, the Assistant Secretary of Defense for Logistics and Materiel Readiness is responsible for, among other things, maintaining the instruction. The instruction describes a series of mathematical computations and adjustments which the military services use to compute their core capability requirements and to identify planned workload needed to support these requirements. The military services identify the weapon systems required to execute the Joint Chiefs of Staff contingency\(^{13}\) scenarios, which represent plans for responding to conflicts that may occur in the future. After the systems are identified, the |

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\(^{13}\)A contingency is a situation requiring military operations in response to natural disasters, terrorists, subversives, or as otherwise directed by appropriate authority to protect U.S. interests.
military services compute annual depot maintenance capability requirements for peacetime in direct labor hours to represent the amount of time they regularly take to perform required maintenance. Next, the military services make contingency requirements and resource adjustments to account for applicable surge factors during the different phases of a contingency, such as preparation/readiness and sustainment. The military services make further adjustments to account for redundancy in depot capability. For example, a military service may determine that repair capabilities for specific systems maintained in military depots are so similar that they share common base repair processes, technologies, and capabilities that can effectively satisfy the repair requirements of other systems. The military services adjust the core capability requirements when one service’s maintenance requirements will be supported by the maintenance capabilities of other military services.

During this process of identifying the systems for which they will be required to maintain repair capabilities, the military services organize and aggregate their capability data by categories of equipment and technologies known as work breakdown structure categories. The work breakdown structure provides a way for DOD to break down a category of weapon system or equipment into subcategories of its parts at increasingly lower levels of detail. The work breakdown structure can be expressed at any level of detail down to the lowest-level part, such as a bolt. These categories, the programs or systems they include, and the lower-level elements or subcategories of defense materiel or equipment into which they are broken down are referred to by DOD as “levels of indenture.” There are 11 categories at the top level—“first” level—of the work breakdown structure. A first-level category summarizes information for an entire type of system or equipment, such as aircraft or ground vehicles. Table 1 shows the 11 first-level categories of the work breakdown structure.

<table>
<thead>
<tr>
<th>Category number</th>
<th>Work breakdown structure category at the first level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Aircraft</td>
</tr>
<tr>
<td>2</td>
<td>Ground Vehicles</td>
</tr>
</tbody>
</table>

A resource, in this context, refers to the personnel, materiel, and other assets or capabilities available to provide depot maintenance.
A first-level category can be broken down into second-level subcategories, which are the major elements that make up the system or equipment in the first-level category. For example, the first-level category for Aircraft can be broken down into the second-level subcategories for Airframes, Aircraft Components, and Aircraft Engines, which are major elements that make up an aircraft. The second-level subcategories can be further broken down into third-level subcategories, which are subordinate elements that make up the major elements in the second-level categories. For example, the second-level subcategory for Airframes is further divided into the third-level subcategories—different types of airframes, such as Rotary, Fighter/Attack, or Bomber. The subcategories can be further broken down to the lowest-level element of the system. Table 2 shows an example of the top three levels of the work breakdown structure for Aircraft.

Table 2: Example of Category Levels for Aircraft

<table>
<thead>
<tr>
<th>Level</th>
<th>Category number</th>
<th>Work breakdown structure category</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>1</td>
<td>Aircraft</td>
</tr>
<tr>
<td>Second</td>
<td>1.1</td>
<td>Airframes</td>
</tr>
<tr>
<td>Third</td>
<td>1.1.1</td>
<td>Rotary</td>
</tr>
<tr>
<td>Third</td>
<td>1.1.2</td>
<td>Vertical and/or Short Take-off Landing Aircraft</td>
</tr>
<tr>
<td>Third</td>
<td>1.1.3</td>
<td>Cargo/Tanker</td>
</tr>
<tr>
<td>Third</td>
<td>1.1.4</td>
<td>Fighter/Attack</td>
</tr>
<tr>
<td>Third</td>
<td>1.1.5</td>
<td>Bomber</td>
</tr>
<tr>
<td>Third</td>
<td>1.1.6</td>
<td>Aircraft–Other</td>
</tr>
</tbody>
</table>

Source: Department of Defense | GAO-14-777
After the military services have identified their core capability requirements, they are to identify the amount of available planned workload within the work breakdown structure categories and subcategories.

**Reporting Core Maintenance Capability**

DOD Instruction 4151.20 requires the military services to report biennially to OSD their core capability requirements and planned workload, in accordance with a tasking memorandum issued for each reporting cycle. The instruction includes a worksheet that the military services are to fill out and submit to OSD. The worksheet calls for information to be organized by the work breakdown structure to various subcategory levels, mostly at the second level of subcategories. Appendix II provides a table listing these categories and subcategories.

On December 17, 2013, OSD issued the tasking memorandum for the 2014 Biennial Core Report, which directed the military services to use DOD Instruction 4151.20 as basic guidance and included further guidance on how to meet the requirement under Section 2464 to report this information to Congress. The memorandum augments the worksheet by adding another column for the estimated costs of performing the planned workload at the first level of categories. The instruction and tasking memorandum also require the military services to provide additional information when reporting shortfalls in planned workloads. If a military service does not have sufficient workload to sustain the required level of capability that has been identified, a shortfall exists; in other words, the military depots have not been assigned the depot maintenance workload that would enable them to sustain their identified core capability requirements. For example, a military service may have identified 10,000 direct labor hours of core capability requirements for ground vehicles but have only 4,000 hours of anticipated depot maintenance work for ground vehicles. This military service will have a shortfall of 6,000 hours. The instruction requires that the military services report on shortfalls by providing a description and plan to address the shortfalls along with the worksheet, but the shortfalls are not calculated in the worksheet.
DOD’s Report Complies with Two of the Three Reporting Elements and Partially Complies with the Third, but Some Data are Incomplete

DOD’s 2014 Biennial Core Report to Congress complies with two of the three required reporting elements of Section 2464—core capability requirements and planned workload. Specifically, the report provides data on (1) core capability requirements workload in direct labor hours, and (2) planned workload required to sustain the required workloads and the cost of sustaining the core depot maintenance workload organized by work breakdown structure. It partially complies with the third element—a detailed explanation or rationale for shortfalls and accompanying mitigation plans. Specifically, the report includes mitigation plans for the Marine Corps’ shortfall but does not clearly provide an explanation for the identified shortfall. Regarding completeness—including accurate data and supporting information from the military services—the report contains data errors for the first two elements and incomplete information for the third element. Specifically, the report provides an explanation for the Air Force’s identified shortfall but does not provide detailed information in the mitigation plan about how the Air Force’s intended actions will address the effects of the shortfall. Table 3 shows a summary of our assessment of the compliance of DOD’s 2014 Biennial Core Report to Congress.
### Table 3: GAO Assessment of the Extent to Which the Department of Defense’s (DOD) 2014 Biennial Core Report Complies with the Required Reporting Elements in Section 2464

<table>
<thead>
<tr>
<th>Required Reporting Elements</th>
<th>GAO Assessment of Compliance¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>The core depot-level maintenance and repair capability requirements and sustaining workloads, organized by work breakdown structure, expressed in direct labor hours.</td>
<td>Complied</td>
</tr>
<tr>
<td>The corresponding workloads necessary to sustain core depot-level maintenance and repair capability requirements, expressed in direct labor hours and costs.</td>
<td>Complied</td>
</tr>
<tr>
<td>In any case where core depot-level maintenance and repair capability requirements exceed or are expected to exceed sustaining workloads, a detailed rationale for the shortfall and a plan either to correct, or mitigate, the effects of the shortfall.</td>
<td>Partially Complied</td>
</tr>
</tbody>
</table>

*Note: Complied refers to the report explicitly including all parts of the required reporting element. Partially complied refers to the report including some, but not all, aspects of the required reporting element.

The report includes the core requirements information expressed in direct labor hours and organized by work breakdown structure for each of the military services. As reported, DOD’s total core capability requirements are about 61 million direct labor hours.

The information in DOD’s report on core capability requirements for each of the military services is aggregated to the top-level categories of the work breakdown structure, even though OSD collects information at a lower level. Section 2464 requires the information in the Biennial Core Report to be organized by work breakdown structure; however, the statute does not specify at which category level of the work breakdown structure the information should be reported. To obtain the information needed to support the 2014 report, OSD’s tasking memorandum directs the military services to provide to OSD, among other things, information on core requirements and planned workload at various lower-level subcategories. The memorandum also directs the military services to provide, in any instance where core requirements exceed planned workload, additional information on a plan to address workload shortfalls. Each of the military services provided information in response to OSD’s memorandum.

For the Army and the Air Force, the information on core capability requirements in DOD’s report is complete. However, DOD’s report lacks complete information on core capability requirements for the Navy and the Marine Corps, due to data errors such as under stated or misidentified information. Specifically, the Navy’s core capability requirements were under stated for each of the following three top-level categories: Aircraft, Communications/Electronic Equipment, and Fabrication/Manufacturing.
Also, DOD reported a core capability requirement of zero direct labor hours for the Navy’s requirements for the Ordnance, Weapons, and Missiles top-level category, which does not accurately reflect the Navy’s core capability requirements for that category. Navy officials acknowledged that data were incorrectly reported in their submissions to OSD. They explained that this occurred because of staff turnover in the office responsible for compiling the submission and the staff inadvertently not obtaining data from subordinate Navy organizations that perform some depot maintenance. OSD officials stated that they were unaware of the Navy’s inaccurate data. During our review, Navy officials provided updated data to us that were current as of July 10, 2014.

In addition, all of the data in the Sea Ships top-level category for the Marine Corps are misidentified in the report as core capability requirements and should not have been included. OSD officials explained that workload identified for the Sea Ships category was misidentified as a core capability requirement for the Marine Corps, and the data were inadvertently included in the final core report. During our review, OSD and Marine Corps officials confirmed there should not be a Sea Ships core capability requirement included in DOD’s report. Table 4 shows a summary of these core capability requirements, by military service, using the data DOD reported to Congress on June 6, 2014, and updated information provided to us as of July 10, 2014.

<table>
<thead>
<tr>
<th>Military service</th>
<th>Reported core capability requirements on June 6, 2014 (Direct labor hours)</th>
<th>Revised core capability requirements as of July 10, 2014 (Direct labor hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Army</td>
<td>13,329,754</td>
<td>13,329,754</td>
</tr>
<tr>
<td>Navy</td>
<td>26,398,119&lt;sup)b&lt;/sup&gt;</td>
<td>28,091,340</td>
</tr>
<tr>
<td>Marine Corps</td>
<td>2,586,685&lt;sup&gt;a&lt;/sup&gt;</td>
<td>2,561,495</td>
</tr>
<tr>
<td>Air Force</td>
<td>18,376,886</td>
<td>18,376,886</td>
</tr>
<tr>
<td><strong>Total DOD</strong></td>
<td><strong>60,691,444</strong>&lt;sup&gt;a&lt;/sup&gt;</td>
<td><strong>62,359,475</strong></td>
</tr>
</tbody>
</table>

Source: GAO analysis of DOD data. | GAO-14-777

<sup>a</sup>Core capability requirements refers to the required workload to sustain core maintenance capability.

<sup>b</sup>These values contained data errors and were revised.
In response to the OSD tasking memorandum—which provides guidance on how to meet the required reporting elements of Section 2464—each military service provided data on its planned workload—the amount of available work used to maintain the required capability—by the top-level categories and also by various subcategory levels in the work breakdown structure. In DOD’s 2014 report, OSD included information on the amount of planned workload that is available to maintain the required capability, organized by the top-level categories, expressed in direct labor hours, and the estimated cost of these workload, for each of the military services. As reported, DOD has a total planned workload of about 87 million direct labor hours at an estimated cost of about $13 billion.

For the Air Force, the planned workload information in DOD’s report is complete, but we identified data errors in the information OSD reported for the Army, Navy, and Marine Corps. For the Army, OSD over stated the estimated cost of planned workload in the Aircraft top-level category. Similarly, OSD over stated the planned workload (direct labor hours) for the Navy in the Support Equipment top-level category. As previously discussed, OSD misidentified the Sea Ships top-level category for the Marine Corps as a core capability requirement. As a result of these data errors, the planned workload (direct labor hours) and estimated cost of planned workload included in the report were incorrect. OSD officials acknowledged that there are data errors in the report and explained that the errors resulted from transposing numbers and inadvertently misidentifying information when preparing the final report.

In addition, as previously discussed, OSD’s reported data for the Navy’s total planned workload are incorrect for the following four top-level categories: Aircraft; Communications/Electronic Equipment; Ordnance, Weapons, and Missiles; and Fabrication/Manufacturing. Navy officials acknowledged that data were inaccurately reported in what they provided to OSD and explained that this occurred because of staff turnover in the office responsible for compiling the submission and the staff inadvertently not obtaining data from subordinate Navy organizations that perform some depot maintenance. OSD officials stated that they were unaware of the inaccurate data. During our review, Navy officials provided us with updated data that were current as of July 10, 2014. Table 5 shows a summary of these planned workload data DOD reported to Congress on June 6, 2014, and updated information provided to us as of July 10, 2014.
Table 5: Planned Workload by Military Service as Reported in the Department of Defense’s (DOD) 2014 Biennial Core Report dated June 6, 2014 and Revised by DOD as of July 10, 2014

<table>
<thead>
<tr>
<th>Military service</th>
<th>Reported planned workload on June 6, 2014 (direct labor hours)</th>
<th>Revised planned workload as of July 10, 2014 (direct labor hours)</th>
<th>Reported estimated cost of planned workload on June 6, 2014 (dollars)</th>
<th>Revised estimated cost of planned workload as of July 10, 2014 (dollars)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Army</td>
<td>18,440,092</td>
<td>18,440,092</td>
<td>3,868,771,405</td>
<td>3,868,762,405</td>
</tr>
<tr>
<td>Navy</td>
<td>41,171,389</td>
<td>43,447,406</td>
<td>3,920,159,204</td>
<td>4,187,096,956</td>
</tr>
<tr>
<td>Marine Corps</td>
<td>2,982,936</td>
<td>2,957,746</td>
<td>379,861,936</td>
<td>374,013,539</td>
</tr>
<tr>
<td>Total DOD</td>
<td>86,537,278</td>
<td>88,788,105</td>
<td>13,334,449,780</td>
<td>13,595,530,135</td>
</tr>
</tbody>
</table>

Source: GAO analysis of DOD data. | GAO-14-777

*aPlanned workload refers to the workload required to sustain only the core capability requirements.  
*bThese values contained data errors and were revised.

For more detail about each military service’s revised core maintenance capability, organized by top-level category, see appendix III.

The Report Includes Information on Shortfalls and Mitigation Plans but Does Not Include Detailed or Complete Explanations in Some Cases

The report partially complies with the third reporting element because it includes information on shortfalls at the top-level categories and includes plans to mitigate all of the shortfalls identified in the report. DOD’s report shows that it will be able to exceed its core capability requirements with its overall planned workload. The reported data show shortfalls for the Marine Corps and the Air Force. However, the report does not include a detailed explanation or rationale for the Marine Corps’ reported shortfall—the reason why the Marine Corps does not have the workload to meet core maintenance requirements—as required by Section 2464. Additionally, the Air Force’s reported mitigation plan is not complete, because the plan does not fully explain how the Air Force’s intended actions will correct the effects of the identified shortfall.

DOD Reported Workload Shortfalls at Top-Level Categories of the Work Breakdown Structure

Consistent with how it reported the core requirements and planned workload, OSD aggregated the workload shortfalls under the top-level categories of the work breakdown structure for each military service. The report shows that at the top level, the Army and Navy did not identify any shortfalls in the workload available to support its core capability requirements. The report shows that the Marine Corps and the Air Force had shortfalls at the top level. Specifically, the report showed workload shortfalls for the Marine Corps of about 145,000 direct labor hours out of about 3 million direct labors hours. The report shows workload shortfalls for the Air Force of about 388,000 direct labor hours out of about 24
million direct labor hours. Table 6 shows the shortfalls identified in the report.

Table 6: Shortfalls in Direct Labor Hours by Military Service and Work Breakdown Structure as Reported in the Department of Defense’s (DOD) 2014 Biennial Core Report dated June 6, 2014

<table>
<thead>
<tr>
<th>Military service</th>
<th>Work breakdown structure category</th>
<th>Core capability requirement</th>
<th>Planned workload</th>
<th>Workload shortfall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marine Corps</td>
<td>Communication/Electronic Equipment</td>
<td>219,290</td>
<td>74,755</td>
<td>(144,535)</td>
</tr>
<tr>
<td>Air Force</td>
<td>Communication/Electronic Equipment</td>
<td>515,637</td>
<td>127,574</td>
<td>(388,063)</td>
</tr>
<tr>
<td><strong>Total DOD</strong></td>
<td></td>
<td><strong>734,927</strong></td>
<td><strong>202,329</strong></td>
<td><strong>(532,598)</strong></td>
</tr>
</tbody>
</table>

Source: GAO analysis of DOD data. | GAO-14-777

*Planned workload refers to the workload required to sustain only the core capability requirements.*

In assessing the completeness of DOD’s report, we determined that the Navy had no shortfalls in the lower-level subcategories. However, the Army, Marine Corps, and Air Force had identified shortfalls at lower-level subcategories and submitted supplemental information to OSD describing these shortfalls. According to OSD officials, they aggregated the information on core requirements and planned workload provided by the military services at the top-level categories of the work breakdown structure. They also stated that some of the workload shortfalls identified by the military services at the lower-level categories were balanced out by surplus workload in other lower-level categories under the same top-level category. Thus, they did not include these lower-level shortfalls in the report.

For the Army, the report shows that there were no workload shortfalls at the top-level categories. On the other hand, the Army submitted information to OSD on shortfalls in lower-level subcategories totaling approximately 536,773 direct labor hours. These shortfalls are anticipated in various second and third-level subcategories under top-level categories for Aircraft, Ground Vehicles, and Support Equipment. For example, the Army identified a shortfall of about 65,679 direct labor hours under the third-level subcategory of Instruments, which is under the Aircraft top-level category. For the Marine Corps, the report reflects total workload shortfalls of 144,535 direct labor hours in the top-level category of Communication/Electronic Equipment. The Marine Corps identified a shortfall of 1,912 direct labor hours in the second-level subcategory of Generators, which falls under the Support Equipment top-level category in information it submitted to OSD. For the Air Force, the report reflects total workload shortfalls of approximately 388,063 direct labor hours in the
top-level category of Communication/Electronic Equipment. However, the Air Force also provided information to OSD on additional shortfalls of about 60,133 direct labor hours in the second-level subcategory of Aircraft Components under the Aircraft top-level category. The Air Force also provided information about a shortfall of about 294,000 direct labor hours in the second-level subcategory of Missile Components under the Ordnance, Weapons, and Missiles top-level category.

OSD officials told us—and military service officials agreed—that they chose to report at the top level for congressional oversight because they believed this best reflected the services’ ability to provide core maintenance, as surplus planned workload in lower-level categories could make up for shortfalls in other categories. They noted that in some cases skills, facilities, and equipment are transferrable from one system to another within the top-level category of a work breakdown structure, and that aggregation of workload to the top level presents a more accurate picture of shortfalls.

The Report Does Not Include a Detailed Explanation for the Marine Corps Shortfall

The report provides mitigation plans for the identified shortfall in the Marine Corps core capabilities but partially complies with the third reporting element because it does not clearly provide an explanation for the identified shortfall. The report identifies a Marine Corps shortfall of 144,535 direct labor hours that are needed to support its required core capability for maintaining equipment under its Communication/Electronic Equipment category of work. OSD and Marine Corps officials believe the report complies with the requirement to provide a detailed rationale for identified shortfalls. However, the report says only that the shortfall is caused by the addition of Electro-Optics/Night Vision equipment into this category; it does not indicate the underlying reason why the Marine Corps does not currently have a planned workload to meet the core capability requirement in this area. The report provides no explanation for why the Marine Corps must currently rely on commercial sources of repair for the new equipment. When we asked Marine Corps officials to clarify the reason for the shortfall, they further explained to us that the Electro-Optics/Night Vision equipment was purchased without consideration for an eventual need for government repair capability. They stated that since the technology in this kind of equipment advances quickly, it did not make
financial sense to acquire the technical data\textsuperscript{15} at the time of the initial purchase. This additional information that Marine Corps officials shared with us was not in the report. However, the report states that the Marine Corps is now working toward developing a government repair capability for the new equipment. In February 2013, we recommended that DOD improve its Biennial Core Report by including detailed explanations of why the military services do not have the workload to meet core maintenance requirements for each identified shortfall.\textsuperscript{16} DOD agreed with our recommendation and stated that it would include an explanation and mitigation plan for each workload shortfall identified in all future reports. However, based on our current review of DOD’s 2014 Biennial Core Report, as of August 2014, DOD has not implemented this recommendation. Fully implementing our recommendation will provide complete information about the core maintenance requirements and clear explanations for why the military services do not have the workload to meet these requirements, thereby providing Congress with visibility about whether the services’ plans to correct or mitigate the shortfalls will address the cause of the shortfalls.

The Report Does Not Include a Complete Mitigation Plan for the Air Force’s Shortfall

The report complies with the third reporting element for the Air Force, because it provides an explanation for the identified shortfall in Air Force core capabilities and includes an associated mitigation plan. However, the mitigation plan is not complete, because it does not provide detailed information about how the Air Force’s intended actions will address the effects of the shortfall. The report identifies an Air Force shortfall of 388,063 direct labor hours that are needed to support its required core maintenance capability to maintain equipment under its Communication/Electronic Equipment category of work. The report identifies the shortfall as primarily in unmanned aircraft systems’ ground stations and space systems and states that this shortfall is driven by the workload in this area. Additionally, the report explains that repair data and

\textsuperscript{15}Defense Federal Acquisition Regulation Supplement section 252.227-7103 defines technical data as “recorded information, regardless of the form or method of the recording, of a scientific or technical nature (including computer software documentation)…[but not including] computer software or data incidental to contract administration, such as financial and/or management information.” Technical data for weapon systems includes drawings, specifications, standards, and other details necessary to ensure adequacy of item performance, as well as manuals that contain instructions for installation, operation, maintenance, and other actions needed to support weapon systems.

\textsuperscript{16}GAO-13-194.
budget uncertainties present challenges to the Air Force’s ability to establish core depot capability in the military depots. Also, the report states that partnerships with the private sector will help resolve these shortfalls. However, the report does not make clear how these partnerships will resolve the core depot maintenance shortfalls. Further, there are no details in the report on how the Air Force plans to obtain the necessary repair data. When we asked Air Force officials to clarify their shortfall mitigation plan, they further explained that they plan to partner with private-sector contractors to gain access to the repair data so they can meet their core requirement while allowing the private sector to maintain its intellectual property.

DOD Instruction 4151.20 assigns responsibility to the Assistant Secretary of Defense for Logistics and Materiel Readiness to collect, review, and evaluate the military services’ submissions when computing DOD’s composite core capability requirements and planned workload. OSD has some review processes in place as it prepares the report. For example, OSD officials explained that their processes included reviewing each military service’s information submission for factors such as whether it was consistent with DOD policy and whether it explained workload shortfalls. Further, OSD officials told us that their office responded to questions posed by the military services as they were assembling the information. OSD officials stated that before DOD’s final report was issued, the military services had the opportunity to review and make any corrections to the report.

Although DOD has some review processes in place, we found the report that DOD submitted to Congress lacks data and has data errors, and information on the military services’ depot maintenance core capabilities is incomplete. While OSD officials acknowledged there were data errors in the 2014 Biennial Core report, they stated that the data errors made in the report are not materially significant for oversight concern. OSD officials also acknowledged that the review process could be strengthened. We found that DOD reported $261 million less in the estimated cost of planned workload that is needed to sustain core workload compared to corrected data that DOD subsequently provided to us. Also, in some cases, information about top-level categories was not included or misidentified in the report. Furthermore, the report does not include complete mitigation plans, because the Air Force did not provide more details about its plan which may raise questions about whether its
actions would actually rectify the core capability shortfall. According to *Standards for Internal Control in the Federal Government*, internal control activities help ensure that management’s directives are carried out. Control activities are the mechanisms that enforce management’s directives, such as accurate recording of transactions and events. Internal control activities help ensure that all data entered are checked and transactions are completely and accurately recorded. By assessing the processes DOD uses to review the military services’ information and prepare the Biennial Core Report, DOD would be better positioned to ensure that depot maintenance core capabilities data in the final report are completely and accurately recorded and the report includes complete information.

Conclusions

Section 2464, among other things, requires DOD to maintain a core maintenance capability that is government-owned and government-operated, assign sufficient workload to support this capability, and report information on this capability to Congress. DOD’s second biennial report to Congress complies with most of the required reporting elements but includes incomplete information due, primarily, to data errors for some of the military services. Improving the processes used to review the services’ data submissions would help ensure data are checked and completely and accurately recorded. Also, DOD’s second report did not provide detailed or complete explanations for all of the identified workload shortfalls or mitigation plans. As we previously recommended, clear reasons for why the military services do not have the workload to meet core maintenance requirements and their explanations for how they plan to mitigate the shortfalls would provide key information for Congress about how the military services’ actions will correct the shortfalls.

Recommendation for Executive Action

To help ensure that DOD’s future submissions of the Biennial Core Report will be more accurate and complete, we recommend that the Secretary of Defense direct the Assistant Secretary of Defense for Logistics and Materiel Readiness to assess the review processes and implement needed improvements.

---

We provided a draft of this report to DOD for comment. In its written comments, reproduced in appendix IV, DOD concurred with our recommendation and stated that the department will assess the review process and implement any required improvements.

We are sending copies of this report to the appropriate congressional committees; the Secretary of Defense; the Assistant Secretary of Defense for Logistics and Materiel Readiness; the Secretaries of the Army, Navy, and Air Force and the Commandant of the Marine Corps; and other interested parties. In addition, the report is available at no charge on the GAO website at http://www.gao.gov.

If you or your staff have any questions about this report, please contact me at (202) 512-5257 or merritz@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix V.

Zina D. Merritt
Director
Defense Capabilities and Management
List of Committees

The Honorable Carl Levin
Chairman
The Honorable James Inhofe
Ranking Member
Committee on Armed Services
United States Senate

The Honorable Richard J. Durbin
Chairman
The Honorable Thad Cochran
Ranking Member
Subcommittee on Defense
Committee on Appropriations
United States Senate

The Honorable Howard P. “Buck” McKeon
Chairman
The Honorable Adam Smith
Ranking Member
Committee on Armed Services
House of Representatives

The Honorable Rodney Frelinghuysen
Chairman
The Honorable Pete Visclosky
Ranking Member
Subcommittee on Defense
Committee on Appropriations
House of Representatives
Appendix I: Scope and Methodology

To assess the extent to which the Department of Defense’s (DOD) 2014 Biennial Core Report complies with Section 2464 of Title 10 of the United States Code, we analyzed the text of DOD’s Biennial Core Report and obtained supporting information on DOD’s core determination process to determine the core maintenance capability for fiscal year 2015. Two analysts independently reviewed DOD’s report to determine the extent to which it included each element required by the statute. All initial disagreements between analysts were discussed and resolved through consensus. When the report explicitly included all parts of the required element, we determined that DOD “complied” with the element. When the report did not explicitly include any part of the element, we determined that DOD “did not comply” with the element. If the report included some aspects of an element, but not all, then we determined that DOD “partially complied” with the element. We confirmed that the military services were each providing the same type of information. In those cases where we had determined that the report did not include some aspects of a required element, we discussed our preliminary analyses with the Office of the Secretary of Defense (OSD) and military service officials to seek additional information.

To assess the level of completeness of the information, we obtained and analyzed fiscal year 2015 data—including, core capability requirements and sustaining workload, expressed in direct labor hours and cost—and other information, such as workload shortfall explanations, that OSD required the military service headquarters to provide in support of the report. We compared the military services’ submissions to the reporting template in DOD Instruction 4151.20,¹ in order to determine the extent to which the services had submitted the information required by DOD’s instruction and identify any inconsistencies or errors. We performed a number of steps to compare and reconcile the data provided by the military services to the data that OSD included in the final Biennial Core report. These steps included (1) ensuring that each military service consistently reported the direct labor hours identified as the total adjusted requirements and the workload needed to maintain depot maintenance core capability requirements; (2) reconciling, for accuracy, the information in the report against each service’s submission; (3) comparing and contrasting the 2014 report against DOD’s 2012 Biennial Core report to

¹DOD Instruction 4151.20, Depot Maintenance Core Capabilities Determination Process (Jan. 5, 2007).
determine if there were noticeable changes in the data for specific categories; and (4) evaluating each service’s submission to verify that each work breakdown structure category and associated subcategory levels were computed correctly and contained data for those requirements and the corresponding workload the services have. In addition, we conducted data-reliability assessments for the data that were provided by the military services to OSD to support their respective responses for the Biennial Core Report. We found data errors in the initial submissions from the Army, Navy, and Marine Corps. We interviewed OSD and military service officials about these data errors and were provided updated data submissions, in which we did not find any data errors. From these analyses, and given the updated military service data submissions, we concluded that the data were sufficiently reliable for the purposes of this report. The team also met with OSD and military service officials responsible for overseeing the data collection and preparing the data submissions, to obtain clarification and understanding of the content of the submissions. We assessed the accuracy and completeness of the information in DOD’s 2014 Biennial Core Report with criteria outlined in Standards for Internal Control in the Federal Government and DOD Instruction 4151.20.²

We conducted this performance audit from June 2014 to September 2014 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

## Work Breakdown Structure Category

### 1. Aircraft
- **1.1 Airframes**
  - 1.1.1 Rotary
  - 1.1.2 Vertical/Short Take-Off and Landing
  - 1.1.3 Cargo/Tanker
  - 1.1.4 Fighter/Attack
  - 1.1.5 Bomber
  - 1.1.6 Aircraft – Other
- **1.2 Aircraft Components**
  - 1.2.1 Dynamic Components
  - 1.2.2 Hydraulic/Pneumatic
  - 1.2.3 Instruments
  - 1.2.4 Landing Gear
  - 1.2.5 Aviation Ordnance
  - 1.2.6 Avionics/Electronics
  - 1.2.7 Auxiliary Power Units
  - 1.2.8 Other
- **1.3 Aircraft Engines**

### 2. Ground Vehicles
- **2.1 Combat Vehicles**
- **2.2 Amphibious Vehicles**
- **2.3 Tactical (wheeled) Vehicles**
- **2.4 Construction Equipment**

### 3. Sea Ships
- **3.1 Aircraft Carriers**
- **3.2 Submarines**
- **3.3 Surface Combatants/Others**

### 4. Communication/Electronic Equipment
- **4.1 Radar**
- **4.2 Radio**
- **4.3 Wire**
- **4.4 Electronic Warfare**
- **4.5 Navigational Aids**
- **4.6 Electro-Optics/Night Vision**
- **4.7 Crypto**
- **4.8 Computers**
- **4.9 Other**
<table>
<thead>
<tr>
<th>Category</th>
<th>Subcategories</th>
</tr>
</thead>
<tbody>
<tr>
<td>5. Support Equipment</td>
<td>5.1 Ground Support Equipment</td>
</tr>
<tr>
<td></td>
<td>5.2 Generators</td>
</tr>
<tr>
<td></td>
<td>5.3 Test, Measurement, and Diagnostic Equipment</td>
</tr>
<tr>
<td></td>
<td>5.4 Calibration</td>
</tr>
<tr>
<td></td>
<td>5.5 Other</td>
</tr>
<tr>
<td>6. Ordnance, Weapons, &amp; Missiles</td>
<td>6.1 Nuclear Weapons</td>
</tr>
<tr>
<td></td>
<td>6.2 Chemical Weapons</td>
</tr>
<tr>
<td></td>
<td>6.3 Biological Weapons</td>
</tr>
<tr>
<td></td>
<td>6.4 Conventional Weapons</td>
</tr>
<tr>
<td></td>
<td>6.5 Explosives</td>
</tr>
<tr>
<td></td>
<td>6.6 Small Arms/Personal Weapons</td>
</tr>
<tr>
<td></td>
<td>6.7 Strategic Missiles</td>
</tr>
<tr>
<td></td>
<td>6.8 Tactical Missiles</td>
</tr>
<tr>
<td>7. Software</td>
<td>7.1 Weapon System</td>
</tr>
<tr>
<td></td>
<td>7.2 Support Equipment</td>
</tr>
<tr>
<td>8. Fabrication/Manufacturing</td>
<td></td>
</tr>
<tr>
<td>9. Fleet/Field Support</td>
<td></td>
</tr>
<tr>
<td>10. Special Interest Items</td>
<td></td>
</tr>
<tr>
<td>11. Other</td>
<td></td>
</tr>
</tbody>
</table>

Source: Department of Defense. | GAO-14-777
Section 2464 of Title 10 of the United States Code requires the Department of Defense (DOD) to, among other things, submit to Congress a biennial report on its “core depot-level maintenance and repair capability,” no later than April 1 of each even-numbered year. The statute requires DOD to identify the following three items for each military service for the subsequent fiscal year: (1) core capability requirements, (2) planned workload—this refers to the workload required to sustain only the core capability requirements—and (3) explanations and mitigation plans for any shortfalls between core capability requirements and planned workload. The statute directs that the core capability requirements information and planned workload information be organized by work breakdown structure—which is a group of categories of equipment and technologies—and expressed in direct labor hours.

DOD submitted its 2014 Biennial Core Report to Congress on June 6, 2014, and we found that the report contains multiple data errors. Figures 1 and 2 show excerpts from DOD’s report of the core capability requirements and workload information and a side-by-side comparison of the data DOD included in the report and the revised data DOD provided to us as of July 10, 2014.
### Appendix III: Revised Core Maintenance Capability by Military Service

**Figure 1: Army and Navy Data as Reported in the Department of Defense’s (DOD) 2014 Biennial Core Report dated June 6, 2014 and Revised by DOD as of July 10, 2014**

<table>
<thead>
<tr>
<th></th>
<th>Core capability requirement</th>
<th>Public-sector depot maintenance sustaining workload</th>
<th>Estimated cost of sustaining workload</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Army</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aircraft</td>
<td>3,338,606</td>
<td>4,912,616</td>
<td>788,829,060</td>
</tr>
<tr>
<td>Ground vehicles</td>
<td>4,374,751</td>
<td>6,242,239</td>
<td>1,559,796,744</td>
</tr>
<tr>
<td>Sea ships</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Communication/electronic equipment</td>
<td>2,659,769</td>
<td>3,306,333</td>
<td>1,180,275,961</td>
</tr>
<tr>
<td>Support equipment</td>
<td>909,676</td>
<td>1,159,020</td>
<td>113,254,047</td>
</tr>
<tr>
<td>Ordnance, weapons, and missiles</td>
<td>1,255,925</td>
<td>1,314,243</td>
<td>136,683,366</td>
</tr>
<tr>
<td>Software</td>
<td>384,102</td>
<td>397,642</td>
<td>74,899,890</td>
</tr>
<tr>
<td>Fabrication/manufacturing</td>
<td>32,831</td>
<td>36,909</td>
<td>350,634</td>
</tr>
<tr>
<td>Fleet/field support</td>
<td>317,464</td>
<td>320,809</td>
<td>13,420,497</td>
</tr>
<tr>
<td>Special Interest Items</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>56,630</td>
<td>750,281</td>
<td>1,261,176</td>
</tr>
</tbody>
</table>

| **Navy**      |                             |                                                     |                                      |
| Aircraft      | 2,674,988                   | 6,092,712                                           | 511,781,928                          |
| Ground vehicles| 21,431,566                  | 32,253,888                                          | 2,168,560,114                        |
| Communication/electronic equipment | 93,336                    | 433,166                                             | 192,616,489                          |
| Support equipment | 81,316                    | 428,815                                             | 25,166,437                          |
| Ordnance, weapons, and missiles | 0                        | 1,289,326                                           | 0                                    |
| Software      | 12,901                      | 33,082                                              | 6,565,123                           |
| Fabrication/manufacturing | 262,463                   | 420,853                                             | 56,414,714                          |
| Fleet/field support | 372,571                   | 500,062                                             | 99,237,304                          |
| Special Interest Items | 0                        | 0                                                   | 0                                    |
| Other         | 1,467,088                   | 3,753,944                                           | 744,970,187                          |

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*We summarize DOD’s description of this information as planned workload.

*We summarize DOD’s description of this information as estimated cost of planned workload.

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Source: GAO analysis of corrected DOD data. | GAO-14-777

\[\text{Data reported by DOD on June 6, 2014} \]
\[\text{Updated data provided by DOD as of July 10, 2014}\]
Figure 2: Marine Corps and Air Force Data as Reported in the Department of Defense’s (DOD) 2014 Biennial Core Report dated June 6, 2014 and Revised by DOD as of July 10, 2014

<table>
<thead>
<tr>
<th></th>
<th>Core capability requirement</th>
<th>Public-sector depot maintenance sustaining workload(^a)</th>
<th>Estimated cost of sustaining workload(^b)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Marine Corps</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aircraft</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ground vehicles</td>
<td>1,896,000</td>
<td>2,233,140</td>
<td>258,857,749</td>
</tr>
<tr>
<td>Sea ships</td>
<td><strong>26,190</strong> (\checkmark)</td>
<td><strong>26,190</strong> (\checkmark)</td>
<td><strong>5,848,397</strong> (\checkmark)</td>
</tr>
<tr>
<td>Communication/electronic equipment</td>
<td>219,290</td>
<td>74,755</td>
<td>56,724,819</td>
</tr>
<tr>
<td>Support equipment</td>
<td>211,987</td>
<td>353,454</td>
<td>27,123,872</td>
</tr>
<tr>
<td>Ordnance, weapons, and missiles</td>
<td>234,218</td>
<td>296,397</td>
<td>31,307,099</td>
</tr>
<tr>
<td>Software</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Fabrication/manufacturing</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Fleet/field support</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Special Interest Items</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Air Force</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aircraft</td>
<td><strong>12,962,465</strong></td>
<td>18,001,918</td>
<td><strong>4,372,369,893</strong></td>
</tr>
<tr>
<td>Ground vehicles</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Sea ships</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Communication/electronic equipment</td>
<td>515,637</td>
<td>127,574</td>
<td>98,074,305</td>
</tr>
<tr>
<td>Support equipment</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ordnance, weapons, and missiles</td>
<td>988,545</td>
<td>1,061,912</td>
<td>159,726,054</td>
</tr>
<tr>
<td>Software</td>
<td>3,446,710</td>
<td>4,190,066</td>
<td>450,587,669</td>
</tr>
<tr>
<td>Fabrication/manufacturing</td>
<td>271,523</td>
<td>348,825</td>
<td>50,372,257</td>
</tr>
<tr>
<td>Fleet/field support</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Special Interest Items</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Other</td>
<td><strong>192,006</strong></td>
<td><strong>212,566</strong></td>
<td><strong>34,527,057</strong></td>
</tr>
</tbody>
</table>

\(^a\)We summarize DOD’s description of this information as planned workload.

\(^b\)We summarize DOD’s description of this information as estimated cost of planned workload.
Ms. Zina Merritt
Director, Defense Capabilities and Management
U.S. Government Accountability Office
441 G Street, NW
Washington, DC 20548

Dear Ms. Merritt:


The Department acknowledges receipt of the draft report and concurs with the recommendation. The Department will assess the review process and implement any required improvements.

Sincerely,

[Signature]

Paul D. Peters
Principal Deputy
Appendix V: GAO Contact and Staff Acknowledgments

GAO Contact  Zina Merritt, (202) 512-5257 or merrittz@gao.gov

Staff Acknowledgements

In addition to the contact named above, Carleen Bennett, Assistant Director; Tracy Barnes; Lindsey Cross; Chaneé Gaskin; Shvetal Khanna; Joanne Landesman; Michael Silver; Amie Steele; and Michael Willems made key contributions to this report.


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