

Finding Alternatives to MHE on the Battlefield

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Transporting materials-handling equipment on the battlefield uses resources that could be better devoted to moving combat equipment and vehicles. The author offers an alternative for unloading needed supplies on the battlefield.

Logisticians must prepare to sustain the next fight without repeating mistakes from previous combat operations. Since the beginning of Operation Iraqi Freedom, the Army has restructured the force while keeping the same inefficient logistics techniques that rely heavily on legacy force materials-handling equipment (MHE) and distribution procedures. The success of future combat operations will depend on more efficient logistics capabilities that include reducing reliance on MHE forward on the battlefield, eliminating large commercial container detention fees, and ensuring the uninterrupted flow of supplies to their final destinations.

MHE Forward on the Battlefield

On 19 March 2003, coalition forces began offensive operations in Iraq. On 15 April, 27 days and over 600 kilometers later, those forces were in control of Baghdad. Sustaining a rapidly moving combat force during Operation Iraqi Freedom pushed the demand on logistics capabilities to their limits.

As units of the 3d Infantry Division moved north into Iraq during the initial advance toward Baghdad, heavy equipment transporters and lowboys that were carrying forklifts had to offload those forklifts in order to recover and remove broken combat vehicles. As a result, Atlas forklifts had to road march across the Iraqi desert.

Forklift operational readiness rates dropped below 50 percent because of excessive use, harsh climate conditions, and a lack of available repair parts that led to controlled substitution and sometimes cannibalization of equipment in order to meet daily mission requirements. This caused theater resupply convoys to experience excessive wait times at logistics support areas because of the limited number of forklifts available to offload trailers and containers.

The 3d Infantry Division had no organic or task-organized rough-terrain container handlers (RTCHs) to support logistics operations until the division reached Baghdad. The lack of container-handling equipment created turmoil for division logistics units by making

it very difficult to offload, break down, and distribute supplies that arrived in containers. Some 20-foot containers arrived with the door sides of the containers up against each other on 40-foot trailers to avoid pilferage. This made it impossible to access the cargo without offloading the containers.

With no container-handling capability forward with divisional units, containers had to be offloaded using the cranes of two M88 recovery vehicles. The 40-foot containers exceeded the variable reach capability of the Atlas forklift, so once the containers were offloaded, cargo straps were required so that the forklifts could pull pallets out of those containers. Sometimes, if the doors were accessible and no RTCHs or M88s were available, containers were emptied while loaded on the trailer.

A simple way to avoid excessive time on station caused by waiting for trucks to be offloaded would have been to conduct a trailer transfer at the division logistics support area. However, the 3d Infantry Division did not have 40-foot trailers to exchange with the corps line-haul units. Many commanders were opposed to using trailer transfer or flatrack exchange procedures because the trailers and flatracks were serial-numbered property book items and they wanted to avoid property book issues.

When RTCHs were task-organized to support the division, the division still had to rely on the RTCHs' parent cargo transfer company for maintenance because the division did not have mechanics familiar with the Kalmar RT-240 RTCH. An engineer boat company with M1120 heavy expanded-mobility tactical truck load-handling systems was later task-organized to the division to support distribution operations. However, these trucks did not possess container-handling unit systems or M1077 flatracks. Therefore, flatracks had to be borrowed from other units in order to move containers forward to the division logistics release point for distribution to the brigade support areas. Most of the available flatracks were the container roll-in-roll-out platform style that cannot haul containers.

Commercial Container Recovery

A major issue that was brought to light in Operation Iraqi Freedom was the difficulty of recovering commercial containers. By 2005, the number of unaccounted-for commercial containers exceeded 60,000, costing the Department of Defense detention fees in excess of \$513 million monthly.

Many containers ended up being used for force protection when units turned them into bunkers, ammunition storage facilities, unit arms rooms, and forward operating base perimeter walls. This was the result of the inability to upload empty containers at support areas for retrograde because of limited container-handling capabilities and because corps convoys did not wait for retrograde containers to be uploaded.

Distribution Throughput

Distribution throughput techniques are the way forward for shipping containerized cargo. Current sustainment strategies work well for doctrinally based logistics operations in a mature theater, where stability operations and support operations are being accomplished by routinely replenishing break-bulk cargo that is palletized on the backs of trucks.

However, since cargo must be handled multiple times before it reaches its final destination, this distribution method does not work well in forward combat areas that need immediate replenishment to sustain offensive operations. During these periods, containerized throughput methods of resupply are involved in maintaining the momentum of the offensive.

MHE is a force multiplier; however, it requires substantial maintenance and transportation support. RTCHs also are not likely to be located forward on the battlefield during offensive operations, and forklifts are unreliable.

Reducing Dependence on MHE

The challenge is to prevent these problems from being repeated during future full-spectrum combat operations. Logisticians can sustain a fast-paced offensive operation more efficiently by reducing the number of times cargo must be handled before it reaches the point of consumption. They must decrease the amount of time needed to conduct resupply operations and eliminate their dependence on MHE. Finally, logisticians need to avoid future container retrograde issues that lead to large detention fees.

Logisticians must develop new techniques, procedures, and equipment that enable improved distribution-based logistics capabilities. They can accomplish this by meshing container-handling and transportation capabilities into a seamless system that provides the ability to sustain offensive operations while maintaining the maneuver commander's momentum.

The recommended course of action to solve these

problems is based on using the M1075 palletized load system platform with a container that has rollers on its floor, like those in a transport aircraft that can deliver supplies all the way to the forward lines without the need for MHE. Using the hydraulic arm hook or container-handling unit on the back of the truck to tilt the container at an angle off the rear of the truck would allow for the palletized cargo within the container to roll out onto the ground. Cargo could be delivered directly to maneuver battalion forward support companies, where it could be broken down for distribution to combat units.

A second course of action adds a hydraulic system to a 40-foot trailer, similar to the hydraulic system on an M1000 heavy equipment transporter system. The hydraulic system lifts up the trailer in the front and lowers it in the back. By adding ramps, palletized supplies then can roll off onto the ground.

These techniques could revolutionize the Army's distribution capabilities. This new distribution method provides the ability to strategically deliver supplies forward on the battlefield to combat units. It eliminates the need for MHE to download or transfer cargo, along with the extensive maintenance issues related to the limited availability of repair parts during initial combat phases. It would significantly reduce the vulnerability of soft targets (logistics vehicles) in forward combat areas and greatly cut the time needed to download supplies.

Supplies that combat units cannot carry or consume can be left behind for follow-on formations to consume. This technique would eliminate the need for flat-track exchange or trailer transfer operations and related property book issues.

The M1075 palletized load system truck is a common operating platform across the Army with reliable repair part stocks available and a proven maintenance record. The M1075 platform is currently up-armored and has a successful track record of providing protection to the Soldiers who operate it. The M1075 is a tactical vehicle capable of traveling over rougher terrain than M915 tractors with M872 trailers while carrying the same load (two 20-foot containers).

This technique will also eliminate the need for container retrograde operations because the container remains a part of the system and will never be left behind.

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