

Catch? What Catch?

The HEMTT Recapitalization Program

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“You give me an old [truck] carcass, and in 100 days I’ll return to you a zero miles/zero hours, like-new vehicle.”

—Army Col. Robert Groller, project manager, tactical vehicles, PEO Combat Support/Combat Service Support (CS/CSS), Warren, Mich.

“What’s the Catch?”

—Army Brig. Gen. Richard P. Formica, III Corps Artillery, Fort Sill, Okla.

Fleet recapitalization is a process used by the U.S. Army to overhaul weapon systems and at the same time insert new technology to achieve current configuration. This process supplements new production with remanufactured assets in an effort to modernize the fleet and improve readiness. A critical piece to running a recapitalization program is the requirement for core materiel to produce a recapped item. For trucks, a plan must include identification of core vehicle assets to support a production schedule. What do you do to feed a production line when not enough vehicles are being displaced, excess vehicles appear to be exhausted, and war reserve assets are depleted?

When traditional sources could not generate enough platforms to meet the production goals of the Heavy Expanded Mobility Tactical Truck (HEMTT) recapitalization program, a new source had to be developed. Called “R3,” the HEMTT Recap, Repair and Return program is a method of supplying core assets and may become the model for future remanufacturing efforts.

The HEMTT has been the workhorse of the Army’s heavy tactical wheeled vehicle fleet for the past 20 years. Manufactured by the Oshkosh Truck Corporation, the HEMTT is a series of 10-ton, eight-wheel-drive vehicles designed to provide transport capabilities for re-supply of combat vehicles and weapons systems. Basic variants include a



HEMTT truck before (left) and after (right) recap.

tanker, wrecker, cargo, tractor, and the load handling system. At the present time, over 13,000 vehicles are fielded to U.S. forces.

The HEMTT family of vehicles is an aging, heavily used fleet that has made the Army readiness goal of 90 percent only sporadically since 1991. Prior to its deployment during Operation Desert Storm, the HEMTT had always exceeded its readiness goal, but after extensive usage in an extremely harsh environment, it has been unable to meet readiness standards. The vehicles are being used even harder during Operation Iraqi Freedom (OIF), and they are projected to become a more serious readiness issue.

Breathing New Life into an Aging Fleet

In order to improve readiness by getting modern trucks produced more quickly and cheaply, the vice chief of staff, Army (VCSA) approved the HEMTT Recap program in October 2001, establishing a \$1.1 billion program within heavy tactical vehicles. The priority units to receive new and recap vehicles were Stryker brigades, Patriot battalions, counterattack corps, and other high priority units including the Army National Guard and Reserve. In FY03, the HEMTT Recap program was allocated \$116 million. Based on a model and mix of vehicle type, production of 621 trucks was awarded on contract. A concentrated effort by the HEMTT team identified only 56 percent of the core required to support FY03 recap production, leaving

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\$67 million (351 vehicles) at risk. Innovative thinking was vital to survival of the program. The building of fewer recap models would ultimately result in fielding delays and would primarily affect the high priority units of the counterattack corps consisting of the 1st Cavalry Division (1 CAV), the III Corps Artillery, and the 4th Infantry Division (4ID).



There are two primary sources for obtaining core vehicles: excess and vehicle displacement. Records in the sustainment database indicated a large surplus of HEMTT vehicles; however, a thorough scrub of these records revealed very little excess. Another source of core vehicles is from units receiving new equipment that displaces units' old trucks. Not enough new production HEMTTs were being fielded into units that generated sufficient core in return. Distribution of 41 percent new production was designated to fill unit shortages, and these units did not have vehicles to turn in. The stand-up of the new Stryker brigades generated few to no displaced vehicles. Patriot recap was initiated from new production to start a perpetual turnover process allowing continuous recap of turned-in core vehicles from Patriot battalions. Equipment projected for the Army National Guard and Army Reserve was to fill shortages and, therefore, was not a primary source for displaced vehicles. The counterattack corps would, however, provide displaced vehicles on a one-for-one exchange.

In May 2002, the HEMTT team foresaw a desperate situation ahead for identifying core intake. Requesting units to turn in excess vehicles or even downsizing units were options proposed to Force Development (G-8) and U. S. Army Forces Command (FORSCOM). In November 2002, Oshkosh Truck Corporation met with the HEMTT Recap System acquisition manager to discuss the criticality of needed core to continue the recap teardown process. The program was in jeopardy of shutting down.

Thinking all possibilities had been exhausted, the HEMTT management team met with Army Col. Robert L. Groller, then assigned as project manager (PM), heavy tactical vehicles (HTV) to express the grave situation for the HEMTT recap program. Groller proposed a series of questions to be investigated that would define the way ahead for the program. How quickly could Oshkosh Truck Corporation turn a vehicle around upon receipt from teardown to recap? How would we meet the model mix requirements called out in the contract? How fast could trucks be shipped on each end?

Groller tasked Oshkosh with determining what the minimum turnaround time would be if an Army unit provided a truck for recap, and what the long lead time items were that determined the turn around time. Armed with this information, Groller contacted Army Col. Kenton L. Ashworth, assistant, chief of staff, G4, Fort Hood, Texas, to tell him he had a deal. Ashworth was very interested in the initiative and invited Groller to brief the program to III Corps in December 2002. III Corps could provide a one-for-one exchange if criteria were met.

"You give me an old [truck] carcass," Groller proposed, "and in 100 days I'll return to you a zero miles/zero hours, like-new vehicle."

Army Brig. Gen. Richard P. Formica, III Corps Artillery, attending the briefing asked, "What's the catch?"

Start to Finish in 100 Days

The HEMTT R3 program was intended to augment the ongoing HEMTT recap to prevent fielding delays and default of government-furnished equipment (GFE) on the HTV family contract. The PM could execute precious procurement dollars, and the counterattack corps would get the latest configuration trucks. The program needed to be worked at Corps level; it would be too difficult on unit readiness to give up the required quantities of trucks by division. Counterattack corps participants would be units at Fort Hood, Fort Sill, Okla. Units at Fort Riley, Kan., and Fort Bliss, Texas, and would indirectly benefit through internal transfer of vehicles. III Corps signed on, getting to pick their worst dogs from across the corps to send in as long as they met the basic requirements for a recap candidate: a core vehicle carcass must have the complete power train (engine, transmission, and transfer case), axles, frame rails, and crane, but it does not need to be operational. Models of trucks inducted into the R3 program consisted of tanker (M978A2R1), wrecker (M984A2R1), and cargoes (M977A2R1, M985A2R1).

Through the execution of the 100-day turnaround (90 days for total teardown, refurbish, and build, and five days on each end for vehicle shipment), Oshkosh proved their

flexible government and commercial production line and their desire to accommodate their customer. The PM-HTV office provided a schedule of HEMTT model mix to III Corps based on contracted models to be produced. The model mix was based on filling counterattack corps units in a priority sequence. Based on a seven-month lead time, we allowed a one-time contract modification to target III Corps' specific unit requirements. Operating the program at corps level meant dispersing the recapped vehicles throughout divisions and corps support units.

The Recap Process in Action

In a recap process, the trucks are torn down to the frame rail assembly and all the components are inspected and overhauled to required original equipment manufacturer (OEM) standards. The truck is then re-assembled on the same assembly line as a new vehicle. All vehicles are upgraded to the current HEMTT configuration. The old engines are sent to a Detroit Diesel remanufacture facility in Kansas and completely overhauled and upgraded to an electronically controlled engine. The obsolete transmission is replaced with a state-of-the-art five-speed Allison World Transmission. Axles are completely torn down, washed, inspected, and re-assembled in the Oshkosh in-house axle remanufacture operation. All load cranes are remanufactured at Oshkosh. Vehicle wire harnesses, gauges, and electrical components are replaced with new. The cargo bodies are sent to the OEM for complete overhaul. All vehicles leave with a new cab assembly, new paint job, bolt-together wheels, and a new set of Michelin tires. The trucks are zero miles, zero hours with a new truck warranty. Though they are remanufactured, they are considered new—and the cost is 75 percent or less than the cost of procuring a new truck.

The PM-HTV office hosted a weekly teleconference for members of the program management office; logisticians; III Corps representatives at Forts Hood, Sill, and Riley. Also on the line were representatives of Oshkosh and Defense Contracting Management Agency (DCMA) representatives. It took intensive weekly management to track vehicle serial number turn-ins and returns, the new equipment training requirements, shipping instructions, and second destination transportation (SDT) funds (which were paid by PM-HTV.)

Coordination with III Corps and Oshkosh resulted in the turnaround of five to eight vehicles per week. Vehicles were turned in "as-is complete" with basic issue items (BII). BII is sent to Camp Shelby, Miss., for refurbish at approximately one-half the cost of new. Units were to remove and retain all C4ISR equipment, plates, and brackets for reinstallation in the returned vehicles. PM-HTV depended on the Fort Hood-based TACOM materiel fielding team, composed of government personnel and contract support personnel from SAIC and Dimension International to inspect, prep, and ship outgoing vehicles and

deprocess and hand off returned trucks at the unit's location. The project was ready for kickoff in January 2003.

If we'd been deliberately looking for bad timing to attempt to execute a program like this, we couldn't have done a better job. In the emergence of OIF, 4ID deployed, taking one-third of the recap candidates with them. So we needed a plan to backfill deploying units to meet this contingency. If a unit was notified of deployment, how would we get them their recapped trucks back prior to deployment? Groller identified a bank of vehicles to return to a participating unit if deployment orders were received. These vehicles were temporarily diverted from scheduled fieldings. Within days of a unit's receiving deployment notification orders, an identical model vehicle would be returned, or if not yet inducted into the recap process, the original vehicle would be returned to the unit. Within a week of beginning the R3 program, III Corps Field Artillery, Fort Sill, received deployment orders. Rapid response returned a like-new vehicle to the unit within three working days.

The Emergence of a Model Program

R3 provided modernized vehicles to III Corps and prevented fielding delays. Units report a slight increase in readiness as a result of R3. Accurate tracking has been complicated by returning units from OIF, making a true assessment of the effect of this program difficult. But one thing is for certain: R3 provides zero miles/zero hours, like-new trucks to replace aging, high maintenance old configuration trucks. Innovative thinking, coordination, and cooperation made this program work. It's good for the Army and supports the warfighter in the field.

Budget cuts mean a couple lean years ahead for the HEMTT recap program: few production dollars will be available to continue modernization of the counterattack corps until FY06. R3 stopped the loss of the precious dollars allocated today for tactical wheeled vehicles and allowed continued modernization of the Army's heavy tactical truck fleet.

HEMTT R3 has become a model for executing the emerging reconstitution or "RESET" programs for the repair of battle-damaged equipment returning from OIF. With focus on the short timelines imposed on a unit to reconstitute equipment to a C1 level status, this is a proven, effective method to accomplish such a feat. Through a cooperative effort between government and contractor, it merges the ongoing effort to continue modernization of the Army's heavy tactical wheeled vehicle fleet, while successfully achieving readiness status.

The catch? There isn't one, and the success of R3 may become the standard for executing future recap dollars.

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