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TITLE: Armored Support of Infantry.

SCOPE Capabilities and limitations of the three-inch Naval gun mounted on M10 motor carriage, and 90mm gun mounted on M36 chassis, as employed by tank destroyer units in the European Theater during World War II. Comparison of those weapons in support of Infantry with the M26 tank mounting the 90mm gun now organic to infantry divisions and regiments. Historical examples of unusual methods of employing armor in support of infantry.

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Prepared by:

Robert W. Young

(Name)
ROBERT W. YOUNG,
Captain, Cav.

(Rank)

ARMORED SUPPORT OF INFANTRY

"We don't want any units attached to us--but you have the gun we need", was the first remark made by Colonel Paddy Flint, commanding the 39th Infantry, 9th Division, when I reported my unit, Company A, 899th Tank Destroyer Battalion as being attached.

The gun he referred to was the three inch naval gun that had been modified and placed on a motor carriage, M10.

Thousands of these powerful units, quickly produced, helped to turn the tide against the Germans in Africa, Italy, and France. This gun motor carriage was made by mounting the three inch gun and recoil mechanism--initially designed for use on the heavy tank, M6--in a special turret on the M4 tank chassis. The design was completed and the vehicle standardized in July 1942. As mounted, the gun had a range of 16,000 yards, and with the armor-piercing ammunition available from the start, it could penetrate four inches of the best armor plate at 1,000 yards.¹

This new weapon was designed for the tank destroyer battalion, which had the mission of destroying enemy tanks throughout World War II. It was introduced into combat during the Spring of 1943 by the 899th and 776th Tank Destroyer Battalions, after a long felt demand for a more potent weapon to cope with the Germans' superior tank and

1. Major General G. M. Barnes, U. S. Army (Ret), Weapons of World War II, p. 239.



Direct Fire Mission

A three inch naval gun mounted on motor carriage, M10, performing a direct fire mission by a tank destroyer unit in World War II.

armament. On the 23d of March 1943, the German 10th Panzers were stopped at El Guettar, Tunisia--the first engagement of the 899th Tank Destroyer Battalion with the enemy, proving the new weapon was effective.

Tank destroyer units were initially organized to operate independently against enemy armor in open tank terrain, such as North Africa. However, for mutual support, they were often attached to, or placed in support of, infantry divisions. This arrangement provided the infantry with much needed antitank protection, and afforded the tank destroyer units with protection from infiltrating enemy foot troops. Both branches soon developed a healthy respect for each other. The tank destroyer units always "tied in" with the infantry before dark, and remained either on the front line, or in direct support of the leading elements, in both the attack and the defense. The infantryman's morale was always higher with the tank destroyers nearby, after he found out that its noise and size was over shadowed by its punch and ability.

In one situation the mere presence of the tank destroyers turned a rout into a defense. For early in the Gafsa-El Guettar battle a Lieutenant, leading his tank destroyer platoon up to support an infantry battalion, met the major portion of that disorganized unit nearly a mile

from their previously reported defensive position.

The infantrymen, upon encountering the tank destroyers, started shouting, "Don't go up there, we were just run out by German tanks"!

The tank destroyer Lieutenant answered, "That's what I am looking for; show me the tanks". This being the first time the infantrymen had seen the new tank destroyer weapon, could not believe their ears; but, they did stop their rout to the rear, and with little persuasion returned to their defensive position. The enemy tanks had gone; however, if they should return, antitank protection was waiting.

The infantry soon accepted the support which the tank destroyers provided because they were convinced their direct fire was accurate and dependable. This trust was further evidenced during an attack on a fortified town when the infantry called on the tank destroyers for some unusually close support:

There was a very prominent three-story house in the northwest corner of the town. Lieutenant A, commanding the TD platoon on the north, received a message from the infantry that there was a German 50mm AT gun in the third floor firing through the western window. Our infantry had got into the ground floor of the same house. Would Lieutenant A please knock the gun out? Lieutenant A crossed fingers, said yes, put four rounds of HE in the window, destroyed the gun, killed the crew, and never scratched a doughboy.¹

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1. Col. J. P. Barney, Jr., "Tank Destroyers in Direct Support", The Infantry Journal, (November 1944), p. 17.

The three inch gun proved its worth up to the Rhine River. While crossing the Rhine and during the defense of the Remagen bridgehead, the 899th Tank Destroyer Battalion was re-equipped with a new weapon, the 90mm gun mounted on the motor carriage M10, which had been provided a new turret in the process of conversion. It was now termed the M36. The 90mm, M3, gun used on this vehicle can penetrate 4.8 inches of armor with standard armor piercing capped ammunition, and 7.8 inches of armor with the high-velocity, tungsten carbide ammunition, at a range of 1,000 yards.

This gun was advantageous since the terrain changed immediately to long rolling hills across the remainder of Germany to the Elbe River. These hills provided the enemy with extremely long fields of fire. Maneuver under cover and concealment was restricted, therefore we required a more potent weapon at greater ranges.

Today the infantry, having recognized the importance of armor through experiences of the last war, has provided each regiment with an organic heavy tank company, and the new division with an organic heavy tank battalion. These units replace the old antitank company, and the tank destroyer battalion which had previously been a normal attachment.

The missions of the tank battalion with the Infantry

Division are to:

1. Add strength to the attack and counterattack through direct fire support, mobility, and shock effect.
2. Assist in exploiting successes in the attack.
3. Add depth to antitank protection in both the offense and defense.

The missions of the regimental tank company are to increase the regiment's fire power and shock effect, and to assist in providing antitank protection.¹

These missions are parallel to those performed by the old tank destroyer battalion and the antitank company. Since the 90mm gun mounted on the M26 tank of the heavy tank battalion and regimental tank company is identical with the gun used in the latter stage of the war by many tank destroyer battalions, it may be employed on many special missions in addition to those now advocated.

In combat no situation is normal. Unusual situations often require unusual methods of employment, and only highly flexible units can provide solutions. The desire to close with, and destroy the enemy, on the part of small unit commanders is also essential. These factors brought about the unusual employment of Company A, 899th Tank Destroyer Battalion on many occasions.

At 2300 hours, 17 June 1944, a company of the 60th In-

1. Headquarters, Army Ground Forces, Training Memorandum No. 2, 10 January 1948, pp. 2b and c.

fantry, riding on a platoon of tank destroyers for the first time, and a platoon of the Antitank Company, 60th Infantry, towing 57mm guns, formed a task force, and pushed west from St. Jacques de Nehau, France, to take Barneville; cut the Cotentin Peninsula; and seal off the Germans to the north. Enroute four enemy 88mm anti-aircraft weapons were destroyed while one tank destroyer was disabled by a hit in the final drive. The crew of the tank destroyer remained with the vehicle and relayed radio messages from the task force back to the Commanding General, 9th Infantry Division, during the remainder of the night. The tank destroyers had the only communication across the peninsula. At 0100hours, 18 June 1944, a message of "Mission accomplished", came through.

Upon arrival at Barneville, the 60th Infantry established a defensive position. One tank destroyer supporting the 60th Infantry was placed in a firing position overlooking the town. Shortly after daylight, an enemy truck loaded with troops was spotted going through the town at a range of 1200 yards. It was immediately taken under fire with high explosive, and destroyed. When verifying the results hours later, with the French civilians, it was found that only one man out of 35 occupants survived and he was wounded. This proved that practice firing at moving targets paid dividends, although it was seldom used in combat.

Tank destroyers were most frequently employed as direct fire assault guns in infantry attacks; often being called upon to fire at stubborn points of resistance such as well fortified enemy machine gun emplacements. It has been proven that a few well placed rounds of high explosive will just as effectively destroy an enemy strong point as the assault of an infantry platoon, with little or no losses. In the vicinity of Esclands, France, a tank destroyer was called on to fire on a machine gun emplaced in a hedge row, which was holding up our infantry's advance. While placing high explosive fire on the target a single German jumped up from his position, near the point of impact, and dashed down the hedge row to escape. The tank destroyer gunner, encouraged by shouts to "get him", fired through the hedge at the fleeing man. The third round fired exterminated the German in mid-air. Later as the infantry passed through the hedge row nearly twenty enemy casualties, resulting from the high explosive rounds bursting along the hedge row, were found. One enemy in flight is not a recommended target for such a weapon, however, it proved to be worth-while in this situation.

Often it is necessary to fire at obscure targets or places where the enemy is presumed to be. An example of this type of action occurred near St. Jean de Days, France, for at

0200 hours, on the morning of 11 July 1944, the enemy launched a combined armored and infantry attack in the vicinity of that village. Two columns of heavy enemy tanks with supporting infantry smashed through and penetrated to the rear defense area of the 39th Infantry, in an attempt to capture St. Jean de Daye and sever the Allied beachhead. Outgunned and outnumbered, Company A, 899th Tank Destroyer Battalion, remained in position and fired on enemy tanks wherever discernible in the darkness. As daylight approached, Company A, well aware that their three inch guns could not penetrate the heavy frontal armor of the Panther tanks, maneuvered their tank destroyers to flanking positions where effective fire was placed on the enemy armor. One particular tank destroyer was forced to fire through a hedge row at the invisible enemy. The platoon leader commanded the gunner to use APC-BDF,¹ and to start firing at the hedge row ten yards from a barn, traversing left about 80 yards and firing a round each three yards of that distance. The APC-BDF rounds penetrated the hedge without detonating, striking the enemy vehicles in the flank. The hedge prevented the enemy from traversing their 88mm guns and returning the fire. Three Panther, Mk. V, tanks, and one enemy half track were destroyed. Fifteen prisoners were taken.

1. Armor piercing capped, base detonating fuze.

Another example of firing at obscure targets developed during the night of 4 August 1944, when the enemy launched a series of counterattacks in the vicinity of Cherence le Roussel, France, with the mission of breaking through to Avaranches, cutting the American supply lines, and isolating the Allied breakthrough from the Cotentin Peninsula. For a period of four days, the infantry and supporting troops withstood these attacks made by elements of the German 1st SS and 116th Panzer Divisions. British P51 aircraft made their first "rocket" attack on a tank column, which had penetrated in this sector. Many enemy tanks were destroyed by the new weapon. Tank destroyer units accounted for their full share of tank fighting in this action for, north of Cherence le Roussel, the enemy holding high dominating ground, had eight tanks with excellent firing positions in an orchard on a hill to prevent the advance of our attacking forces. Division light and heavy artillery was concentrated on the position, but to no avail. Tank destroyer weapons were in a precarious situation, for they immediately met direct tank fire in maneuvering to any firing position. A tank destroyer platoon leader led one tank destroyer into a well covered position in close proximity of the enemy tanks. By keeping the weapon concealed, which was imperative, the gunner could not possibly see the enemy position, nor

could the enemy see the tank destroyer. The platoon leader proceeded to direct APC-BDF fire into the orchard using indirect fire methods. Two SCR 536 radios, borrowed from the infantry, provided communication between the observer and the gunner. 70 rounds of ammunition, the full combat load, were fired in rapid succession into the orchard. Four enemy tanks were destroyed, the remaining enemy tanks were routed, and fled in haste to the rear. Two of these were later found bogged in a swamp and abandoned about 600 yards east of the orchard. The infantry attacked through the orchard, and took the objective without further difficulty, where a defensive position was established in a series of hedge rows.

Firing at close and extreme ranges was seldom practiced in training, but was frequently done in combat as there was no alternative. At 0815 hours, 8 August 1944, this defensive position was attacked by three Mark IV tanks and enemy infantry, supported by heavy artillery fire. Due to the restriction placed on the fields of fire by hedge rows, two tank destroyer weapons had been placed with their guns projecting through the same hedge row the forward infantry elements were defending. When the enemy tank-infantry team approached, our infantry was forced to withdraw to the second hedge row; the tank destroyers remained in position waiting

for a shot. Just as two enemy tanks broke through the opposite hedge row, the tank destroyers fired--knocking out both enemy tanks and causing a number of casualties among the accompanying infantry. The remaining enemy tank and infantry fled. The range of the engagement was 40 yards!

The three inch gun proved to be an excellent weapon for destroying enemy tanks of all sizes, as long as the enemy vehicles could be engaged from the flank, or rear, by maneuver. It did not have sufficient penetration with APC-BDF to penetrate the frontal armor of the Panther or Tiger tank. However, one Panther tank was destroyed by a lucky shot striking the machine gun mounted in the frontal armor plate, and another Panther tank by placing a shot on the lower half of the semi-circular gun mantlet, which ricocheted into the hull, setting the tank on fire.

Tank combat, on the European continent, had been at close and medium ranges, up to the crossing of the Rhine River at Remagen. Across the Rhine targets were frequently engaged at maximum ranges. In closing the Ruhr pocket near Siedlinghausen, Germany, several enemy jag-panthers were encountered. These enemy vehicles were similar in armament to the Mark VI, Tiger tank, except that the 88mm gun was mounted in the hull with a limited traverse. The armor measured over seven inches on the frontal plate. One of



Antitank Mission

A tank destroyer mounting a 90mm gun takes up a position looking down Herman Goering Street in METZ, after the city was captured by allied forces.

these vehicles was fired on by a 90mm tank destroyer from a high crest at a range of 1500 yards. The first APC-BDF hit the frontal plate and bounced off. The German crew bailed out. Two more rounds bounced off, and the German crew started to get back in, since the projectile was having no effect. A fourth round hit the top deck where the armor was quite thin, penetrated and set the tank on fire. HVAP¹ ammunition was not available, nor any opportunity to maneuver to a flank.

In situations where enemy tank threats are not imminent, a platoon of tank destroyers, or larger unit, held in reserve, may be placed in a battery position, and employed as reinforcing or direct support artillery, due to its heavy armor protection, and ability to withstand counterbattery fire, thereby providing an artillery piece ideally suited for harassing, interdiction, or counterbattery fire at extreme ranges. The 90mm gun, if blocked up in front or placed on a reverse slope, can fire over 19,000 yards--much farther than the 105mm of the light artillery battalion. A simple method of control is to attach the platoon to the support artillery battalion for fire missions and registration. However, separate ammunition must be provided for artillery firing, in order to keep the basic load of ammunition intact

1. Hyper velocity armor piercing.

for immediate employment of the unit on antitank or direct fire missions.

Indirect fire, at extreme ranges, may cause some difficulty unless smoke or air burst is used in registration. An example of this type was experienced at Helleville, France, on 22 June 1944, when all three platoons of Company A, 899th Tank Destroyer Battalion, were placed in battery positions; a fire direction center set up, similar to a battalion of artillery, and interdiction fire missions assigned the unit. Registration was made by a liaison type aircraft flying over our front lines, out of range of enemy small arms fire. Observation was difficult since the observer was registering at an extreme range. Several attempts were made to pick up the burst of the adjusting gun. Finally the observer had to call for "battalion one round", before he could make a sensing. No smoke shells were available; but, by replacing the regular sensitive fuze with time fuze on the adjusting rounds only, the observer could adjust with time fire. Then by an angle of site correction, he could complete his registration. This method proved very satisfactory, and was used frequently thereafter. It was determined here that some type of shell, other than high explosive, should be provided for registration purposes; time fire was a solution.

Tank destroyers are a weapon of the past, for under the

new tables of organization the tank destroyer has been replaced by a completely armored, mobile vehicle--the M26 tank. Commanders of tank units assigned to infantry organizations, when planning the training of their units, should study thoroughly the past methods of employment of tank destroyer units under unusual, as well as normal circumstances. The M26 tank with its additional armor protection, coaxial machine gun, and bow machine gun provides commanders with a weapon superior to the tank destroyers used at the end of World War II. Knowledge of the capabilities and limitations, plus aggressive utilization of the new weapon, in support of infantry, will often provide the deciding factor in the accomplishment of infantry missions.

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