Task Force Ripper

Rapid Pothole/Pavement Repair

By First Lieutenant Christopher T. Dening

After years of anti-Iraqi forces activity, the main supply routes (MSRs) and alternate supply routes (ASRs) of Iraq have become riddled with craters. Insurgents have staged and detonated improvised explosive devices (IEDs), which have created various-sized craters in the pavement. These craters are a problem for convoys traveling across theater because they reduce mobility and provide the insurgency with additional places to conceal IEDs.

For this reason, theater engineers initiated the rapid pothole/pavement repair (RPR [pronounced *ripper*]) mission. Soldiers from Bravo Company and Headquarters Support Company, 84th Engineer Battalion (Combat) (Heavy), were tasked with the RPR mission and have worked hard to ensure that MSRs and ASRs in the battalion's area of operations are crater-free. Known as Task Force Ripper, the RPR teams travel the roadways of Iraq, patching damaged routes.

The 84th cannot claim all the credit for the completed work, because various maneuver units provided security to support these engineers. The RPR teams fill and repair the holes while the security units direct traffic and provide protection. The coordination of a RPR team and a security unit requires intense and thorough planning by the leadership of both units. Despite working in a potentially hostile environment with the threat of insurgent activity, the two elements finished the job quickly and safely.

Repairing a Crater

Before an IED crater is deemed repaired, several deficiencies must be corrected. The damaged and cracked asphalt is cut and jackhammered out from the craters edge, creating a new surface to bond with the concrete. If the concrete is just placed on top of old asphalt, the asphalt

Soldiers prepare an IED crater for the placement of concrete.

will expand as the temperature rises and eject the concrete from the patch, rendering the repair useless.

During the wet season, the craters are often full of water, which interferes with the curing of the concrete. Prior to any placement of concrete, all water is pumped out of the crater. After the water is removed, the crater is cleared of debris and backfilled. The backfill is then tamped to compact the soil. The compaction of soil increases its bearing capacity, ensuring that the concrete patch does not sink and form a pothole under the weight of the traffic. Lastly, concrete is placed in the hole and troweled to match the road's surface. This increases the trafficability of the road and reduces wear and damage to vehicles.

Equipment and Methods

The Soldiers of the 84th have a number of tools in their arsenal, or that are easily accessible, to facilitate the RPR process: a 250-cubic-feet-per-minute (CFM) compressed air trailer, a pneumatic concrete saw, a pneumatic jackhammer, a sump pump, a dump truck, a civilian concrete truck, a magnesium trowel, hand trowels, and shovels.

The methods used by the RPR teams have adapted and improved greatly since they first began executing missions. To save on time and resources, the teams now bring their own backfill. Several safety precautions have been implemented to increase Soldiers' safety during operations, to include various methods to mitigate the threat of IED attacks. The teams continue to improve tactics, techniques, and procedures to gain proficiency at filling the many craters that litter the country.

Summary

Task Force Ripper has made it much harder for insurgents to place buried or subgrade IEDs. The RPR teams' goals are to force insurgents to surface-lay IEDs, making them easier for coalition forces to spot and disarm, and to ensure that the crater repair will last.

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