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Chief Review Services / Chef - Service d'examen

CRS / CS Ex

Audit of Accounting for Capital Assets—Repairable Items

December 2007

7050-35 (CRS)



Canada

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LIST OF ACRONYMS

ADM(Fin CS)	Assistant Deputy Minister (Finance and Corporate Services)
ADM(IM)	Assistant Deputy Minister (Information Management)
ADM(Mat)	Assistant Deputy Minister (Materiel)
AFS	Audited financial statement
AFSP	Audited financial statement project
AOR	Auxiliary oiler replenishment
CAEL	Capital Asset Exclusion List
CFSD	Canadian Forces Supply Depot
CFSS	Canadian Forces Supply System
CICA	Canadian Institute of Chartered Accountants
CPV	Coastal patrol vessel
CRS	Chief Review Services
DFA	Director Financial Accounting
DFPP	Director Financial Policy and Procedure
DG Fin Mgmt	Director General Financial Management
DGMSSC	Director General Materiel Systems and Supply Chain
DND	Department of National Defence
ERP	Enterprise resource planning
FAM	Financial Administration Manual
FAR	Financial Accounting and Reporting
FMAS	Financial Managerial Accounting System
FY	Fiscal year
FYE	Fiscal year-end
GAAP	Generally accepted accounting principles
GCCS	Government of Canada Cataloguing System
LCMM	Life Cycle Materiel Manager
MASIS	Materiel Acquisition and Support Information System
MCDV	Maritime coastal defence vessel
MHE	Material handling equipment
SCA	Supply customer account
SMP	Standard military pattern
TB	Treasury Board
WMA	Weighted moving average

RESULTS IN BRIEF

Chief Review Services (CRS) conducted an audit of Accounting for Capital Assets—Repairable Items[1] to assess whether current policies, procedures and information systems provide accurate and timely information regarding these assets for both materiel management and financial reporting purposes.

At 31 March 2007, repairable items comprised $6.5 billion of the reported $38 billion gross tangible capital assets included in the financial statements as machinery and equipment and ships, aircraft and vehicles.[2]

Currently, assurance cannot be provided as to the accuracy of the reported value because the underlying policy has not been defined, and existing information systems lack the required integration and edit checks to ensure complete, accurate data.

Overall Assessment

The accuracy of the reported value of repairable items cannot be assured because:

- There is no formal policy to guide classification, amortization and pricing of these assets; and
- Information systems are not well integrated and lack the required edit checks.

Developing and implementing an effective and efficient framework for recording and reporting repairable items is essential before the Department of National Defence (DND) can confidently expect a controls-reliant audit of the departmental financial statements to result in an unqualified opinion from the Auditor General. Developing such a framework will require the expertise of staff from both the Assistant Deputy Minister (Materiel) (ADM(Mat)) and the Assistant Deputy Minister (Finance and Corporate Services) (ADM(Fin CS)). Co-operative effort by these groups should result in more accurate financial statement reporting, as well as more reliable materiel management information.

Findings and Recommendations

Policies and Procedures. A Financial Administration Manual (FAM) chapter documenting the accounting policy and procedures for repairable items has not yet been developed. In its absence, approaches have evolved which are not fully consistent with generally accepted accounting principles (GAAP). Additional direction is required regarding the classification, amortization and pricing of this group of capital assets.

It is recommended that priority be placed on the development and implementation of a FAM chapter addressing repairable items.

[1] Repairable items are a specific type of capital asset. Although they are reported on the financial statements along with major capital assets such as aircraft and ships, the accounting treatment for the two types of assets is quite different. In general, when the term “capital assets” is used in this report, it is intended to refer to major capital assets and **to exclude** repairable items.

[2] Total reported gross tangible capital assets also include land, building and works, leasehold improvements, leased tangible capital assets and work in progress.

Information Systems. The information required to determine the value of repairable items for financial statement purposes is stored in four separate departmental information systems. Because there is no automated process to relate all the required information, significant manual intervention is required. An absence of comprehensive edit checks and electronic monitoring tools further undermines the accuracy of the data.

It is recommended that the information in these systems be better integrated. Additional edit checks and enhanced monitoring capabilities should be developed. As an initial step, the Canadian Forces Supply System (CFSS) should be modified to support the pricing methodology selected for repairable items.

Financial Statement Value. The reported quantity includes a significant number of wrongly classified items (i.e., items flagged as repairable but actually consumable) and obsolete items. As well, it includes a large number of low dollar value items that should either be fully expensed when purchased or treated as consumable inventory.

The accuracy of the reported value is further undermined because it does not include, for the most part, repairables that are held in supply customer accounts (SCA). At 31 March 2007 the CFSS recorded value of repairables in SCAs exceeded $4 billion, only $179 million of which was included as repairable items in the departmental financial statements.

Many of the same issues exist in the pricing of repairable items as documented in the CRS Audit of Inventory Pricing. More than 90 percent of repairable items continue to be carried at the baseline prices established in fiscal year (FY) 2002/03. There is little supporting documentation to confirm these baseline prices.

The combination of classification, quantity and pricing errors preclude providing assurance as to the accuracy of the value reported in the financial statements. As well, errors in the reported holdings make it more difficult to ensure materiel is available when needed and increase the risk of undetected losses.

It is recommended that a risk-based approach be used to confirm the classification of repairable items, as well as the quantity and price of these holdings.

Note: For a more detailed list of CRS recommendations and management response please refer to Annex A—Management Action Plan.

INTRODUCTION

In accordance with the CRS Work Plan for FY 2006/07, an audit of the accounting practices related to repairable items was conducted. The requirement for this audit was identified during a CRS survey conducted to identify and prioritize potentially high-risk accrual accounting issues in DND.

Background

In April 2001, the Government of Canada implemented the Financial Information Strategy, thereby changing its basis of accounting for financial and management reporting purposes from modified accrual to full accrual. To meet the new financial reporting requirements, significant changes in departmental accounting practices began to be implemented in FY 2002/03.

One of these changes was the re-classification of approximately $6 billion of repairable items from inventory to capital assets to better reflect the pattern of usage for these items. Annex C provides details of the repairable items included in tangible capital assets in the FY 2006/07 financial statements.

The accounting processes used to capture the cost and to record amortization on these items have continued to evolve. For example, repairable items were initially proportionally allocated to asset pools based on the opening balance value of the asset pool. Since FY 2004/05, however, a detailed mapping process has been used to more precisely allocate individual stock codes (in particular repairable spare parts) to the asset pool of the supported equipment platform.[3] As well, the pricing methodology for repairable items was modified to improve the accuracy of reported values. Despite these improvements, the management letter to the Department following the Auditor General's annual audit of Public Accounts has regularly commented on weaknesses in the accounting processes associated with repairable items.

Objectives

The overall objective for the audit was to review the existing policies and processes and identify areas where improvements are required to create a controls-reliant system for classifying, counting, valuing and reporting repairable items. Specifically, the intent of the audit was to:

- Determine the effectiveness of current policies and procedures;
- Assess the adequacy of the controls and processes embedded in the information systems used to account for repairable items; and
- Verify the accuracy and completeness of the value of repairable items included in the departmental financial statements.

Please refer to Annex B for a listing of the criteria used to assess the objectives.

[3] For example, F-18 engines are allocated to the Fighter Aircraft Pool, while Light Armoured Vehicle engines are allocated to the Armoured Vehicle Pool.

Scope

For financial reporting purposes, CFSS warehouse holdings are divided into four categories as illustrated in Figure 1. The scope of this audit included those warehouse holdings identified as repairable items. The audit focused on holdings as of fiscal year-end (FYE) 2006/07—$5.3 billion, as well as related transactions during FY 2005/06 and FY 2006/07.

The audit also considered repairable items held in CFSS SCAs. At FYE 2006/07 this comprised over 2 million items with a CFSS-recorded value of $4.5 billion. With minor exception, these are not included as repairable items (or as any other type of asset) in the departmental financial statements.

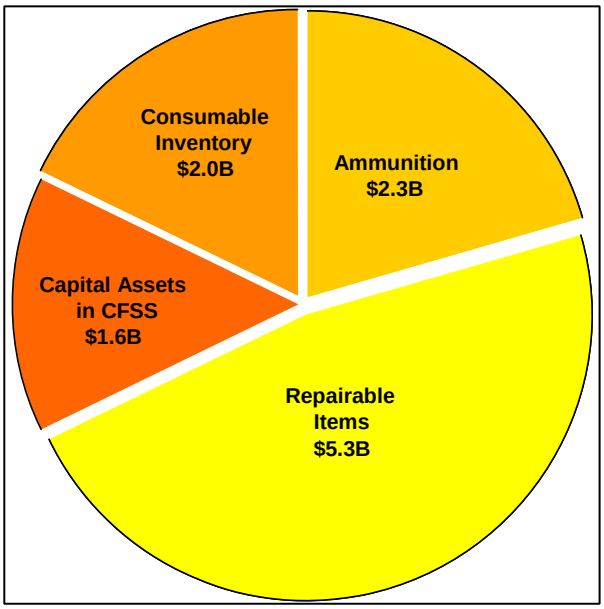

Figure 1. CFSS Warehouse Holdings at 31 March 2007.
At FYE 2006/07, CFSS warehouse holdings of repairable items had a recorded value of $5.3 billion.

The audit scope **excluded:**

- Approximately $277 million of repairable materiel in transit, $105 million of "dues-in" items, and approximately $600 million of repairable items held by contractors and recorded outside the CFSS system. These holdings are included in the financial statement value provided at Annex C but do not form part of the CFSS warehouse holdings in Figure 1.[4]
- Repairable ammunition (included in ammunition in Figure 1). The Department treats both repairable and non-repairable ammunition as inventory.
- CFSS recorded items included on the Capital Asset Exclusion List (CAEL). These items, many of which are repairable, are reported in the financial statements based on Materiel Acquisition and Support Information System (MASIS) records rather than CFSS records. They are shown as Capital Assets in Figure 1.
- Repairable items flagged for disposal. These are not included in the financial statement reported value.

Methodology

- Reviewed relevant policies and guidelines with respect to both inventory and capital assets, including FAM chapters 1020-4 and 1020-5, the Canadian Forces Supply Manual, Treasury Board (TB) policies, and the Canadian Institute of Chartered Accountants (CICA) Handbook.
- Interviewed key departmental stakeholders within the ADM(Fin CS) and ADM(Mat) organizations.
- During site visits to 25 Canadian Forces Supply Depot (CFSD) Montreal and 8 Wing Trenton:

[4] Annex C also includes an adjustment for approximately $179 million of repairable items held in supply customer accounts. These non-warehouse holdings are excluded from the Figure 1 value.

- Confirmed holdings of a non-statistical sample of repairable items held in warehouse accounts (including the repairable reserve account[5] at 25 CFSD) and SCAs (8 Wing only); and
- Discussed local materiel management processes with supply personnel.

- For a statistical sample of repairable items, contacted individual life cycle materiel managers (LCMM) to confirm the status of the items.
- Completed a global analysis of CFSS holdings of repairable items using computer-assisted audit/analysis tools and techniques.

Caution to Reader

Much of the analysis in this report relies on CFSS recorded prices. Previous CRS audits, as well as this audit, have highlighted significant inaccuracies in this pricing. As a result, no assertion can be made as to the accuracy of the resulting analysis, and caution must be exercised in using these results for management decision making without further confirmation.

[5] Repairable reserve is a type of warehouse account. It holds items which require repair before they can be used, but for which there is currently sufficient useable stock to meet requirements.

FINDINGS AND RECOMMENDATIONS

Policies and Procedures

There is no formal policy regarding the classification, pricing or amortization of repairable items. The procedures that have been adopted are not fully consistent with GAAP or with other departmental accrual accounting practices.

FAM Development

Beginning in FY 2002/03, repairable items valued at approximately $6 billion were re-classified from inventory to capital assets in order to better reflect their usage over several accounting periods.[6] At that time, FAM 1020-5 Inventory and FAM 1020–4 Capital Assets were amended to indicate that they did **not** apply to repairable items. FAM 1020–4 Capital Assets, issued in June 2003, states that *"a separate FAM chapter is being developed to address this new category of capital asset."*

In a management letter to ADM(Fin CS) in January 2006, as a result of their 2004/05 Public Account audit work, the Office of the Auditor General recommended that DND formalize the accounting practices for repairable items. They stated that *"while the methods and roles are evolving, there is a need to formalize the policies and procedures being followed."* DND responded that the Directorate of Financial Policy and Procedure (DFPP) would commence writing a FAM chapter on Repairables early in 2006; however, as of August 2007 this work had not begun.

Classifying Repairables

Repairability versus Useful Life. Within the Department, a critical factor in determining whether an item is categorized as a capital asset (i.e., repairable) or as consumable inventory is whether or not it is normally repaired when broken. If an item's repair flag is "Y"[7] in the CFSS, it is capitalized (as a repairable item) in the departmental financial statements.[8]

This approach is not fully consistent with the CICA Public Sector Accounting Handbook and TB accounting policy.[9] Neither of these documents includes "repairability" as a consideration in determining whether an item will be capitalized and amortized over several accounting periods, or carried at cost and fully expensed when put in use (i.e., treated as consumable inventory). Rather, the critical factors are whether the item has a useful life extending beyond one fiscal year and whether it is intended to be used on a continuing basis.

Repairability may be a reasonable proxy for determining if an item has a useful life greater than one fiscal period; however, acceptance of this approach has not been formally documented.

[6] As a result of the re-classification, the cost of these assets is amortized over the accounting periods during which they provide benefits, in accordance with the GAAP "matching" principle.
[7] If an item would be sent to a second-line facility (or higher) for repair, its repair flag should be set to "Yes."
[8] There are some exceptions. Items flagged for disposal are not included. Ammunition is not included, although some can be repaired and has a repair flag of "Yes." Items that are on the CAEL are also excluded.
[9] Treasury Board Accounting Standard 3.1 – Capital Assets.

Threshold Value. FAM 1020–4 states that to be considered a capital asset, an item must have an initial cost of at least $30,000 (with some exceptions, including vehicle fleets). No similar threshold value has been established for repairable items and, in practice, all warehoused repairable items regardless of value are being capitalized in the departmental financial statements.

Repairable Spare Parts versus Standalone Repairables. Existing departmental documents do not clearly indicate whether repairables include:

- Only repairable spare parts (i.e., items such as an engine that form part of a larger platform); or
- Both repairable spare parts and standalone repairable items such as microwaves, televisions, and binoculars.

There is a lack of clarity and consistency:

- The glossary to the DND FAMs states that repairables will be amortized over the useful life of the associated equipment platform,[10] and all examples provided are spare parts;
- FAM 1020–4 Capital Assets states that a decision was made to remove "repairable spare parts" from inventory; it does not mention standalone repairables;
- The reporting procedures for this category of assets are documented in a report titled "Repairable Spare Parts–Accounting Methodology;"[11] and
- The Canadian Forces Supply Manual makes no mention of the requirement to be part of a larger platform when listing the criteria for determining the repair flag setting.

As a result, it is not clear which items are intended to be included as repairables. Indeed, repairable spare parts cannot be readily distinguished in the CFSS from standalone repairable items.

Pricing

GAAP require that "full laid down costs" should be used when pricing capital assets. Within the Department, in the absence of a FAM chapter on repairables, there has been no guidance regarding the inclusion of, for example, installation costs, freight costs, and insurance costs—nor has there been any direction regarding the treatment of betterments.

Currently, a weighted moving average (WMA) costing methodology is being applied to repairables. Because WMA is not the default method of pricing for repairables within the CFSS, much manual effort is required to calculate the correct price and to adjust the CFSS recorded values. However, there is no documented policy confirming this as the chosen approach.

[10] Standalone repairables do not have an associated equipment platform. For amortization purposes they are assigned to the generic "Machinery and Equipment" pool.
[11] In practice, the procedures are being applied to both spare parts and standalone repairable items.

Amortization

Amortization Rate. GAAP direct that a capital asset should be amortized at a rate appropriate to its useful life. A "pooled" approach may be used for groups of similar items where it is not practical to track individual rates and useful lives.

Currently, the Department amortizes repairable items based on the accumulated amortization for the repairable pool to which the item is assigned. For example, as per Annex C, a repairable part assigned to the Helicopter – Marine Support pool would be 100 percent amortized, while a part assigned to the Helicopter – Air Support pool would be only 15 percent amortized.

Where a repairable pool relates to a specific platform, this approach seems to be consistent with GAAP requirements. However, some pools include various platforms, with quite different remaining lives. For example, the transport aircraft repairable pool includes spare parts for seven different aircraft types, including 40-year-old CC-130s and brand new CC-177s. While each aircraft is amortized individually based on in-service date and estimated life, the repairable parts for all seven aircraft types are amortized at the same accumulated rate—42 percent for FY 2006/07. Given changing initial provisioning and life-cycle maintenance concepts, this approach is not fully consistent with GAAP and may not give the desired degree of accuracy.

Amortization Period. FAM Chapter 1020–4 Capital Assets states that these assets will be amortized when "in use," and that they shall be considered in use when issued to a first-line unit (i.e., an SCA). New capital assets held in second-, third- and fourth-line support facilities (i.e., warehouse accounts) are not considered in use and therefore are not amortized.

This is not consistent with the current approach for repairable items. Both repairable spare parts and standalone repairable items are being amortized while in warehouse accounts. They are usually fully amortized, with zero book value, once issued to an SCA.

The life of a repairable part is dependent on the parent platform. If the parent platform is in use, it is reasonable to amortize the associated repairable parts while warehoused. However, the same does not hold true for standalone repairables.

Not including the value of repairable items held in SCAs could result in material understatement[12] of this category of asset in the departmental financial statements.

Roles and Responsibilities

While FAM 1020–4 Capital Assets assigns asset managers within ADM(Mat) the responsibility to ensure that capital assets are accurately identified and properly valued for financial statement purposes, we found that ADM(Fin CS) is assuming much of this role for repairable items by ensuring that these items are accurately priced and assigned to asset pools.

[12] Based on DND FY 2006/07 total expenditures, a cumulative error greater than $160 million would be considered material to the financial statements.

Lack of clearly defined roles reduces the efficiency and effectiveness of meeting both financial and materiel management objectives.

Recommendation

OPI	RECOMMENDATION
ADM(Fin CS)/ DG Fin Mgmt and ADM(Mat)/DGMSSC	**Policy and Procedures.** Formalize policy and procedures related to repairable items to include guidance on: • Classification, including any dollar threshold; • Amortization rate and period, specifically appropriate treatment of SCA holdings; • Pricing approach including any provisions for betterments; and • Relative responsibilities of ADM(Mat) and ADM(Fin CS). Guidance must be consistent with GAAP and TB policy and support both materiel management and financial reporting objectives.

Information Systems

Limited edit checks and monitoring tools, and reliance on manual processes to compensate for non-integrated systems, increase the risk of material misstatement and preclude controls-reliant validation of the reported financial statement values for repairable items.

Multiple, Non-integrated Systems

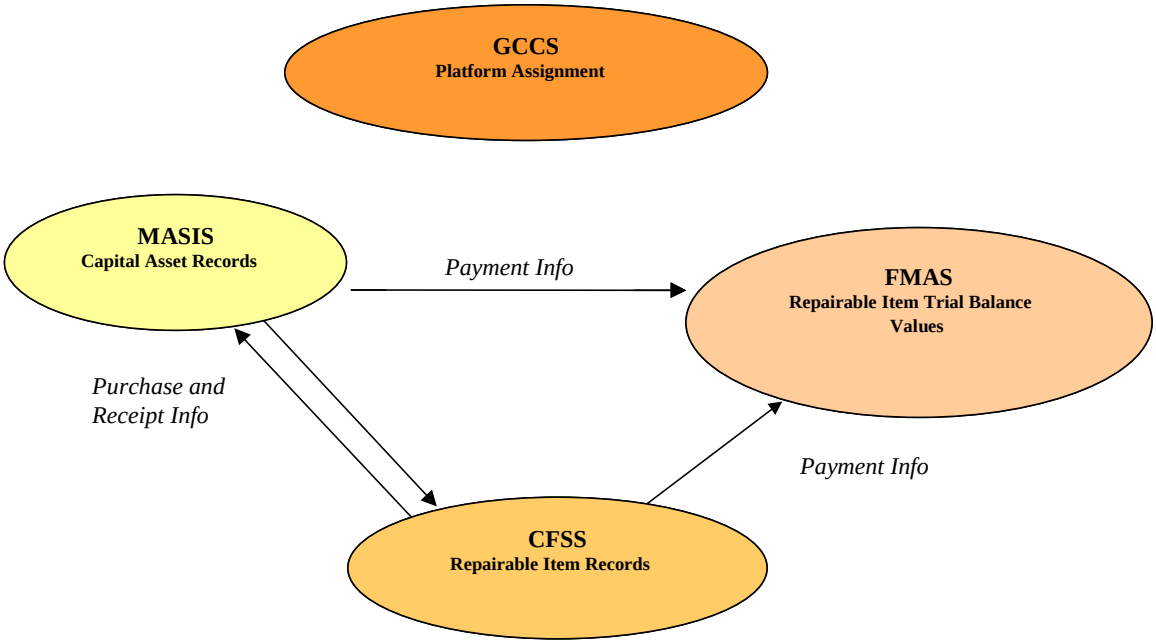

Figure 2. Relevant Information Systems. *Information from four systems is required to complete the reporting process.*

Reporting repairables in the departmental financial statements requires that information be obtained from the four systems shown in Figure 2.

Government of Canada Cataloguing System (GCCS). The GCCS contains master data on each repairable item. It is used to assign a NATO Stock Number to each new purchase, and contains information regarding which platform(s) each repairable part is used on.

While some of this information may also exist in MASIS and/or CFSS, it is not being provided as part of the repairable item records used to determine the financial statement value. Rather, ADM(Fin CS) maintains a standalone spreadsheet to assign repairable items to the appropriate repair pool for amortization purposes. This approach is labour-intensive and error-prone. In FY 2006/07, over 4,000 new repairable items were entered in CFSS, each of which required research and a manual update to the spreadsheet to properly assign to a repair pool.

MASIS. This system is used to record capital assets over $30,000. It contains pricing and betterment information, as well as quantity and in-service dates. The financial statement value of these items is based on MASIS records.

Some of these capital assets are also tracked in CFSS. At the time of the audit, there was no indicator or flag to exclude these items from the CFSS-extract of repairable items. To compensate, a standalone CAEL was developed. ADM(Mat) staff were responsible for ensuring the list was up-to-date, so that items included in the financial statements as capital assets, based on MASIS information, were not also included as part of the CFSS-held repairable items.

While an analysis did not highlight any items that had been double-counted, there is inherent risk in this approach. At FYE 2006/07, CFSS records included CAEL items valued at $8.4 billion:

- Warehouse accounts included approximately 10,000 CAEL items with a CFSS recorded value of $1.6 billion; and
- SCAs contained a further 42,000[13] items with a CFSS recorded value of $6.8 billion.

CFSS. Either the CFSS or MASIS can be used to enter purchase orders related to repairable items.

When items are received, the invoice price and quantity are validated against the purchase order, and the quantity on hand is updated in CFSS. Unlike inventory items, the repairable item's CFSS price is not updated to reflect the new purchase. Rather, the price remains at a standard or assigned price.[14]

At the end of each calendar year, ADM(Fin CS) staff, in cooperation with staff from ADM(Mat), determine the new standard price for each repairable item. The methodology that is used is essentially a WMA costing approach. All MASIS and CFSS purchases of repairable items are extracted, and a new WMA cost is calculated—using a standalone spreadsheet—which considers the previous holdings and price, along with the new purchases.

Because the process is very time-consuming (currently taking approximately three months), it is completed on a calendar year rather than fiscal year basis. This means that purchases during the last quarter (traditionally the highest volume time of the year for purchases) are not considered in determining the new price for the current fiscal year. Using a manual rather than automated process prevented quarterly financial statements from being based on updated prices. This approach does not provide timely information for decision making.

Financial Managerial Accounting System (FMAS). FMAS contains the general ledger information used to produce the trial balance, including the gross value of each repairable pool and its associated accumulated amortization.

While information required for invoice payment is transmitted between both MASIS and CFSS to FMAS, no information is transmitted concerning whether the invoice amount is to be expensed or capitalized, or recorded as a repairable or consumable inventory item. Indeed, all invoiced amounts are initially expensed. Adjusting entries are made to contra-accounts to adjust these expenses based on changes in the calculated balance of capital assets, repairable items, and consumable inventories. Manual entries are also required to update the gross value of each

[13] The 10,000 warehouse items comprised 1,400 stock codes, while the 42,000 SCA items comprised approximately 4,000 stock codes.
[14] While CFSS allows either WMA or standard costing to be selected for inventory items, it currently defaults to standard costing for repairables.

repairable pool and its accumulated amortization. These processes are only partially documented, and are not well understood by all stakeholders. It is difficult to ensure they are applied consistently and result in accurate information.

Edit checks and Monitoring Tools

The current version of CFSS has only limited edit checks and monitoring capabilities.

Data errors, which could be prevented through input edit checks, continue to occur. For example, at FYE 2006/07:

- 149 stock codes with a recorded value of $47 million had incompatible repair flags and repairability codes, i.e., the repair flag was set to "Y" but the repairability code indicated that the item was not repairable.
- The repairable reserve, intended to hold items for subsequent repair, included 381 consumable (i.e., non-repairable) inventory stock codes with a recorded value of $14 million.

Automated monitoring capabilities are limited. While the web-query tool produces many useful reports, it does not provide global information on holdings. Rather, reports can only be produced on a warehouse or district basis. In order to obtain global information, special requests and tailored extracts are required. This reduces ADM(Mat)'s ability to complete timely population profiling, to isolate areas of greatest risk, and to complete risk-based verification. The absence of robust monitoring tools makes it more difficult to correct legacy errors.

Director General Materiel Management and Supply Chain (DGMSSC) tries to complete some monitoring of CFSS pricing in particular; however, this is not always done in a timely or thorough fashion due to resource limitations.

Recommendation

OPI	RECOMMENDATION
ADM(Mat)/DGMSSC	**Non-integrated Systems.** Integrate existing information systems to reduce the requirements for independent and manual processes. Once the policy for pricing repairable items has been documented, ensure CFSS can complete any necessary calculations.
ADM(Mat)/DGMSSC	**Edit Checks and Monitoring.** Develop additional CFSS edit checks and improved monitoring tools, thereby allowing increased reliance on automated controls.

Financial Statement Value

We are unable to provide assurance as to the accuracy of the financial statement value for repairable items. Ambiguity regarding what to include as repairable items, combined with pricing and quantity discrepancies, could result in material under- or overstatement.

Classification of Repairable Items

In the absence of a documented policy, all warehoused items[15] flagged as repairable beyond first line, (excluding ammunition, items on the CAEL, and items flagged for disposal) have been included in determining both the gross and amortized value of tangible capital assets in the departmental financial statements. The resulting repairable population is inaccurate.

The repairables population is overstated because:

- it includes many items that should more appropriately be fully expensed or flagged as consumable, and
- it contains many obsolete items.

The repairables population is understated in that it excludes, for the most part, repairable items held in SCAs.

Items that should be Expensed or Flagged Consumable. While many items have the potential to be repaired, it is often more economical to simply replace them when they break.

During site visits to both 25 CFSD and 8 Wing Trenton, it was apparent that many of the sampled items, though flagged repairable, would not be sent for repair beyond first line. Table 1 summarizes the sample results.

In the case of the Stat Sample, which included only items with a recorded unit price greater than $1,000, responsible LCMMs were asked whether the item was appropriately flagged as repairable. For 4 percent of the items, they responded that the item was consumable. If this result is extrapolated to the portion of the population with a unit price greater than $1,000, it can be concluded that the value is overstated by approximately $200 million. However, given the pricing errors that are also present in the population, this can only be considered a very rough estimate.

Unit Price	Warehouse	% Flagged Repairable, but Consumable
<$500	25 CFSD	63% (56/88)
>$500	25 CFSD	53% (24/45)
	8 Wing	10% (12/121)
>$1000	Stat Sample	4% (7/178)

Table 1. Results of Sampling Regarding Classification. *At least 4 percent of items flagged repairable are actually consumable.*

[15] i.e., items held in CFSS warehouse accounts.

Stratifying the population of repairables based on unit price further suggests that many of these items should be fully expensed or treated as consumable inventory. Table 2 shows that 76 percent of the included items have a unit cost of less than $1,000. They comprise less than 6 percent of the total value. While eliminating these items would not significantly affect the reported value, given the manual processes involved, it would greatly reduce the workload.

Unit Price	% of Items	Total Recorded Value	% of Value
<$100	44%	$26M	<1%
$100 to $1000	32%	$262M	5%
$1000 to $30000	23%	$2,470M	46%
>$30000	1%	$2,593M	49%

Table 2. Stratification of Repairables by Unit Price.
76 percent of included items have a unit price less than $1,000.

While our sampling approach did not include items flagged as consumable, it is equally likely that there are errors in this population. Over 230 stock codes with a recorded unit price greater than $30,000 have been flagged as consumable. The total warehoused value of these items is approximately $130 million.[16] Their high unit value would suggest that many of these items could be repairable, or that they have a useful life greater than one year and therefore should be capitalized.

Obsolete Items. Items that are flagged for disposal, either due to obsolescence or because they are beyond economical repair, are currently excluded from the population of repairable items. Approximately 4 percent of the repairable items in CFSS warehouse accounts have been flagged for disposal, and have therefore been excluded for financial statement purposes. However, when LCMMs were queried regarding the status of the items in the statistical sample, they responded that a further 8 percent of the items were obsolete and would not be issued to customers. This was supported by sample observations at 25 CFSD. A high percentage of the items being held in repairable reserve at 25 CFSD were either obsolete or beyond economical repair. The local supply managers stated that some items had been warehoused for over 30 years. Other items were actually tagged as non-repairable, yet they had not been flagged for disposal in the CFSS.

If an additional 8 percent of repairable items should be flagged for disposal, extrapolation suggests that the current gross value of repairable items is overstated by approximately $425 million. Again, this can only be considered a very rough estimate due to errors in unit pricing.

Repairable Items in SCAs. Currently the majority of repairable items in SCAs are excluded from the financial statements. Initially it was thought that once issued from the warehouse, repairable spare parts such as aircraft engines would be embodied in the whole asset, and therefore their value would be included in the value of the whole asset. It was not expected that these items would be held for future use in SCAs. However, this has subsequently proven not to be the case.

[16] A further $230 million of non-repairable items (repair flag = "N") with unit price greater than $30,000 are held in SCA accounts.

At FYE 2006/07, as shown in Table 3, SCAs held:

- more than 2 million repairable items with a total recorded value of $4.5 billion, and
- $2.3 billion of repairable items with a unit price greater than $30,000.

Unit Price	# of Stock Codes	# of Items	Total Recorded Value ($)	% of Value
<$30,000	698,599	2,061,607	$2.2B	48%
>$30,000	15,233	13,387	$2.3B	52%
Total	713,832	2,074,994	$4.5B	100%

Table 3. SCA Holdings of Repairable Items. *More than $4.5 billion of repairable items were recorded in CFSS SCAs at FYE 2006/07.*

Since FY 2004/05, in recognition that SCAs hold some repairable items, Director Financial Accounting (DFA) staff has calculated an adjustment to the financial statements. The exercise to determine the adjustment is complicated and time-consuming. Each item must be examined individually to determine the appropriate amount to include in the financial statements because, for example, while 12 aircraft engines may be recorded in an SCA, eight may be embodied in aircraft and only four held for future use.

At FYE 2006/07, to account for repairable items in the SCAs, an adjustment of $179 million was made to the financial statements. The approach used to calculate the adjustment lacks rigour. Only some SCAs and some items were reviewed in determining the value, and there is little rationale to determine why the bulk of the repairable holdings have not been included. As a result, a material understatement of the total value of repairables is likely.

Pricing Errors

A review of the repairable re-pricing exercise completed by DFA showed that in 2006:

- There were purchases relating to 2,646 (5 percent) of the existing repairable stock codes;
- For each of these stock codes, a WMA price was calculated manually based on previous holdings and price along with the new purchases; and
- The calculation was based on purchase order price rather than invoice price, resulting in some inaccuracy.

Table 4 shows the action requested of ADM(Mat) staff based on the calculated change in WMA price.

Calculated Change in Price:	% of Stock Codes	Action Requested:
<$1.00	22%	None, CFSS price not changed
<30% (and greater than $1.00)	35%	CFSS price changed to new value
>30% (and greater than $1.00)	43%	Price change only after further investigation by ADM(Mat)

Table 4. Repairable Re-pricing. *ADM(Fin CS) staff (DFA) calculated a new WMA price for 2,649 repairable stock codes, then requested that ADM(Mat) staff take the listed action.*

No rationale was provided for the difference in actions, or the thresholds applied.

As part of the audit, a sample of 95 items was selected where the calculated price change was greater than 30 percent:

- The CFSS price had been changed for only 78 percent of these items; and
- There was no documentation to confirm whether further investigation had occurred for the other items.

Because the turnover rate of repairables is, as expected, very slow, 91 percent of repairable items continue to be carried at the opening balance price. As discussed in the CRS Audit of Inventory Pricing, many of these opening balance prices are questionable at best.

During the course of the audit, many individual pricing errors were noted, including:

- 21-inch televisions and laptop computers with unit prices of zero;
- a voltmeter with a CFSS price of $8.88 but a catalogue price of $814; and
- three circuit card assemblies held in an SCA, with a CFSS unit price of $10 million, but a catalogue price of only $204.99.

Quantity Errors

Validation of the CFSS recorded quantity of holdings was completed during site visits to 25 CFSD and 8 Wing. The CFSS recorded quantities in both active warehouse and repairable reserve accounts were found to be reasonably accurate, as shown in Table 5. However, there was a significant discrepancy between the recorded and actual quantities in 8 Wing SCAs.

SCA holders stated that:

- Some sampled items had been embedded in the aircraft;
- Some items had been returned to the warehouse or transferred to other bases, but the required CFSS entries had not yet been completed; and
- They did not recognize some items based on the CFSS description, and so could not confirm whether they were present or not.

In other cases, the individual responsible for the SCA could not easily be determined. Finally, while the bin location of warehoused items was, for the most part, documented in CFSS, this was not the case for SCA items, making items much more difficult to locate.

Type of Account	# of Stock Codes Sampled	Quantity Recorded = Quantity Observed
Active Warehouse	242	91%
Repairable Reserve	72	85%
8 Wing SCAs	72	65%

Table 5. Sample Quantity Verification. *Warehouse recorded quantities were reasonably accurate, but there was significant discrepancy between recorded and actual SCA holdings.*

Materiel Management Implications

While classification, pricing, and quantity errors have an obvious impact on the accuracy of the value of repairable items in the financial statements, these errors can also have a significant impact on materiel management decisions. For example:

- Carrying a large volume of obsolete or non-repairable items increases warehousing costs, and the costs of stocktaking and administration;
- An absence of information to easily determine whether a repairable spare part recorded in an SCA is embedded in the total asset or available for future use could impact replenishment decisions;
- Unit pricing errors could lead to poor purchasing and repair/replace decisions;
- Inadequate quantity control on SCAs could increase the risk of undetected loss; and
- Inaccurate information increases the risk that materiel is not available when needed.

Recommendations

OPI	RECOMMENDATION
ADM(Mat)/DGMSSC	**Validation of Recorded Value.** Develop a risk-based approach to confirm holdings of repairables. Approach needs to confirm items are accurately classified and priced, and that recorded quantities are accurate.

ANNEX A—MANAGEMENT ACTION PLAN

Ser	CRS Recommendation	OPI	Management Action	Target Completion Date
Policy and Procedures				
1.	Formalize policy and procedures related to repairable items to include guidance on: • Classification, including any dollar threshold; • Amortization rate and period, specifically appropriate treatment of SCA holdings; • Pricing approach including any provisions for betterments; and • Relative responsibilities of ADM(Mat) and ADM(Fin CS). Guidance must be consistent with GAAP and TB policy and support both materiel management and financial reporting objectives.	ADM(Fin CS)/ DG Fin Mgmt and ADM(Mat)/ DGMSSC	**ADM(Fin CS**) – fully endorse the recommendation and will develop a formal policy for repairable items. **ADM(Mat)** – clarification and promulgation of repairable classification, amortization rates and pricing have all been identified as audited financial statement (AFS) risk areas and incorporated into the audited financial statement project (AFSP) remedial action plan. ADM(Fin CS) is the corporate OPI for AFSP, and relative responsibilities will be addressed as AFS requirements are better defined, again, through the AFSP.	31 March 2009
Information Systems				
2.	**Non-integrated Systems.** Integrate existing information systems to reduce the requirements for independent and manual processes. Once the policy for pricing repairable items has been documented, ensure CFSS can complete any necessary calculations.	ADM(Mat)/ DGMSSC	System integration is identified as an AFS risk and will be addressed as part of the AFSP. Over the longer term, the action plan requires an end-to-end process definition so that integration and control points will be properly identified. All new or modified integration requirements will then be communicated to ADM(IM) for resolution. It should be noted that ADM(IM) has already identified an integrated Defence enterprise resource planning (ERP) strategy for the Department. One of the major outcomes will be improved integration of information systems. In the short term, immediate integration issues will continue to be managed on a case-by-case scenario.	2012 *ADM(Mat) note: Upon completion of the AFSP plan, more specific target dates and milestone activities will become available.*

ANNEX A

Ser	CRS Recommendation	OPI	Management Action	Target Completion Date
Information Systems (cont'd)				
3.	**Edit Checks and Monitoring.** Develop additional CFSS edit checks and improved monitoring tools, thereby allowing increased reliance on automated controls.	ADM(Mat)/ DGMSSC	Expanding upon the end-to-end process definition as part of the AFSP plan, process risk areas will be identified and control measures instituted to mitigate process deviations. Automated controls will be incorporated to the extent possible in conjunction with a continuous inventory monitoring cell currently being established within DGMSSC. Again, in the short term, immediate control measures for readily identifiable risk areas will be address on a day-to-day basis.	2012 *ADM(Mat) note: Upon completion of the AFSP plan, more specific target dates and milestone activities will become available.*
Financial Statement Value				
4.	**Validation of Recorded Value.** Develop a risk-based approach to confirm holdings of repairables. Approach needs to confirm items are accurately classified and priced, and that recorded quantities are accurate.	ADM(Mat)/ DGMSSC	This responsibility has been identified as part of the recently established Strategic Asset Inventory Oversight Cell within DGMSSC. Staffing is currently under way.	2011 *ADM(Mat) note: Again, upon completion of the AFSP plan, more specific target dates and milestone activities will become available.*

ANNEX B—AUDIT CRITERIA

Objective	Criteria
Determine the effectiveness of current policies, and procedures related to repairable items.	Policies for determining the financial statement value of repairable items: • have been clearly documented, • are consistent with GAAP and TB policy, and • have been adequately communicated to all stakeholders.
	Procedures are: • well documented, • consistently applied, and • replicable.
Assess the adequacy of the controls and processes embedded in the information systems involved in valuing repairable items.	Systems are well integrated or interfaced so that: • data is entered only once, and • manual processes/adjustments are minimal.
	Edit checks are used to reduce invalid, inaccurate entries.
	Electronic monitoring is well supported and regularly used to detect anomalies and to allow for risk-based validation.
Verify the accuracy and completeness of the repairable item value included in the financial statements.	Repairable items are properly and consistently classified for reporting purposes (repairable items as opposed to capital assets and inventory).
	Obsolete items have not been included.
	All non-embedded repairable items are included regardless of location (warehouse accounts and supply customer accounts).
	Repairable items are accurately priced, using a methodology that is consistent with GAAP.
	Quantities of repairable items are accurately recorded, and verified by stocktaking.
	Financial statements give adequate disclosure to the methodology used to value repairable items.

ANNEX C—FY 2006/07 REPAIRABLE ITEMS

Financial Reporting Account –Capital Assets	Total Asset Value Per Departmental Financial Statements	% of Assets that are Repairables	Repairables Pool	2007 Closing Gross Book Value of Repairables	% of Accumulated Amortization for Repairables Pool
Machinery & Equipment	2,012,089,000	13.3%	Machinery & Equipment	267,618,713	64.31%
Informatics Hardware	3,688,709,000	8.8%	Information Hardware	324,813,258	43.71%
Arms and Weapons for Defence	4,907,326,000	20.2%	Armored Vehicles	554,686,214	36.98%
			Weapons	437,765,117	58.89%
Other Equipment	48,514,000	15.8%	Other Equipment	7,642,392	70.76%
Ships and Boats	12,743,879,000	14.8%	Frigates	865,050,972	38.24%
			Destroyers	485,768,054	60.76%
			AOR	150,108,430	88.25%
			Auxiliaries	37,504,644	65.30%
			MCDVs	20,639,713	33.50%
			Submarines	343,202,846	18.19%
Aircraft	12,296,194,000	13.8%	Fighters	1,350,671,688	74.63%
			Transports	469,424,742	42.46%
			Trainers	150,569,799	78.31%
			Patrol	377,141,910	74.92%
			Helicopters – Land Support	107,678,193	33.28%
			Helicopters – Maritime Support	288,693,948	100.00%
			Helicopters – Air Support	166,494,374	15.98%
Non-Military Motor Vehicles	555,285,000	0.9%	CPV	5,151,550	57.61%
Military Vehicles	1,333,978,000	10.1%	SMP	135,137,881	66.81%
Other Vehicles	160,151,000	1.1%	MHE	1,752,142	61.83%
Totals	**37,746,125,000**	**17.3%**		**6,547,516,579**	**56.69%**

Value of Repairable Items Included in the FY 2006/07 Financial Statements. The closing gross book value of Repairables is included in the reported Total Asset Value of these assets.

The closing gross book value includes approximately $600 million of repairable items held by contractors and recorded outside the CFSS system. As well, it includes approximately $277 million repairable materiel in transit, and $105 million “dues-in” items. These amounts were not included in the audit scope. The closing gross book value has further been adjusted to include $179 million of repairable items held in supply customer accounts.

Accumulated amortization varies by pool from 16 percent for Air Support Helicopters to 100 percent for Maritime Support Helicopters. The average accumulated amortization for repairable items is 57 percent.