



Forward support troop Soldiers from the 4th Squadron, 2nd Cavalry Regiment, repair a vehicle during a rest stop in Kuchyna Air Base, Slovakia. The Soldiers of the maintenance platoon kept 153 vehicles operational during a four-day road march across Europe in September 2015. (Photo by Capt. Ryan R. Stone)

Sustaining Strykers Over Four Days Through Four Countries

A forward support troop that maintained vehicles convoying 798 kilometers through Europe provides lessons learned on vehicle maintenance, recovery, and fuel consumption.

■ By Capt. Ryan R. Stone

When the forward support troop (FST) for the 4th Squadron, 2nd Cavalry Regiment deployed on September 13, 2015, to support the unit's 798-kilometer road march through NATO allies Germany, Czechoslovakia, Slovakia, and Hungary, some 480 personnel and 153 vehicles, including multiple Stryker variants and sustainment ve-

hicles, made the four-day movement.

The FST demonstrated logistics interoperability during the road march by using host-nation resources including recovery vehicles, facilities for class I (subsistence), and class IIIB (bulk petroleum, oils, and lubricants).

The mission included strategic-level military-to-military and civilian-to-military engagements and refuel on

the move sites hosted by allied forces. The culminating event was a multinational bridge crossing, known as Dragoon Crossing, in route to the Central Exercise and Shooting Range near Veszprem, Hungary.

Organizing for Success

The six-serial convoy included a maintenance team in every serial.

Having dedicated assets in each convoy allowed the maintainers freedom of movement and ensured that faults were diagnosed quickly and accurately.

Serials one, three, and five each had a contact truck so that maintainers could quickly diagnose faults and call for a wrecker if self-recovery or like-vehicle recovery was not an option. Serials two, four, and six each had a M984A4 heavy expanded-mobility tactical truck wrecker and an M915 tractor-trailer truck pulling a low-boy trailer.

The serials were staggered in 30 minute increments, allowing maintainers time to diagnosis or fix faults. During the 36 hours on the road, the maintainers dealt with 15 faults that deadlined vehicles. The maintainers also conducted maintenance on 20 faults in order to keep the convoy moving. Of all the vehicles that made the international four-day movement, only one had to be towed to the Hungarian training site.

The FST maintainers worked on 10 roadside breakdowns during the road march. Because all of the convoys had host-nation police escorts, maintainers were able to safely repair faults ranging from loose coolant hoses to failed brake chambers. In one case, maintainers called for emergency aerial resupply during an overnight stay at Kuchyna Air Base, Slovakia. Within 12 hours, the FST Soldiers diagnosed the fault of a Mobile Gun System Stryker variant, found the national stock number, called the supply support activity to order the part, received the part delivered via a UH-60M Black Hawk helicopter, and installed the part.

Vehicle Recovery Challenges

Using like-vehicle recovery proved challenging. Serials were under a constricted time line and vehicle operators were not familiar with like-vehicle recovery operations. A lack of complete tow-bar kits also compounded recovery challenges. Tow bars for 5- and 2.5-ton trucks were not properly resourced before the movement, so a wrecker had to move these disabled vehicles.

Having a wrecker and an M915

with an M870A1 trailer staggered in even-numbered serials as line-haul assets was the key to a successful movement. The wrecker's main winch was used on two occasions to pull a Stryker onto an M870A1 trailer.

Reliance on civilian tractor-trailers for Stryker recovery highlights the need for a dedicated recovery asset for

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the Stryker systems. The reconnaissance squadron had eight Mobile Gun System Strykers in the road march. These systems can only be towed by a flatbed wrecker because of the length of the gun tube. Additionally, the two mortar carrier vehicles with the double V-hull upgrade each weighed 49,169 pounds—nearly twice the capacity of the M984A4's recovery lift system.

The 2nd Cavalry Regiment's modified table of equipment only authorizes the M1088 tractor and the M172A1 25-ton trailer. The Stryker wheelbase is 191 inches and the deck length of M172A1 trailer is 192 inches, making the M172A1 trailer too short to haul a Stryker vehicle. A Stryker can be safely moved on an M870A1 trailer, which has a 216-inch-long platform.

Estimating for Success

Nearly all of the squadron's support vehicles were near their respective carrying capacities during this movement. The squadron planned fuel consumption based upon the standard 300-mile range for all military vehicles. But because many of the squadron's vehicles were equipped with air conditioning, additional armor, or additional equipment, the projected fuel range was inaccurate. Vehicles had to use fuel cans to make it to the next refuel point, especially with various stops to complete maintenance and to wait for police escorts at border crossings.

The added weight of personnel and equipment stressed older vehicles and caused multiple braking, cooling, and suspension breakdowns along the route. Wheeled sustainment and cargo-carrying vehicles had the most breakdowns. These repairs were resolved with hand tools, but they caused significant delays

within the movement window.

To mitigate fuel consumption and maintenance issues, units should conduct a movement of at least 25 miles with the designated load for each vehicle before attempting a road march over 60 miles. The shorter movement will allow the vehicles to get up to operating temperature and test the efficiency of the cooling, suspension, and braking systems.

In order to project accurate estimates, operators must record fuel consumption. Quarterly movements of all vehicles must be completed in order to alleviate the need for adjustments before a major move.

Overall the mission showed logistics interoperability with NATO allies. The lessons learned from this road march will enable the FST to provide support and services to ensure freedom of action across the European theater while showing interoperability within the NATO alliance.

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