

Notes on:

## ***Busting the Bocage: American Combined Arms Operations in France, 6 June – 31 July 1944***

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Fort Leavenworth, KS: U.S. Army Command and General Staff College, 1988

“Peacetime doctrine is usually faulty. Once in combat, the military can recognize flaws and remedy them as quickly as possible. The advantage will go to the army that learns quickly and adapts promptly under fire.”

– Michael Howard

1. **1942 infantry doctrine** specified that battalion attacks were simply frontal assaults against enemy defenses, along a frontage of 500 – 1000 yards wide. *1942 FM 7-20 Infantry Battalion*
2. In Tunisia, infantry commanders failed to exploit attached tanks. **General Headquarter (GHQ) tank battalions, inferior to tank battalions in armored divisions, rotated between infantry divisions, making teamwork and SOP development impossible.**
3. The Germans built **formidable hedgerow defenses in Normandy**. AT (Panzerfaust) and MG positions laid interlocking fires on enclosed compartments. PDFs were laid parallel to hedgerows. German radio and wire communications served to coordinate defenses and adjust mortars.
4. **In Normandy, pre-invasion training deficiencies came to light.** Riflemen, trained to fire only at definite targets, failed to suppress *suspected* German positions. Infantry leaders lacked experience with tanks. Close terrain prevented standoff observation of the enemy, depriving U.S. infantry of artillery and mortar support.
5. **Tactical solutions.** Infantry leaders quickly realized that heavy suppression was needed to maneuver. Tanks were the solution. Tanks provided protection from small arms, MGs for suppression, and main gun for hard targets. **Although doctrine recommended separate attacks, leaders learned to integrate tank and infantry attacks, demanding mutual support.**
6. **Technical solutions.** The 29th ID developed an explosive breach for hedgerows. The 2nd AD developed a saw-tooth attachment mounted on a tank. **Due to incompatible radios, expedient phones connected infantry to tanks. Fire control SOPs were developed: squad leaders fired tracers to direct tank fire. Habitual squad-tank relationships enabled proficiency to develop.**
7. **29th ID SOP Battle Drill:** one tank, one squad with MG, engineer team, and one 60mm mortar.
  - (1) **Tank** noses through hedgerow, **suppresses** entire base of **far hedgerow**. Fires main gun **WP into two corner MG positions**.
  - (2) 60mm lobs shells behind hedgerow.
  - (3) **Infantry** moves through near hedgerow, **fires and moves under tank suppression**. Infantry avoids flank hedgerow and usual grazing fire. Infantry closes on far hedgerow throwing grenades.

(4) Engineers set explosive breach on near hedgerow. Tank moves across compartment. Enemy in far hedgerow is flushed with tank and infantry fire.

(5) Mortar and engineers displace forward. Repeat Drill.

Combat lessons: BARs replaced MGs. Rear-deck phones assisted tank-infantry coordination. Mortar observers stood on tank decks for visibility. Mortars used smoke to obscure assault. **Tank MGs learned precise fire control to support infantry.** Front-line training, rehearsals, and habitual relationships were required. The 83rd ID used two tanks, a support tank in one corner, and an assault tank in other corner.

*On 11 July 1944, 2nd Bn, 116th Infantry conducted a major advance using the new SOP and suffered only light infantry casualties, and no tanks lost.*

8. **3rd AD Company SOP Battle Drill:** Tank Company, Infantry Company, and Engineers. **One squad assigned to each tank.**

(1) Attack three compartments simultaneously.

(2) Platoons of tank-infantry teams breach two flank compartments first. Tanks stand-off 20 feet from hedgerows.

(3) Platoons turn inboard and assault center field last. Germans in center field usually withdrew before assault.

Combat lessons: **Armored infantry were trained to mount, dismount, ride on tanks, and camouflage themselves on tanks. Armored infantry were trained to use tank-infantry phones for tactical coordination and direct-fire suppression coordination.** Artillery observers rode in lead tanks. Infantry battalion COs rode in command tanks to coordinate all arms.

*On 29-30 June 1944, 3rd AD conducted a major advance. No tanks were lost, and 351 of 401 infantry casualties were caused by indirect fire. Later, when tanks raced unsupported across an airfield, 13 tanks were shot with AT guns and 14 were shot with Panzerfausts.*

9. *Busting the Bocage* describes individual American ingenuity in the crucible of combat. Small-unit leaders solved tactical problems that the Army had not prepared them to face. Future armies need to do a better job of doctrinal development before they send their soldiers into combat so clearly unprepared for the realities of the battlefield.