Saving Money by Linking Avenger Requirements With Nonorganic Support

When changes to the 101st Sustainment Brigade's manning reduced its ability to service Avengers, it looked to a nearby aviation support battalion for help—saving the Army money in the process.

■ By Capt. Jerad Hoffmann

In today's Army, sustainment brigades face a continuous but not daunting task of providing responsive support to echelon-above-brigade units that are routinely nested with them in administrative control and general support relationships.

The 101st Sustainment Brigade supports the unique low density military occupational specialty skills and equipment requirements of air defense artillery (ADA), engineer, and military police battalions in addition to its organic combat sustainment support battalion (CSSB) and special troops battalion.

With increased pressure to reduce costs and end strength, the Army eliminated the 101st Sustainment Brigade's capabilities that were designed to support the 36 Avengers in the 2nd Battalion, 44th ADA (2–44 ADA). Although this action reduced overall Army costs, it had the potential to increase cost at the unit level and dramatically reduce Avenger fleet availability.

This article demonstrates how the 101st Sustainment Brigade mitigated the loss of a critical capability by linking 2–44 ADA's Avenger support requirements with a local, nonorganic support provider, namely the 563rd Aviation Support Battalion (ASB), 159th Combat Aviation Brigade, located at Fort Campbell, Ky.

Organic Avenger Maintenance

The 2–44 ADA's primary weapon system is the Avenger. The electronic subcomponent systems inside the Avenger, called line replaceable units (LRUs), are maintained using the integrated family of test equipment (IFTE). Until 2010, the 101st Sustainment Brigade was authorized one IFTE along with seven military occupational specialty-specific operators in the 584th Sustainment Maintenance Company (SMC), 129th CSSB. Maintaining the IFTE cost the 129th CSSB between $50,000 and $100,000 a year.

Over the past 10 years of combat, modular deployments of the 2–44 ADA and its support provider (the 584th SMC) generated Army Force Generation mismatches between the two units. Often when the 584th SMC was available to support the 2–44 ADA, the ADA was deployed and vice versa. Modular deployments significantly reduced the efficiency and effectiveness of the 584th SMC IFTE. In 2010, the IFTE and associated support personnel were cut from the 584th SMC modified table of organization and equipment (MTOE).

Repair Through Requisition

In place of onsite LRU repair using the IFTE, the Army determined that it was most cost-efficient to maintain Avengers at low density sites by replacing not mission capable (NMC) LRUs through Army supply system requisitions. To mitigate the additional costs of replacing instead of repairing LRUs, the Army applied the existing exchange pricing program. (Exchange pricing is a business process that provides one-for-one credit for selected recoverable items.)

When an LRU is identified as NMC, the unit orders a replacement at a discounted price. Once the unit receives a new LRU, the NMC LRU must be returned through the supply system or the unit forfeits the reduced cost and pays full price. However, even with the discount, some Avenger LRUs cost over $60,000.

The new method had the potential of decreasing Avenger fleet availability because of procurement timelines spanning 10 to 30 days and because it would result in the unneeded replacement of some LRUs. Under the new system, every LRU identified as faulty by the Avenger's diagnostic board, including the LRUs incorrectly identified as NMC, would be replaced at a cost of $9,000 to $60,000.

The Best Course of Action

When the IFTE support personnel were reassigned and not replaced, the 101st Sustainment Brigade support operations (SPO) staff and Fort Campbell Aviation and Missile

Command logistics assistance representative conducted the military decisionmaking process (MDMP) to determine the best method to support the ADA's requirements and mitigate the loss of this critical capability.

During the MDMP, three courses of action (COAs) emerged. The first COA was to execute the Army's plan of replacing all NMC LRU's through the supply system using the exchange pricing program. The second COA involved the lengthy process of adding the IFTE and its associated personnel back to 584th SMC's MTOE. The third and final COA involved the employment of nonorganic IFTE located in the 563rd ASB, 159th Combat Aviation Brigade.

The 101st Sustainment Brigade SPO conducted the analysis by tracking NMC LRU work orders over a 90-day period. During this time, 18 Avenger LRUs were job ordered to the 584th SMC IFTE section. Of the 18 LRUs, 12 were tested and quickly returned to the unit with no evidence of failure. Stated simply, the Avengers' onboard diagnostics incorrectly identified 12 out of 18 LRUs as NMC. The real source of the fault was in the wiring or other systems. By not purchasing these 12 new LRUs, the 2–44 ADA saved $354,000 and approximately 180 days of fleet downtime.

The IFTE personnel repaired three of the 18 LRUs tested with the cost of repair parts totaling $5,200. Had these LRUs been replaced using the supply system it would have cost $28,800.

There was little difference in the procurement times for repair parts and a new LRU, so the total downtime was the same. The last three LRUs exceeded the maintenance expenditure limit and 2–44 ADA requisitioned new LRUs, totaling $130,800.

The NMC time for an Avenger when a LRU was repaired by the 584th SMC IFTE varied from 14 to 30 days depending on the availability of parts. LRU replacement through the supply system resulted in equipment NMC time of 10 to 28 days because of procurement timelines. When no evidence of failure was found by the 584th SMC's IFTE, NMC time was less than five days because of the rapid return of the falsely identified LRU.

Overall, the 584th SMC IFTE saved the unit approximately $377,600. However, during the same quarter, the 584th SMC IFTE also required $125,000 in internal operating costs and repairs, reducing the cost savings to approximately $252,600. Based on this analysis, the significant number of false NMC reports from the diagnostics equipment on the Avenger had the greatest effect on cost and maintenance downtime. The estimated total NMC time to replace all 18 LRUs was 360 days.

A Nonorganic Cost-Saving Solution

Using the IFTE at the 563rd ASB would reduce NMC time to 120 days by eliminating the customer wait time for the 12 LRUs incorrectly identified as NMC. Fault verification was clearly the most cost-efficient and responsive method to support the 2–44 ADA. Unfortunately, an ASB is not organic to the 101st Sustainment Brigade, and there was no guarantee that the 563rd ASB would support this initiative.

The 101st Sustainment Brigade SPO needed to find a way to convince the ASB that accepting the additional workload associated with Avenger LRU repair would not compete with internal aviation maintenance requirements. The 563rd ASB also needed "a win" to offset the minimal risk they would assume by accepting an external support maintenance requirement.

Based on the SPO's analysis, fault verification requires one hour of work, and the ASB would process 15 to 25 such work orders quarterly. The 101st Sustainment Brigade also requested a 72-hour turnaround time on LRUs, providing the ASB time to perform workload management. This window still allowed technicians to accomplish testing much faster than the Army supply system could ship a replacement LRU.

The 563rd ASB claims credit for significant cost avoidance for the Army. Every LRU tested and found fully mission capable saves the Army the replacement cost of an LRU.

A memorandum of agreement was signed to ensure the 563rd ASB's support in testing LRUs for the 2–44 ADA. Verifying faulty LRUs saves the 2–44 ADA and the 101st Sustainment Brigade significant amounts of money and increases Avenger fleet availability.

In the first month of this program, the 563rd ASB saved the 2–44 ADA almost $10,000 by identifying a single LRU incorrectly identified as NMC by the diagnostics system on the Avenger. LRU fault verification at the ASB is expected to save the 2–44 ADA $250,000 to $500,000 per year and the CSSB up to $300,000 in cost avoidance by not having to maintain an IFTE.

Since August 2012, the 101st Sustainment Brigade has exceeded its initial cost savings estimate, and as of November 2013, the total savings using the 563rd ASB's IFTE was approximately $398,620.

As the Army continues to seek ways to reduce costs, logisticians must continue to seek innovative ways to use available resources more efficiently, regardless of command and support relationships, to provide the most responsive support possible.

Capt. Jerad Hoffmann is the company commander of the 594th Transportation Company, 129th Combat Sustainment Support Battalion, 101st Sustainment Brigade, 101st Airborne Division (Air Assault), at Fort Campbell, Ky. He holds a bachelor's degree in sociology from Southern Illinois University Edwardsville, and he is a graduate of the Combined Logistics Captains Career Course and Air Assault School.