



# Increasing Safety in Afghanistan

## Clearing Large Areas in a Fast and Reliable Way: A New Engineer Task

By Lieutenant Colonel Thomas Sponfeldner

In August 2002, German engineers expanded their equipment inventory with another special vehicle. A representative of the German army chief of engineers took over the Minebreaker, a mine-clearing vehicle manufactured by Flensburger Fahrzeugbau Gesellschaft (FFG). Now, German engineers can clear large areas of mines quickly and reliably.

Area clearance became an issue for the first time during the International Force peacekeeping mission in Kosovo and Stabilization Force mission in Bosnia, and later during the Kosovo Force peacekeeping mission. The requirement was to quickly proof and clear large areas that were possibly contaminated by mines and unexploded ordnance (UXO). Only then would it be

possible to increase the safety of friendly forces in the vicinity of airfields, warehouses, and logistic transshipment sites and along roads. Previously, the Keiler armored mine-clearing vehicle had been used for that purpose, but the Keiler is a tactical vehicle for making fast breaches through minefields under combat conditions. The vehicle provides a safety lane 4.7 meters wide, milling the ground in the lane down to a depth of 25 centimeters. The soil, including any ordnance, is thrust to the side. Ordnance that is not activated remains in an inert state.

With the Afghanistan mission, the International Security Assistance Force (ISAF) requirement of large area military clearing was quickly brought back into

focus. The first contingency forces used the Danish ISAF explosive ordnance-clearing platoon, which was equipped with a Hydrema mine-clearing vehicle. However, when the Danish platoon withdrew, this capability was no longer available.

In cooperation with the German Office of Defense Technology and Procurement, a market screening was performed. Among the systems that were tested and rated operational, the FFG Minebreaker was the only system that was readily available. A final test with live antitank mines at the technical center of the German forces confirmed that the system could clear up to 7.5 kilograms of TNT without serious damage to the clearing device. In preparation for their mission, operators and maintenance staff were familiarized with the Minebreaker during company-sponsored training.

Next came the leap in the dark. Information about the conditions at Kabul had been collected, preliminary doctrine for Minebreaker operations had been written, and logistic support had been organized. Yet, we had to take a step into the unknown with new equipment and a new mission. This was quickly clear to the advance team when they arrived in Kabul on 4 September. There was a lot of work to do before it was possible to use the "Ferrari," as the red Minebreaker was nicknamed.

Because they had such short notice, the Turkish managers denied access to the predetermined clearing area at Kabul International Airport. Other potential areas were out of the question because they were too small or because their



The chief of the Mine/Countermine Division at the German army engineer school, second from left, accepts the first Minebreaker manufactured by FFG.

location made it impossible for the Minebreaker to get there. As the United Nations Mine Action Center for Afghanistan (MACA) had also charged nongovernmental organizations with mine-clearing tasks at the airport, activities had to be precisely coordinated to avoid getting in each other's way. In order to get used to the soil on-site, the Minebreaker team got the opportunity to clear the mine belt between the double fence rows around the airport. It was a worthwhile task, since antipersonnel mines were surface-laid every 2 to 3 square meters.

The arrival of the Minebreaker on 6 September was a welcome event. Within two days, the other members of the crew arrived, and the first clearing actions were started. We did not anticipate the tremendous amount of dust caused by clearing operations in this area. From trials in Germany, we were used to small dust clouds when working on sandy soil, but nothing compared to what occurred on-site. The driver sometimes could not see at all. It was fortunate that an ordnance-clearing specialist had a Fox armored personnel carrier because this vehicle could direct the Minebreaker driver. There was much room for improvement in the first few clearing lanes, but the driver's feel for the Minebreaker and for the soil improved by the meter. Maintenance started after the operation. Removing the dust was the first order of business.

On 14 September, the first real mission was to be carried out. All preparations had been completed, and the inner fence of the mine belt was opened. At 1100, we were able to tackle the final section of the access road. At 1125, there was the first detonation, followed by four more in the next five minutes. Then we had to postpone our work because Turkish medical support units took their lunch break. When we returned from our break, there were Afghan soldiers waiting with their rifles in firing position. There was no misunderstanding this gesture—the clearing work would not continue on this site. Despite extensive



**The Minebreaker arrives at Kabul International Airport on 6 September 2002.**

negotiations, it was not possible to reach an agreement, so we ceased working.

At a meeting the next day, Afghan representatives explained that the outer mine belt was required for airport security, and this was not the only critical section on the airfield. It was not apparent where clearing would be permitted. MACA objections that the Afghan government had agreed to permit the clearing of all mines were not accepted.

In cooperation with MACA, we found new sites appropriate for Minebreaker operations, and on 19 September, the formal introduction of the Minebreaker was held. A remarkable part of the mine-clearing project was the cooperation between the German and Afghan forces, who provided the transport vehicle for the Minebreaker. So far, more than 15,000 square meters have been cleared and more antipersonnel mines and some UXO have been destroyed. The proofing of the cleared areas is partly done by explosive ordnance-clearing specialists who employ visual means immediately after the Minebreaker operation and partly by nongovernmental organization workers with metal detectors. During the proofing, explosive ordnance-clearing specialists found only one live bomb fuze. It was a solid metal body that could not be broken by the Minebreaker, so

Turkish explosive ordnance-clearing specialists disposed of it.

Despite adverse climatic and geologic conditions, the results of the clearing operations can be rated very highly. Currently, clearing operations out of Kabul International Airport are carried out in the Kabul area as well as along the road to Baghram. Another operational area covering 640,000 square meters is in the vicinity of Baghram, where we operate with U.S. Army units. If the Minebreaker is used there, it will take more than six months to clear the area.



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