

L.I.T. TOOLKIT



A materials management system gives Army depot and its partners a better view of parts used to rebuild M1A1 Abrams tanks.

by Merrill Douglas

Tank Goodness

At the Anniston Army Depot, the primary mission is to make used equipment like new again. Personnel at the depot in Anniston, Ala., perform maintenance and upgrades on most varieties of heavy- and light-tracked combat vehicles and their components.

"We are the heavy-combat all-track vehicles rework center of the free world," says James Coley, indirect support manager for Anniston's Abrams Integrated Management (AIM) program and heavy combat gun tanks. Anniston's technicians also work on land combat missiles and large and small weapons.

Under its AIM program, Anniston reworks M1A1 Abrams tanks that have been in service throughout the world. The process involves stripping the tank down to its frame, rebuilding components wherever possible, replacing them when necessary, and putting the vehicle back together.

JUST LIKE NEW

The purpose of this effort is "to give the troops a new or better-than-

new tank with zero miles," Coley says. The result is indistinguishable from a tank just rolling off the production line, and it costs the Army a good deal less, he says.

Anniston works with two private sector partners on the AIM program. Anniston staff at 17 work centers on the depot rebuild tank components and ship them to an on-site warehouse operated by Logistics and Environmental Support Services Corp. (LESCO) of Huntsville, Ala.

The warehouse later ships the parts to the Lima Army Tank Plant in Lima, Ohio, which is operated by General Dynamics. There, employees reassemble the tanks, add new modules to bring them up to the latest configuration, and test them. General Dynamics then sells the refurbished tanks to the Army.

TRACKING 800 LINE ITEMS

In the past few years, Anniston has reworked parts for 125 to 130 Abrams tanks annually. Keeping track of 800 line items, comprising thousands of individual parts, as they move from

The Anniston Army Depot refurbishes used combat vehicles and their components. A new material tracking system provides consolidation and visibility, which were lacking in the past.



one location to the next is no easy matter. Until recently, the AIM program used the Standard Depot System (SDS) to manage its parts inventory. This is the same system used by other programs at Anniston.

But "this program is somewhat different than any other program we've done at the depot," Coley says. The others don't include private sector partners of this nature. "When you start going outside the Army system, other systems don't necessarily fit all your needs," he says.

SHORT PENCIL STUBS

To manage parts that pass through the hands of depot employees, then on to the other partners, "we were having to manage with short pencil stubs," Coley says. "Each individual planner or parts person was managing in a different way for their respective areas."

This system got the job done, but it didn't offer a central place where

everyone involved in the process could obtain the same information. In a situation like that, "you spend a lot of time running and chasing things," because information on the status of different parts isn't easily available, Coley says. "So we asked a management consulting firm, Robbins-Gioia, to come in and give us a system so that everybody would be playing from the same sheet of music."

The result was the AIM Material Tracking System (AIMMTS). Phase 1 of the system began operating in July 2002. Robbins-Gioia expects to have Phases 2, 3 and 4 up and running by the end of July this year.

Robbins-Gioia has provided services to the Anniston Army Depot for 10 years. The company develops automated tools for managing the master production schedule, helps officials at the facility track revenues and expenses, performs forecasts, and has built a

data warehouse that provides easy access to data from the depot's legacy computer systems.

In the past, managers working on different aspects of the AIM program entered data about the parts they handled into various Excel spreadsheets. "We were approached by the director of information management at the depot to convert those spreadsheets into a robust database in Microsoft SQL Server 2000," says George Sheppard, project leader for the AIM Material Tracking System at Robbins-Gioia.

The Material Tracking System would be the system of record for everyone involved in receiving, storing and issuing parts connected with the AIM program. "Instead of every work center having either its own ledger books or its own spreadsheets where people type in information,

“When we get to the end of the tunnel, we’ll find parts we weren’t aware we had.”

— James Coley, indirect support manager, Anniston’s Abrams Integrated Management program

everybody has one database and one system,” Sheppard says. The goal was to offer a degree of consolidation and visibility the AIM program lacked in the past.

WINDOWS TO WEB

After moving the spreadsheet data into the SQL database, the consultants created a Windows-based interface through which users could enter data and pull reports. Robbins-Gioia will migrate the system to a web server and create a browser-based interface as part of the project’s Phase 2, Sheppard says.

Currently, when one of the work centers has finished refurbishing a set of parts, the supervisor selects each part number and notes how many of that part the center is shipping to the warehouse. Supervisors can also view cumulative reports on parts that have been shipped, to let them know, for example, if the work centers are meeting their targets for the month, Sheppard says.

Next, a maintenance parts technician uses the system to print a list of parts that are ready for shipment to the warehouse. He compares the quantity of actual parts staged for shipping with the list and, if the quantity is correct, notes that fact in the system. If parts are missing, he works with the center’s supervisor to reconcile the problem. When the parts are ready to go, the system produces a shipment manifest.

SECOND VERIFICATION

A second verification takes place when parts arrive at the warehouse. A material handler there compares the

quantity of each part received to the quantity listed on the manifest. If the number is correct, he records that fact in the system. He can also include comments noting any discrepancies.

Phase 2 will extend the system to track parts shipments from the LESCO warehouse to the tank plant in Lima, which occur according to a schedule determined by General Dynamics.

“In Phase 2, on-hand inventory data will be added to the information at the depot, as well as the tracking of rejects or returns, and shortage information,” Sheppard says.

Along with collecting data as parts move from one location to another, the system provides reports to the AIM program’s production controllers, who are responsible for keeping production on schedule and averting shortages.

“The production controller is the primary customer” for the system, Sheppard says. Among other things, the system allows this manager to see cumulative data by part number, detect shortages for any part number, and get information on defective parts that General Dynamics has sent back to Anniston.

ADDING LIMA

Phases 3 and 4 of the project will add data about new parts that General Dynamics buys for use at the depot and the tank plant to supplement the refurbished parts. Phase 4 will allow personnel at the Lima plant as well as the depot to view selected data about activities at the depot, including information on regular material parts shipments. It will also provide more visi-

bility into the supplemental inventories that are stored at Anniston and at the Ohio tank plant, Sheppard says.

In introducing Phase 1 of the AIM Material Tracking System, the biggest challenge officials at Anniston faced was resistance from staff members who didn’t relish change. The solution, Coley says, was education.

“Once we got the people involved, and showed them how using the tool would help them and improve accountability, to my knowledge there haven’t been any rejections,” he says. Instead, people are anxious to see the complete solution go on line.

The biggest benefit the system provides is accountability, Coley says. It allows personnel to easily monitor quantities of parts on hand, without having to retrieve information from many different sources. It also provides visibility into the AIM program as a whole, including the amount of work performed at each work center and the quantities shipped to Lima, he says.

FINDING PARTS

When the system is complete, along with gaining better accountability, Anniston will realize cost efficiencies, Coley says. “I think we’re going to find, when we get to the end of the tunnel, that we have parts we weren’t even aware that we had”—parts that weren’t being used because they had fallen between the cracks in the old inventory management system.

The AIM program “is not a standard program. It’s extremely hard to manage,” Coley says. “I think the Robbins-Gioia tool will help us get there.” ■



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