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Road Trip with a MINECAT

by Stephanie Schlosser

In The Journal of Mine Action 3.2, we spotlighted the Compact 230-Minecat, a multi-role platform suitable for both military and humanitarian applications whose primary role is to be a mine-clearance vehicle. Since that article in the summer of 1999, the Minecat has had a proper education, going through a series of tests in various landscapes and in front of tough judges. Landmine clearing is serious business and before a new piece of equipment can be put on the world market, it has to prove itself in rigorous settings. After all, the real customers in the demining market are those people whose lives and livelihoods depend upon the clearing of their land. J. Barry Middlemass, owner of the Lockheed Beck consulting company, brings us through a series of Minecat testing trips on this road trip from Norway to Kosovo.

Christening the Cat

A few thoughts on the past few months of the Minecat. Since the last entry in the magazine we have continued in the comprehensive testing of the machine. Results are now filtering through with the answers to many questions that were asked at the launch of the Minecat in October 1999.

- Report one (1) NoDeCo from FFI (Military Testing Establishment)
- Report two (2) NoDeCo from Military Engineers (Norway)/Live Explosives (Draft only - released soon)
- Report three (3) From KOSOVO by NPA Live Mines November '99

Visitors have been many and various including the International Trust for Pastoral Landmine Action (ITP) and Landmine Technology (Landmine Action). Their representative was given the opportunity to see our testing and sit as it was flailing. The experience gave him a much better understanding of the equipment.

Our design and the way ahead.

We have a long waiting list of customers. This was entirely due to the time constraints and security of the equipment, as the vehicle was assembled directly from the two 20 ft. ISO containers and driven directly to the site, without tightening or tensioning attachments and testing the balance of the flail. After a brief description of a French "MURPHY" the machine still managed to dig 15 cm under normal conditions and then dug into the ground 50 cm after demolishing some fairly dense scrub. The second demonstration was for the Army Staff and Army Experimental Establishment only. Under the control of the Military Engineer Staff they carried out a short demonstration: 500 GMS HE (for effects on chains and deflector) No Damage, 3 kgms HE No Damage, 7 kgms Non metallic Anti-Tank Mine Flail Disrupted the Mine - No Damage!

Before the machine was reloaded into the containers, under the supervision and stopwatches of the Army Staff. The complete load was ready to move off to Kosovo within one hour. Barry Middlemass, November 6 & 9, 1999

Detour à Mourmalon

En route to Kosovo we stopped off in France, at the military training area of Mourmalon. Here we carried out a presentation to members of the military, manufacturers and NGOs, and the Ambassador for Mines (France). The presentation was the worst the author has ever seen. This was entirely due to the time constraints and security of the equipment, as the vehicle was assembled directly from the two 20 ft. ISO containers and driven directly to the site, without tightening or tensioning attachments and testing the balance of the flail. After a brief description of a French "MURPHY" the machine still managed to dig 15 cm under normal conditions and then dug into the ground 50 cm after demolishing some fairly dense scrub. The second demonstration was for the Army Staff and Army Experimental Establishment only. Under the control of the Military Engineer Staff they carried out a short demonstration: 500 GMS HE (for effects on chains and deflector) No Damage, 3 kgms HE No Damage, 7 kgms Non metallic Anti-Tank Mine Flail Disrupted the Mine - No Damage!

Where and What Next

We hope that future customers will use the ITF for funding donations. The company now has frozen the design of the Minecat and will continue focusing on the versatility of various add-on equipment for the platform. A sub two (2) meter Minecat is still in the frame for various customers with different "operational" requirements.

Destination Mine Field

On arrival in Kosovo the machine had the back up of only one Operator/Mechanic, due to a reorganization in the family of the second Opp/Mech. I believe it must be made clear at this point that the back up personnel of NoDeCo are not ex-military and consequently, they cannot back up the "operational" use of the machine. This point, I must stress, is something which at times is overlooked by the NGO or agency using the machine. The staff with the machine is there purely as advisers on the Mechanical and the Operating side of the equipment. Due to financial restrictions, "Technical/Operational" advisers cannot always be present during the early yet very important phases of the equipment's life. This situation put a tremendous strain and responsibility on the "civilian" mechanic/operator, who only wants the best for the machine. I make this comment because, with the other member of staff missing, it was not possible to rebalance and check out the machine after its trip to France. A consequence of this was that the NGO waited to start testing immediately after the machine arrived, mainly due to the deterioration of the weather and the need to have the men working with the equipment who had previously been allocated. The first test was carried out before the arrival of our Chief Technician (Mech), who on arrival carried out the re-balancing and checked out the remainder of checks on the machine. Hopefully, being satisfied that the Minecat was working to near maximum efficiency, the second series of tests were carried out with complete results as follows:

LIVE MINE RESULTS

Total mines and type deployed: Nine (9) Anti-Personnel (PMA-2/PMA-3) Two (2) Blast/Fragmentation (PMA-2a/PMA-3a) including trip wire Five (5) Anti-Tank (TMM-1/TMA-5a)

All mines were cleared as follows:

- Detonated One (1) Anti-Tank (Loss of three (3) chain heads)
- Detonated Three (3) Anti-Personnel
- Detonated One (1) Trip-wire Blast/Trap
- Detonated All other devices (Broken)

The team of ground crew for these series of tests was composed by the previous use of many heavy tracked and wheeled vehicles, making the test extremely hard for the penetration of the heads of the flail. The difficult ground will no doubt mean the use of an alternative chain head, if the customer requires a "digging" factor as well as the neutralization/clearance of devices. Barry Middlemass, November 15, 1999