

Soviet Engineers in Combat

The Objective is Rapid Advance

by CPT Charles R. Boyer

The guiding Soviet principle of land warfare is violent, sustained, deep offensive action. Mechanized and armored formations, supported by aviation and artillery, are to seize the initiative at the outset, penetrate enemy defenses, and drive deeply into the rear.

To accomplish this, highly mobile, armor heavy Soviet forces will attack in successive echelons hoping to overwhelm enemy defenses—an operation that relies heavily on engineers.

The Offense

The Soviet engineers' primary mission is to clear and maintain routes to

sustain rapid advance. They remove mines and obstacles, cross water obstacles, protect the flank, and aid against counterattack.

Engineers are included in all reconnaissance elements of tank and motorized rifle units. They report the condition of advance routes, providing the main body with information on assembly areas, detours around obstacles, and warnings of minefields and craters. The engineer reconnaissance patrol is equipped with portable mine detectors and route-marking flags.

The Soviets stress that water obstacles must be crossed from the march to preclude major halts in the offense. Their doctrine dictates crossings at multiple points along a broad front to overwhelm the enemy. Smoke

is used extensively to mask assault crossings during daylight.

Engineers reconnoiter water obstacles to find fording sites and suitable entry and exit points for combat vehicles. Detailed terrain analysis is required for bridge and ferry sites. Reconnaissance of tank-fording sites requires divers and a tracked amphibian with river-reconnaissance devices.

Engineer river-crossing capability is found in the regimental engineer company organic to motorized rifle and tank regiments; the division engineer battalion; and special engineer battalions, regiments and brigades at army and *front* level.

Movement Support Detachments

During marches, movement support detachments (MSDs) travel ahead of

the main body, clearing obstacles reported by reconnaissance teams. They fill craters, clear mines and prepare bypasses around major obstacles.

The MSDs are task organized from divisional or regimental engineer assets based on mission and availability. They can be from platoon to company strength and are equipped with route and mine clearing vehicles and equipment. An MSD's bridging capability is normally limited to equipment required for its own movement.

A division engineer battalion can form two to three MSDs. They are employed on main routes and travel under the protection of an advance guard or forward security element whenever possible.

On other routes, the leading regiments provide MSDs from their own resources. A typical MSD at this level might consist of an engineer platoon with one or two dozers and up to three tanks fitted with dozer blades. These MSDs are protected by up to a platoon of infantry or tanks and are often accompanied by chemical reconnaissance personnel.

Breaching Minefields

Normally during an assault or rapid advance, the Soviets breach minefields using mine plows and rollers fitted to the lead tanks. Although engineers reconnoiter the minefield, the initial breaching is not primarily an engineer task.

Engineers assist in fitting the plows and rollers which are commonly used for minefield reconnaissance. These are usually employed on the scale of one per platoon of three to four tanks. The Soviets estimate clearing speeds of about 10 kilometers per hour (kmph) for plow-fitted tanks, and up to 22 kmph for roller-fitted tanks.

Combat vehicles that aren't on tank chassis must wait until the full width of the lane is cleared. This is often done by tanks with plows or rollers that tow line charges across the minefield, then detonate the charges.

The Soviets also use a mine-clearing device mounted on the BTR 50PK APC (two to each divisional engineer battalion). An explosive line charge is fired across the minefield and detonated. This clears a lane six- to eight-meters wide.

The BTR-50PK is particularly useful during assault river crossings when there are minefields on the far bank,

and amphibious APCs may have to operate initially without tank support in the bridgehead. An average of four to six lanes can be expected. Of these, at least two will be developed into permanent lanes for artillery and logistics vehicles.

Mobile Obstacle Detachments

Special teams called mobile obstacle detachments (MODs) are formed from regimental and divisional engineer assets. Their mission is to rapidly mine the most likely avenues of enemy attack or counterattack. The MODs travel on the flanks of a march column or formation where they can deploy rapidly. They are normally near the antitank reserve.

Minefields are most rapidly laid using armored, tracked mine layers (three to each divisional engineer battalion). Hand emplacement and towed mine layers are also used.

Both the tracked mine layers and mine-laying trailers dispense mines at predetermined spacings of 4.0 or 5.5 meters. On suitable ground, a division's three armored, tracked mine layers can surface lay a three-row, 1,000-meter-long minefield in a half hour. In the same time, a regimental MOD's three mine-laying trailers could lay about 500 meters of minefield.

The Defense

The Soviets consider the offense the only means to decisive victory. Defense is a temporary posture leading to resumption of the offensive. The engineers implement obstacle plans (particularly antitank obstacles) to block enemy penetrations. A MOD may join antitank reserves to counter enemy tank threats. They also repair existing routes and create new routes to support maneuver forces. They respond to enemy nuclear strikes with fire fighting, structure repair and debris removal.

Mechanized earthmoving equipment is used in survivability missions to dig

trenches and build revetments or shelters in areas not exposed to direct enemy observation or fire. Because self-entrenching blades are standard on many tracked vehicles (tanks, self-propelled artillery), a Soviet division could probably dig in all of its combat vehicles within three hours.

To some extent, all troops construct fortifications, shelters and vehicle revetments. However, the engineers construct the more complex fortifications.

Counter mobility

During counter mobility operations, engineer troops normally construct barrier systems which are coordinated with the overall system of fire. The first priority is antitank obstacles. Mechanized diggers can dig up to 400 meters of antitank ditch per hour depending on the dimensions of the ditch, soil conditions and terrain.

Defensive minefields are laid in much the same manner as flank-protection minefields. The quality and specific structure of the minefield depends upon time and terrain. However, the doctrinal guidance describes three rows of mines per belt, up to 100 meters between rows, and three belts per field, with the field covered by fire whenever possible. Additional counter-mobility capabilities include road cratering, wire barriers and abatis.

Conclusion

Engineers play a vital role in maintaining maneuver mobility in land warfare. The Soviet army's emphasis on rapid advance directly reflects their desire to fight and win. Their engineers are well trained, well equipped and ready.

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The Army Occupational Surveys for MOS 12B and MOS 12C will be distributed to selected engineer units in May. These surveys will gather task performance and training information from a large sampling of soldiers, E-1 through E-7, and use the data to improve combat engineer training.

Please answer each item of the survey carefully, since this is a unique opportunity for you to influence training.