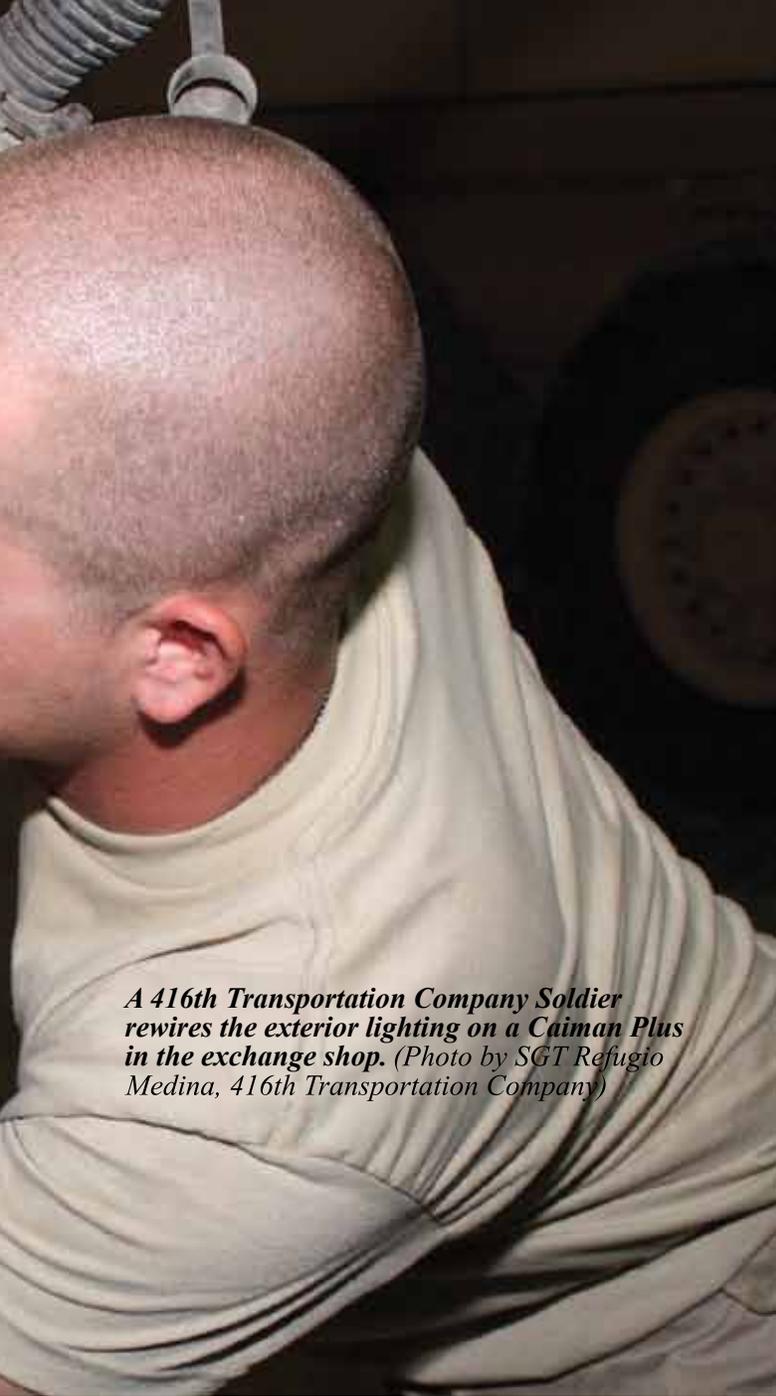




The Complete Exchange of an MRAP Fleet During Stability Operations

BY CAPTAIN GEORGE AUTRY

The 416th Transportation Company exchanged a fleet of Caiman mine-resistant ambush-protected (MRAP) vehicles for better protected Caiman Plus MRAPs while continuing operations in the Iraq Joint Operations Area.



A 416th Transportation Company Soldier rewires the exterior lighting on a Caiman Plus in the exchange shop. (Photo by SGT Refugio Medina, 416th Transportation Company)

When the 416th Transportation Company out of Hunter Army Airfield in Georgia was sent to Kuwait for a 12-month deployment in October 2010, it left behind its fleet of M915 trucks and 7,500-gallon fuel tankers and fell in on a fleet of M1220 Caiman mine-resistant ambush-protected (MRAP) vehicles. The company's new mission was to provide security for the convoys of its parent battalion, Joint Logistics Task Force (JLTF) 6. These convoys traveled from Kuwait into Iraq to points as far north as Camp Speicher, traversing some of the most hostile and dangerous routes in the Iraq Joint Operations Area.

Although the company was grateful for its Caiman MRAPs (a considerable improvement over the up-armored M1151 high-mobility multipurpose wheeled

vehicles used in earlier deployments), the 416th wanted to upgrade to the M1230 Caiman Plus MRAPs. With additional side armor designed to reduce the impact of explosively formed penetrators, the Caiman Plus MRAP has increased survivability.

The opportunity to phase in these improved vehicles finally arrived in late May 2011 as the company's parent brigade, the 230th Sustainment Brigade, began to exchange its entire inventory of Caimans for the superior Caiman Plus models. The 416th was responsible for exchanging 42 Caimans for the upgraded vehicles.

The Logistics Challenge

Any opportunity to increase the safety of Soldiers is a positive development and should be considered as such. However, significant challenges arose in the process of switching out the existing fleet. The main obstacle to the new vehicles' immediate incorporation into the fleet was the state of their readiness when the 416th Transportation Company received them. Each new Caiman Plus MRAP was completely bare of the additional equipment required for operation, including improvised explosive device (IED) countermeasures, Blue Force Trackers, radios, antennas, global positioning systems, digital vision enhancements for night driving, exterior light sets, and basic-issue items.

According to the exchange plan, as each new Caiman Plus arrived at the unit, an existing Caiman's equipment would be removed as needed and transferred to the new Caiman Plus platform. This single obstacle resulted in two secondary challenges: how to manage the logistics of the equipment transfers and how to minimize the impact on the company's mission throughout the process.

The Exchange Process

Two alternatives were weighed for transferring the equipment from the Caimans to the Caiman Pluses. One option was to consolidate operations for the brigade in a central location by tasking Soldiers from the subordinate battalions to run an exchange shop, where they would pull equipment from Caimans and install it in the Caiman Pluses. The second option was to allow the mechanics of each convoy escort team (CET) company to transfer the equipment themselves in their own maintenance bays and complete the task according to their own schedules as operations allowed.

The final decision was to centralize operations. Although transferring equipment between vehicles seems straightforward, it proved to be a highly technical procedure, involving multiple components and wiring systems. A dedicated central team augmented the operators of each MRAP and provided consistency, a strong knowledge base, and maximum efficiency. A large bay in a sister battalion's motor pool was set aside as an exchange shop. Operations at this dedicated site were run exclusively at night in order to avoid the intense heat of the Kuwaiti summer.



A 416th Transportation Company Soldier rewires a Caiman Plus mine-resistant ambush-protected vehicle in the exchange shop. (Photo by SGT Refugio Medina, 416th Transportation Company)

warfare officer made shop appointments several days in advance, and it was the 416th Transportation Company's responsibility to get the MRAPs to the shop for the appointments. Only after visits to both shops were the new Caiman Plus chassis deemed road ready.

Once the exchange method had been determined, each organization involved in the process had a different role to play. Since the exchange shop was used by the entire brigade, the JLTF 6 battalion maintenance officer (BMO) controlled the flow of vehicles through the shop.

A day or two before the exchange, the BMO would notify the 416th Transportation Company of the number of Caiman/Caiman Plus exchange pairs the company could bring into the shop and the time they were scheduled to arrive. Once the company received the order, its Soldiers prepared each Caiman, cleaning and emptying it of all nonessential equipment.

Next, the platoon owning the prepared, fully loaded Caiman would move it and a bare Caiman Plus to the exchange shop on the day the BMO had specified. The Caiman/Caiman Plus exchange pairs would be secured at the exchange shop motor pool and left for that evening's work.

As night fell and the exchange crews came to work, the Caiman pairs would be brought into the bay to begin the transfer. The bay could hold up to three pairs simultaneously, but two at a time was more common. The vehicles were parked one in front of the other, and the teams would start by disconnecting wiring and unbolting, relocating, and reinstalling the equipment. A communications Soldier supplemented the many mechanics by testing radio systems and Blue Force Trackers. The crews gave careful attention to the sensitive items on the MRAPs, ensuring that all necessary items transferred and stayed secure throughout the course of the exchange.

On average, three to four pairs of vehicles were exchanged each night. The crew at the brigade exchange shop was capable of moving all of the equipment with the exception of some IED countermeasures. Transferring those systems required the pair of vehicles to be brought separately to a specialized shop, where civilian contractors made the transfer. The battalion electronic

The Time Factor

Competition with other brigade entities for slots within the necessary shops, combined with operational considerations, led to delays between each step in the process, from the company receiving each Caiman Plus to the transfer of equipment and systems. As soon as the pair entered the exchange shop, both vehicles were considered not mission capable and could not be used in operations.

Fortunately, the Caiman Plus vehicles were not delivered all at once. Instead, they arrived at a steady pace over a 3-month period. The 416th Transportation Company received its first Caiman Plus vehicles in late May 2011 and its last group at the end of August 2011. Each week, the brigade received a number of Caiman Plus MRAPs and divided them among battalions with CETs. The battalions then distributed the newly arrived vehicles to their CET companies. Because of competing requirements, the 416th did not receive Caiman Plus MRAPs every week, but when it did, it received, on average, five vehicles.

The biggest limiting factor in exchanging Caimans for the Caiman Pluses was the time it took to get each pair into the exchange shop. Caimans were often unavailable for exchange because they were being used on missions, and timeslots in the exchange shop were limited. Three to 10 days usually passed between the time a company picked up a Caiman Plus and the time the new MRAP and its counterpart Caiman entered the exchange shop. Once the MRAPs were officially received into the shop, however, the process moved very quickly and took about 2 to 5 days.

Normally, the 416th supported seven CETs, but in order to accommodate the exchange process, the seventh team was stood down. This decreased the combat power available to JLTF 6, but it was unavoidable. The standing

down of the seventh CET freed up the Caimans needed for exchange and freed up the personnel needed to move Caimans between appointments and to work on the exchanges themselves.

Each Tuesday, the JLTF 6 property book officer notified the 416th Transportation Company of the number of Caiman Plus vehicles the company would receive that week. Around midweek, a team from the 416th, made up of mechanics, drivers, and supply and communications Soldiers, would inspect the new vehicles for serviceability.

By the end of the week, a team of drivers and supply personnel would turn in stripped Caimans brought through the exchange process the previous week. The following day, the same team responsible for inspecting the new MRAPs earlier in the week signed for and acquired the vehicles. Concurrently throughout the week, the same team would get the vehicle pairs to their appointments at the necessary shops.

Lessons Learned

The process of exchanging a fleet of one type of MRAP for another was a rewarding challenge. But any units undertaking a similar challenge in the future may wish to consider some of the lessons the 416th Transportation Company took away from the experience.

Keep lines of communication open. It was vital that the company maintain communication at all levels throughout the process. The battalion PBO and company needed to communicate about pickup dates. The BMO and the company needed to communicate about exchange shop appointments, and the electronic warfare officer and the company had to do the same with the IED countermeasures specialty shop.

The operations cell needed to coordinate with the platoons to ensure that their old vehicles were prepared and moved to the right place at the right time. The company communicated with the battalion leaders, keeping them up to date on where each vehicle was in the exchange process.

Prioritize teamwork. In a process with as many tasks as this, teamwork was essential. It was very important that all the players in this complicated ballet of exchanges knew their roles and fulfilled them. The process would not have been possible without the BMO's coordinating appointments or the PBO's notifying the company about pickup dates and quantities. The dedicated mechanics, operators, and communications Soldiers working at the exchange shop were likewise crucial to the success of the exchange.

Without the company operations section ensuring that enough Caimans were kept off the road and ready for exchange, the transfer would not have happened efficiently. The company's supply shop played a vital part in picking up new Caiman Plus vehicles and turning in old Caimans. And finally, without the support of the battalion and brigade commands, which allowed the 416th Trans-

portation Company to stand down a CET, the exchange would not have been feasible.

Develop a system and track it. Although many times the 416th Transportation Company's systematic process was not exactly followed because of active missions and other variables, having a system in place was extremely helpful. The system should be tracked very closely. The 416th's operations section maintained a spreadsheet to track every Caiman Plus in the company, its current location, and its phase in the exchange process. This established system allowed the company to plan carefully and accurately to meet its obligations, enabling it to be proactive and prepared for the next step instead of becoming reactive and scrambling to meet the next deadline.

Centralize operations. While centralization was frustrating at times for those waiting for slots to become available, the efficiencies gained by centralizing the exchange shop yielded significant dividends in the end. Centralizing the exchange process was the right choice for the brigade for several reasons. Having a dedicated team and establishing a rhythm helped expedite the process. Moreover, if each company had been responsible for transferring the equipment of its own vehicles, each transportation company's maintenance team would have lost considerable time, and the exchange process would have detracted from other duties.

Maintain flexibility. Although the system in place was well organized, the exchange was conducted during continuous stability operations. Sometimes Caimans would return from a 10-day mission in the morning and be dropped off for exchange that night. Some exchange shop appointments were not filled because no Caimans were available for the exchange since they were out protecting convoys.

However, flexibility goes both ways. When slots were available, the 416th made every effort to take advantage of them, even on short notice; sometimes this required reacting quickly with limited personnel in order to move Caimans and Caiman Pluses whenever the opportunity presented itself.

Through communication, teamwork, planning, and flexibility, what could have been a very trying task for a company—exchanging a fleet of 42 vehicles while continuing to conduct stability operations—became manageable. In the end, the 416th Transportation Company gained a new fleet of significantly more survivable MRAPs to protect the Soldiers who were protecting their convoys.

CAPTAIN GEORGE "CHIP" AUTRY IS THE COMMANDER OF THE 416TH TRANSPORTATION COMPANY, 230TH SUSTAINMENT BRIGADE. HE HAS A BACHELOR'S DEGREE IN GOVERNMENT FROM THE COLLEGE OF WILLIAM AND MARY AND IS A GRADUATE OF THE INFANTRY OFFICER BASIC COURSE, AIRBORNE SCHOOL, AND COMBINED LOGISTICS CAPTAINS CAREER COURSE.