THE GENERAL BOARD

United States Forces, European Theater

ORGANIZATION, EQUIPMENT AND TACTICAL EMPLOYMENT OF SEPARATE TANK BATTALIONS

MISSION: Prepare report and recommendations on the tactical employment, technique, organization and equipment of separate tank battalions.

The General Board was established by General Orders 128, Headquarters European Theater of Operations, US Army, dated 17 June 1945, as amended by General Orders 182, dated 7 August 1945 and General Orders 312, dated 20 November 1945, Headquarters United States Forces, European Theater, to prepare a factual analysis of the strategy, tactics, and administration employed by the United States forces in the European Theater.

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UNITED STATES FORCES, EUROPEAN THEATER
APO 408

REPORT ON THE ORGANIZATION, EQUIPMENT AND TACTICAL EMPLOYMENT OF SEPARATE TANK BATTALIONS

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ORGANIZATION, EQUIPMENT AND TACTICAL EMPLOYMENT OF SEPARATE TANK BATTALIONS

CHAPTER 1

MISSION AND SCOPE OF STUDY

1. MISSION. The mission of this committee is to prepare a report and recommendations, for submission to the President of the Board, on the tactical employment, technique, organization and equipment of separate tank battalions.

2. SCOPE. The report will include:

a. Missions of separate tank battalions.

b. Organization of separate tank battalions.

c. Major items of equipment to be included in each company of the battalion.

d. Major changes and additions necessary in current War Department publications pertaining to tactics and techniques and the employment of the separate tank battalions.

CHAPTER 2

OPERATIONS OF SEPARATE TANK BATTALIONS

IN THE EUROPEAN THEATER

3. GENERAL MISSIONS. The separate tank battalions were organized as GHQ Reserve Battalions, and were assigned to armies. However, in actual practice and operation, a tank battalion was attached to an infantry division and usually operated with it throughout the European campaign. But, because there were only 28 medium and two light separate tank battalions for 42 infantry divisions in the Theater, there were few that, for short periods, did not operate with two or more different divisions. So close was the tank battalion integrated with the combat echelons of the division to which it was attached, the narrative of operations of them is usually that of the division to which it was attached.

4. TRENDS.

a. Employment.

The need for attaching a tank battalion to an infantry division became apparent in Normandy and policy to that effect was established. There were, however, no instances of the attachment of a separate tank battalion to an Armored Division. The medium companies were usually attached, one to each regiment. After the first few weeks, it became an accepted practice in all armies to attach the same company whenever possible to the same regiment for all operations, offensive or defensive. This permitted some badly needed maintenance of vehicles, and rehabilitation of crews whenever the regiment was out of the line.[1]

The light companies were not employed in a uniform manner. Some divisions, particularly the Ninth, attached the light company to the division reconnaissance troop. These companies were generally in mobile reserve, and at times used to reinforce medium companies. However, the lack of fire power, particularly with the 37mm gun, and the very light armor made them generally incapable of accomplishing the desired missions.[2,3]

The functioning of the battalion as a fighting unit was exceptional. In the latter part of the war the battalion tended to become an administrative unit and advisory staff section only. As an advisory section, it was not uniformly successful. Most commanders agreed that had the battalion been an organic unit and trained with the division prior to combat, a better mutual understanding and spirit of cooperation would have always prevailed.[1]

b. Use of Support Weapons.

The mortars were used so little that they must be regarded as having been unnecessary. They were seldom employed to influence a tank action, and were often attached to infantry mortar units to reinforce their fire.

The assault guns were habitually used by some units as reinforcing artillery. Some battalions grouped all six guns into a platoon of three sections, and a section then attached to each company to reinforce it during operations. Its larger caliber gun and HEAT (High Explosive Anti-Tank) ammunition would have made it desirable as a tank if it had had a power turret. As a smoke weapon it is excellent, and

its retention in the battalion is indicated.[1]

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Chapter 2

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CHAPTER 3

COORDINATION WITH OTHER ARMS

5. Coordination of Tank-Infantry-Artillery-Engineer units.

a. Combat Teams.

In modern warfare the combat team has become the keystone of all successful operations. The complexity of new weapons and the limitations of each gives a complete interdependence of them on others to attain efficiency. Nothing is more helpless than a lone tank without artillery or infantry support. Its inherent blindness, its weight and size make it the natural target of all enemy fires. If friendly artillery is not coordinated, a hidden group of anti-tank guns will soon get it, or if there is no infantry near, as soon as the tank slows down it becomes easy prey to an enemy infantryman with an anti-tank rocket gun.

On the other hand in the planned operation where the tanks-infantry-artillery and engineers are given their proper mission, one for which they have trained together as a team, the strength of each will complement the weakness of the others, thus making the strong concerted effort necessary for success.

b. Communication.

The biggest factor in teamplay, or the combat team, is easy and complete communication, that each arm may have workable means at hand of knowing what progress, or what difficulty, the others are encountering. The most feasible medium, during combined operations, is radio. This has been hampered during the operations in western Europe due to the lack of a proper radio to achieve this coordination. The frequency modulated SCR 528 of the tank and the SCR 300 of the infantry and engineers did not net, and the 600 series of the artillery overlapped only at the end of the band. By December this difficulty was partially met by installation of 300 sets inside the tank. In this way, relatively efficient radio contact between tank and infantry elements was, at last, achieved. But two radios proved too much to be efficiently manned in a tank and, since all messages had to be relayed, communication was slowed and inadequate. All tank commanders felt a great need for a radio that could net with the infantry, tanks and artillery, but it never appeared.

The use of the telephone on the back end of the tank was quite widespread particularly in the First and Ninth Armies. This too was a battle expedient and was to give quick communication between the individual infantryman and tank commander. It was connected to the interphone system and proved to be a drain on the battery.[1]

c. Artillery fire control.

The use of one battalion forward observer for artillery fire control proved inadequate in the separate tank battalions, since they normally operated by companies. An observer was needed with each tank company, to properly control supporting artillery fire. Where the tanks were working in close support of the infantry over a limited objective, fire direction from the platoon commanders was often relayed through the infantry regiment, to the supporting artillery. The tank officers, unfortunately, had not had sufficient previous training to do this efficiently; and the artillery observers, not familiar with a tank,

were often reluctant to ride in a tank for their observation. Many commanders felt that more training of artillery and tank officers, in the opposite arm, would have been very beneficial. Better results would have been obtained if all tank officers had been well trained as forward observers for artillery.

The employment of the liaison plane for work with the tanks of the battalion was used extensively by the 743d Tank Battalion during February, March and April 1945. This plane had a principal mission of spotting enemy armor, giving that information to both the leading tank elements and the artillery, and directing the fire of both on it. The success attained was noteworthy.

d. Demolition.

Some of the best examples of tank and engineer cooperation occurred on the Siegfried Line. Tanks moved up on pillboxes, sealed the apertures with fire, and allowed the engineers to move forward and place pole charges against the doors or down air vents. In operations of the 741st Tank Battalion in September 1944 against the Siegfried Line, with engineers of the 28th Division, small teams were organized for reducing pillboxes. These teams were composed of a platoon of infantry, a section of tanks and a squad of engineers. The tanks approached and fired into the embrasures of the pillbox at close range while the engineers, with the infantry platoon, moved to the pillbox, placed charges and the infantry closed in to capture those who came out after the smoke cleared. This proved to be a very successful operation, and such teams were often employed to reduce pillboxes in breaking through the Siegfried defenses.[2]

e. Brigdeheads.

In the establishment of a bridgehead, over a river, the standard type tank cannot cross initially. A heavy pontoon or steel treadway must be erected in the initial crossing. During the building of the bridges, direct HE and machine gun fire, from the tanks can materially aid in keeping down enemy small arms fire from the bridge site.

In the crossing of the Roer on February 23, 1945, this type of support was carried out with good results by tanks of the 747th Tank Battalion, in support of the 29th Infantry Division.[3]

The use of the Bailey rafts, to ferry tanks for support of a bridgehead, was accomplished with success by the 30th Division in ferrying tanks of the 743d Tank Battalion across the Rhine River 24 March 1945. The Bailey raft, powered by a sea mule, is a cumbersome article of equipment. In a fast moving operation such a plan is impractical. The Rhine had been a major barrier that held up the advance for some time, allowing special equipment to be brought forward.[4]

In defense of a bridgehead, tanks can be used to cover friendly mine fields and road blocks established at critical avenues of approach to the bridgehead. However, the major proportion of the tanks should be used as a reserve, with an infantry unit, to meet any enemy attack on the bridgehead itself.

6. Tank-Infantry-Artillery-Engineer Units Supported by Air Force Elements.

The use of close support of air to the Tank-Infantry-Artillery and Engineer teams requires coordination of a high order. In this,

visual signals play a large role. Identification of friendly and enemy units must be quick and unmistakeable. The flourescent panel AP50A proved to be excellent. By variation of the red and orange panels on successive days, compromise by the enemy was lessened.

Lack of a common radio between tank and air was a serious shortcoming. The VHF set 522 was installed in the tanks of some battalions to give direct contact between tank and air. Excellent results were obtained by the 2 Armored Division with this means of direct contact. Request for one VHW Set per medium company were made by the Armored Section, 9th Army for separate tank battalions, and one per battalion was installed. There is no report of the operation in combat of these radios.

In mounting an operation, the bringing of pilots to the division which will make the attack, has proved very valuable in preparing signals and allowing the ground and air officers to get the closest possible cooperation. This worked with marked success during the operation COBRA that made and exploited the breakthrough west of St Lo. Direct radio contact between air and lead tanks accounted for destroying much enemy armor, while saving American tanks from being destroyed by running into it head-on.[5]

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CHAPTER 4

THE PROPOSED ARMORED ORGANIZATION FOR THE INFANTRY DIVISION

7. Type of Organization and Size.

The proposed armored organization for the infantry division is a tank regiment, as shown on chart (See Appendix 5)(Also see General Board Report "Organization of the Infantry Division"). This tank regiment consists of Regimental Hq Co, and three medium battalions, of three medium companies, a headquarters company and a service company each. The battalion is self-contained for interior administration and supply. These battalions will conform generally to the Tank Battalion T/O & E 17-25, 18 November 1944, changes 1 and 2, with the following major changes:

The mortar platoon is omitted; the assault gun platoon is increased to a six gun platoon, and the assault guns taken from the tank companies; a recovery crew is added to each recovery vehicle in addition to the mechanics already authorized; and the light tank company is eliminated.[1]

The Regimental headquarters under the command of a colonel will supervise the training and employment of the tank battalions. This is a minimum control headquarters for tactical supervision, administration and employment only. The regimental commander will be the advisor to the division commander on armored employment and anti-tank defense, and will coordinate the employment of the armor with the other arms of the division. He may also be used, when the opportunity presents itself, for commanding an armored task force.

The headquarters section includes communication personnel, both radio and telephone, for maintaining communication within the regiment and division.

The air liaison section of the regiment will become an air OP for armor. The location of enemy armor and tank targets will be the primary mission. An important secondary mission will be that of aerial reconnaissance for tank commanders and command control.

The three battalion regiment will normally operate with one battalion in direct support of each assault regiment. The role of the self-propelled tank destroyer will be filled by the battalions within the regimental zones. The battalion supporting one regiment in reserve will also constitute a mobile reserve available to the division commander to reinforce the main effort or exploit a breakthrough.

8. Major Items of Equipment.

a. Tanks.

There are 177 tanks and 18 assault guns in the regiment assigned in the following manner. Each battalion has three medium companies of 17 tanks each, with three command tanks in the command section and six assault guns in the assault gun platoon of the battalion headquarters company. There is also a mechanical reserve of five tanks in each service company.

b. Command Vehicles.

A full track vehicle is desired to replace the command halftrack. There will be eight in the regiment, assigned as follows; two command vehicles to the regimental headquarters company, two command vehicles to each battalion.

c. Recovery Vehicles.

There are 15 recovery vehicles in the regiment assigned as follows; one to each medium company, and two in the maintenance platoon of each battalion service company.

d. Supply Vehicles.

The present 2 1/2 ton, 6 x 6, GMC truck has proved completely satisfactory. The 3/4 ton weapons carrier is to be replaced by a 1 1/2 ton, cargo truck, and one of these is to be added to the supply section of each company for company supplies.

e. Other Vehicles.

Ninety-two 1/4 ton trucks in the tank regiment are assigned as follows; eight to the regimental headquarters and 28 to each battalion. There are four more 1/4 ton trucks in the proposed battalion than formerly. One is for an additional liaison officer, one additional to the headquarters section, and two to the reconnaissance platoon, replacing the halftrack command vehicle. Halftracks will be replaced by full track personnel carriers. Six liaison aircraft of the L-4 type are assigned to the regimental headquarters.

f. Communication Facilities.

The radios in the command and liaison 1/4 ton vehicles in the company and battalion headquarters are of the SCR 508 series, or the radio replacing it. The SCR 509 and 510, have not proved satisfactory because of limited selectivity and range. The necessity is paramount for a two way radio in all tanks.

9. Comparison of Size and Strength of Proposed Armored Organization with Present Normal Armored Attachments.

The Tank Regiment proposed will have 121 officers, 10 warrant officers, and 1843 enlisted men. Its major combat vehicles will be 162 medium tanks and 18 105mm assault guns.

The normal attached tank battalion numbered 37 officers, 3 warrant officers and 677 men. Its principal weapons were 54 medium tanks, 17 light tanks, six assault guns and three 81mm mortars.[1]

The tank destroyer battalion included 34 officers, 2 warrant officers and 592 enlisted men. The principal weapons were 36 tank destroyers, and six M-8 armored cars, with armament.[2]

The combined strength of normally attached tank and tank destroyer personnel is therefore; 71 officers, 5 warrant officers, and 1269 enlisted men. The total of major materiel is 107 tanks and tank destroyer vehicles, six assault guns and six M-8 armored cars.

Thus the proposed regiment shows a personnel increase of 50 officers, 5 warrant officers and 574 enlisted men in the tank regiment over the normal attachments. The major items of materiel are increased by 55 tanks over the total of tanks and tank destroyers normally

attached. Thus the regiment shows an increase of approximately 50 per cent in men and materiel over the former attachments.

10. Merits of the Proposed Organization.

The tank regiment will take over the missions of the tank destroyer battalion as well as adequately fulfilling its primary function of direct support to the infantry regiments. A battalion in support of each regimental combat team will give the division the armored efficiency necessary to properly fulfill its combat mission.

The use of tanks for over three days without maintenance has proved to greatly reduce their mechanical efficiency. There will now be opportunity for the battalion commanders, by skillful use of the available tanks, to even the load on certain units and maintain a high level of mechanical efficiency throughout. The mechanical reserve of tanks in service company will be of vital importance in keeping the combat strength of the battalion at the highest level of efficiency possible, by permitting immediate replacement of tanks deadlined for maintenance or lost due to enemy action.[3,4,5,6,7]

The development of the vital coordination and mutual understanding between tanks and infantry at all levels will be a natural outcome of being part of an integrated division team from the outset. Experience in combat in this theater has proved the need for tanks in all types of operation, and it must therefore follow; that, tanks in sufficient strength, properly organized and integrated within the division itself are vital to enable the division to attain its goal, of success in battle.

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4. After Action Reports, August 1944 - May 1945, 191st Tank Bn.

5. After Action Reports, August 1944 - May 1945, 753d Tank Bn.

6. After Action Reports, June 1944 - May 1945, 743d Tank Bn.

7. After Action Reports, June 1944 - May 1945, 747th Tank Bn.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

11. Conclusions.

a. The mission of tanks in support of infantry as laid down in FM 17-33 is substantially correct. In addition, tanks should be assigned the role presently assigned to tank destroyers.

b. Tank units organically assigned to infantry divisions are essential.

c. Characteristics required in the infantry support tank are as follows:

(1) Main armament - Must be capable of pentrating frontal armor of any foreign tank at suitable combat ranges and of effectively firing high explosives and white phosphorous.

(2) Mobility - Cross-country mobility equal to or better than that of dismounted infantry.

(3) Armor - Frontal armor and armor over ammunition stowage must be capable of withstanding all foreign tank and anti-tank weapons at normal combat ranges.

(4) Communication - A radio, whose frequency band and selectivity is identical to that used by the infantry, artillery and engineers should be installed in all tanks. An exterior telephone should be an OVM (on vehicle materiel) feature of all tanks.

d. Special tanks, including super-heavy tanks, can be more effectively employed if assigned to tank battalions of a special equipment headquarters than if assigned to separate battalions of armored groups.

e. There is no requirement for tank battalions other than those assigned to armored divisions, infantry divisions and special equipment headquarters.

12. Recommendations - It is recommended:

a. That a tank regiment, organized essentially as outlined in Appendix 5 be assigned organically to each infantry division.

b. That this regiment be equipped with infantry support tank tanks capable of fulfilling their mission.

c. That special purpose tanks not suitable for inclusion in the infantry division or the armored division be assigned to appropriate units of special equipment units and that separate tank battalions as now organized be eliminated.

d. That pertinent doctrine, techniques and Tables of Organization and Equipment be amended by appropriate agencies of the War Department.

SUMMARY OF ANSWERS TO QUESTIONNAIRE "THE SEPARATE TANK BATTALION"

QUESTIONNAIRE	CORPS COMMANDERS		INFANTRY DIV COMMANDERS		SEPARATE TANK BN COMMANDERS		COMBINED TOTALS	
	YES	NO	YES	NO	YES	NO	YES	NO
1. FM 17-33 gives the missions listed below as being appropriate for tank battalions. Do you agree that they are applicable to tanks working with infantry division? a. To lead the attack.	4	0	14	3	5	0	23	3
b. To support by direct fire the advance of the light tanks, other tanks, and ground troops.	4	0	17	0	5	0	26	0
c. To feel out the enemy and develop weak spots.	3	1	12	5	4	1	19	7
d. As a reserve for exploiting a success or breaking up a counter-attack against the supported unit.	4	0	17	0	5	0	26	0
e. To accompany the infantry and assist the advance by destroying neutralizing hostile automatic weapons and pillboxes holding up the advance.	4	0	17	0	5	0	26	0
f. When necessary against enemy tanks.	4	0	17	0	5	0	26	0
g. When necessary as dug-in pillboxes (exceptional).	4	0	15	2	5	0	24	2
h. To reinforce artillery fires.	4	0	12	5	4	1	20	6
i. To assist the infantry in mopping-up.	4	0	17	0	5	0	26	0
2. Would you add any missions to the above list? If so, please give them.*	3	1	11	6	3	2	17	9
3. Do you recommend that tanks be made an organic part of the infantry division?	4	0	16	1	5	0	25	1
4. If the answer to 3 above is yes, do you recommend one, two or three battalions be included? — One Bn	2		4				6	
Two Bns	1		5		2		8	
Three Bns	1		5		2		8	
One Tk Bn + One Co as Inf Regt			2		1		3	
5. If you recommend two or more tank battalions, do you also recommend that they be organized in regimental pattern with a headquarters capable of handling the administration?	1	0	9	1	4	1	14	2
6. If you have recommended organic tanks in the infantry division, do you foresee a need for tank battalions organized in groups or regiments to support the organic tanks for specific operations?	1	3	13	3	3	2	17	8
7. Do you recommend development of a special tank, or tanks, probably sacrificing speed for armor, to operate with infantry divisions?	1	3	8	9	3	2	12	14
8. Do you desire both tanks and tank destroyers?	1	3	3	14	2	3	6	20

Additional Missions Recommended:

(1) To take over tank destroyer role of anti-tank defense.

(2) To carry infantry in an attack and in fast moving operations.

(3) As an advance or rear guard.

(4) As a supply vehicle in an emergency.

APPENDIX 2

SUMMARY OF

OPINIONS OF DIVISION COMMANDERS ON

INFANTRY TANK OPERATIONS

1. Mission of Tank Battalions with Infantry Divisions.

The mission of the tank battalion as outlined in FM 17-33, 19 December 1944 is as follows:

a. To lead the attack.

b. To support by direct fire the advance of the light tanks, other medium tanks, and ground troops.

c. To feel out the enemy and develop weak spots.

d. As a reserve for exploiting a success or breaking up a counter-attack against the supported unit.

e. To accompany the infantry and assist the advance by destroying or neutralizing automatic weapons and pillboxes holding up the advance.

f. When necessary against enemy tanks.

g. When necessary as dug-in pillboxes (exceptional).

h. To reinforce artillery fires.

i. To assist the infantry in mopping up.

Division commanders, in answer to a questionnaire as to the appropriateness of this mission, all approved of it. There was some divergence of opinion as to appropriateness of using tanks to reinforce artillery fires. The limited fire control equipment does not allow for great accuracy, and the small bursting radius of the present tank HE shell, makes the efficiency of this type of fire open to serious question.

An additional mission that should be included from combat experience, is; the transporting of infantry troops on the tanks, as troop carriers, in fast moving operations, where speed is essential.

2. Amount and Type of Tank Support for Infantry Division.

The incorporation of tank units as an organic part of the infantry division was very strongly urged by all but one of the division commanders expressing opinions. Brigadier General Jesse A. Ladd, commanding the 9th Infantry Division, has clearly summarized this viewpoint, he states: "Yes. It is imperative that tanks and infantry function together with the closest cooperation. Tank units that fought continually with the same infantry division became an integral part of the team. This teamwork can only be developed by mutual knowledge and respect gained over a long period of time where the two units are in daily association."

The opinion as to the amount of tanks in the division favors at least two battalions with a strong minority favoring three battalions,

allowing one battalion to be in direct support of each regimental combat team.

The tank desired must be one mounting a gun able to cope with any enemy armor encountered, with sufficient cross country characteristics to be able to operate over all types of terrain, and to have sufficient armor to enable the tank to stand and "slug it out" with the enemy.

3. Type of Armored Organization with the Infantry Division.

The three battalions are to be coordinated for training, supervision and tactical employment under a small regimental headquarters. All commanders who believed that more than one tank battalion should be organic, favored a small control headquarters. Major General Robert C. Macon, commanding 83d Infantry Division, in advocating a regiment, states: "Yes. The maximum flexibility of employment can be obtained; control facilitated. The tank headquarters should be capable of tactical operations as well as performance of administrative functions."

4. Major Items of Materiel Desired.

Brigadier General O. S. Rolfe, commanding 71st Infantry Division states: "There should be an infantry tank, slow moving, capable of covering any type of terrain and sufficiently armored to be able to operate with infantry." If, however, the standard medium tank has a gun of 90mm or greater, capable of coping with all enemy armor, and is itself sufficiently armored to "slug it out" then a special infantry tank would not have strong advocate. Unless signal advantages can be obtained in the infantry tank of armament, maneuverability and armor, then a special infantry tank would be undesirable from a maintenance and procurement standpoint.

The light tank company cannot adequately support the regimental combat teams and should be replaced by a medium company or eliminated.

5. The Place of the Tank Destroyer.

If a tank is given to the Infantry with a proper anti-tank gun, the division commanders strongly favor the replacement of the tank destroyer with a tank, within the Infantry Division.

6. Need for GHQ Battalions.

The opinion of division commanders favors a few GHQ Tank Battalions, in Corps or Army reserve that can be attached to an Infantry Division making the Corps or Army main effort, in addition to the tanks organic within one division.

SUMMARY OF

OPINIONS OF TANK BATTALION COMMANDERS ON INFANTRY

TANK OPERATIONS AND ORGANIZATION

1. Mission of Tank Battalions with Infantry Division.

It is the opinion of the battalion commanders of tank battalions operating with infantry divisions in combat, that the missions as laid down in FM 17-33 are sound and no important changes are recommended. In September 1944, Lt Col Welborn G. Dolvin, stated in an after action report: "It is realized that rapid advances, following a breakthrough, warrant taking changes, but it is noteworthy that when principles laid down in field manuals were followed, excellent results were obtained. On the other hand, deviation from basic principles often resulted in failure of the operations with resultant losses in men and materiel."

2. Amount and Type of Tank Support for Infantry.

Tanks integrated as a part of the Infantry Division are strongly desired by tank battalion commanders.[1,2,3,4,5,6,7] At least two battalions is the minimum requirement.

3. Major Items of Materiel Desired.

a. The need of a medium tank with a gun capable of destroying any enemy tank at 1000 yards, reduced ground pressure to enable the tank to operate over any terrain in which infantry might be normally expected to operate, and armor sufficient to repel anti-tank fire at normal ranges is the major critical requirement as to materiel. The present assault gun is satisfactory if a power traverse replaces the present hand traverse.

b. Light tanks of the M-24 type are required.

4. The Place of the Tank Destroyer - The tank destroyer battalion should be replaced by a tank battalion which can accomplish the anti-tank mission, as well as be a reserve to replace the tanks operating with the assault echelon, to reinforce the main effort, or exploit and breakthrough.

5. Need for GHQ Reserve Battalions. The opinion of the separate tank battalion commanders is divided as to the need of separate GHQ battalions. Those favoring them base their opinion on a belief that a few battalions at army level should be available for particular or special operations.

6. Major Changes in the Headquarters Company.

a. The reconnaissance platoon.

This platoon should be increased in size. The halftrack should be replaced by a 1/4 ton or an armored car. Need for better radios of the SCR 528 series in place of SCR 510's is indicated.

b. The assault gun platoon.

It is believed by all interviewed officers that all the assault guns in the battalion, six, should be in one platoon. This was the normal way they operated, and T/O & E's should be changed accordingly.

c. The Mortar Platoon.

This platoon was seldom employed and it is the prevailing opinion that it could well be eliminated in the interest of simplification.

7. Major Changes in Service Company.

The Service Company operated efficiently in the battalion. The 2 1/2 ton truck was one of the outstanding vehicles in the army. It is recommended that a crew should be assigned the recovery vehicles for recovery only. The care of the vehicle and its recovery operation is a full time job, and should not be done by the limited number of mechanics available to the battalion.

8. Major Changes in the Medium Company.

The Medium Company should have one extra officer assigned to it for administration, liaison, and replacement of platoon leaders.

The assault gun should be taken from the medium company and placed in assault gun platoon.

9. Major Changes in the Light Tank Company.

The opinion favors the retention of the light tank company equipped with an M-24 tank. The performance of this vehicle in close follow up and in woods fighting proves its value to the battalion.

10. Communication and Liaison.

a. Efficiency of Infantry - Tank Communication.

The Infantry Tank communication during the European campaign was generally unsatisfactory. There is a pressing need for a radio standard in all tanks that has the same frequencies as those standard with the infantry and artillery.

b. Type of Communication Desired.

(1) Radio - All tanks should have a standard two way radio.

(2) Wire - There should be a small wire section and wire and telephones in the battalion T/E for communication in the division telephone circuit.

c. Liaison.

The need for trained liaison officers is strong. There should be at least two in each battalion each with a quarter ton equipped with a two way SCR 528 series radio.

The sixth officer needed in the company could also act as liaison officer when the company is on a detached or semi-independent mission

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7. After Action Reports, June 1944 - May 1945, 747th Tank Bn.

THE GENERAL BOARD
UNITED STATES FORCES, EUROPEAN THEATER
Armored Section
APO 408

9 October 1945

SECTION II

1. Do you recommend a change in the size of the tank platoon?

Lt Col Felber - No
Lt Col Dolvin - Yes
Lt Col Bates - No
Maj McNeill - No
Maj Guerin - No

2. If you have recommended that the tanks of the infantry division be organized into a tank regiment, would you recommend the tanks be organized into platoons of four tanks each instead of five if the limitations be placed on the number of tanks per division?

Lt Col Felber - No
Lt Col Dolvin - Yes
Lt Col Bates - No
Maj McNeill - Yes
Maj Guerin - No

3. What general type of tank or tanks of those now in production, or as standard equipment, do you recommend for operations with the infantry division?

Lt Col Felber - M-24 and Med tank with less ground pressure, more armor, and gun with muzzle velocity of 3500 f/s or more.
Lt Col Dolvin - M4A3E8
Lt Col Bates - 50% with slightly more armor than M4A3E2 and flotation of M4A3E8, and 50% of improved M-26.
Maj McNeill - M-24 and M-26
Maj Guerin - New tank with lower silhouette, more fire power and more armor.

4. Do you recommend that the battalion commander has a gun tank or a special staff tank, without a heavy gun and room inside for maps, data sheets, etc?

Lt Col Felber - Yes, if it appears like standard tank.
Lt Col Dolvin - Yes, if it appears like standard tank.
Lt Col Bates - No
Maj McNeill - Yes
Maj Guerin - No

5. Do you recommend any changes in the present radio in the tanks?

Lt Col Felber - Yes universal tank-infantry-artillery radio set. Each tank needs 2-way radio.
Lt Col Dolvin - Present radio satisfactory except need for one radio for tank-infantry-artillery.
Lt Col Bates - Present radio T/O and E inclusive of the 29 AN/VRC3s is excellent.
Maj McNeill - Yes
Maj Guerin - Yes - a tank-infantry-artillery radio would be ideal if highly skilled technicians were not required to operate it.

6. A signal corps radio can cover the wave band of the infantry-tank-artillery set. Would you recommend such a universal radio be used by all three arms?

Lt Col Felber - Yes
Lt Col Dolvin - Yes
Lt Col Bates - Yes
Maj McNeill - Yes
Maj Guerin - Yes

7. Do you recommend any major changes in the headquarters company?

Lt Col Felber - Yes
Lt Col Dolvin - Not in organization. But equip mortar platoon with 4.2" mortars.
Lt Col Bates - Yes
Maj McNeill - Yes
Maj Guerin - Yes

8. If you answer "Yes" to 7

a. How would you change the command section?

Lt Col Felber - Make Bn Cmdr full colonel. Add one liaison O.
Lt Col Dolvin - Add two liaison officers.
Lt Col Bates - Have three liaison officers.
Maj McNeill - No change.
Maj Guerin - None

b. What change do you recommend in the reconnaissance platoon?

Lt Col Felber - Increase by 4 H/T and 5 1/4 ton trucks, make 4 reconnaissance sections.
Lt Col Dolvin - Increase to three sections of three 1/4 ton trucks and an armored car.
Lt Col Bates - Have two platoons instead of one.
Maj McNeill - Make same as Division reconnaissance troop.
Maj Guerin - Light Armored Car in lieu of halftrack.

c. What change do you recommend in the assault gun platoon?

Lt Col Felber - Make it battery of eight guns commanded by a captain.
Lt Col Dolvin - Add two officers and fire direction personnel.
Lt Col Bates - Have all six assault guns in the platoon.
Maj McNeill - Put all assault guns in platoon organize into battery.
Maj Guerin - Increase to six howitzers.

d. What change do you recommend in the mortar platoon?

Lt Col Felber - Delete it. Substitute cub plane section.
Lt Col Dolvin - Equip it with larger mortars.
Lt Col Bates - Eliminate it.
Maj McNeill - Disband it.
Maj Guerin - Increase to six tubes.

9. Do you recommend any major changes in the service company?

Lt Col Felber - Yes
Lt Col Dolvin - Yes
Lt Col Bates - Yes
Maj McNeill - Yes
Maj Guerin - No changes.

10. If you answer "Yes" to 9

a. How would you change the administrative section?

Lt Col Felber - Increase clerks and transportation.
Lt Col Dolvin - No change.
Lt Col Bates - None.
Maj McNeill - Increase ratings for clerks.
Maj Guerin - None.

What change would you recommend in the ration section?

Lt Col Felber - Increase it slightly.
Lt Col Dolvin - Provide ration sergeant in T/O and E.
Lt Col Bates - Add ration sergeant.
Maj McNeill - Add ration sergeant and two handlers.
Maj Guerin - None.

c. What change would you recommend in the transportation platoon?

Lt Col Felber - Increase by 4 - 1/4 ton trucks.
Lt Col Dolvin - Add assistant drivers to all trucks, and ammunition sergeant and fuel and lubricant sergeant.
Lt Col Bates - None.
Maj McNeill - Add assistant drivers to all trucks, and ammunition sergeant and a fuel and lubricant sergeant.
Maj Guerin - None.

d. What changes would you recommend in the maintenance platoon?

Lt Col Felber - Increase in all sections in men and equipment.
Lt Col Dolvin - Crews other than mechanics.
Lt Col Bates - None.
Maj McNeill - Should have 3 Med tanks maintenance sections and one light tank section that can work independently.
Maj Guerin - None.

11. It had been suggested that crews of tank recovery vehicles should be separate from the maintenance personnel and be concerned only with actual recovery and evacuation, do you recommend this?

Lt Col Felber - Yes
Lt Col Dolvin - Yes
Lt Col Bates - No
Maj McNeill - Yes
Maj Guerin - No

12. If you have recommended a tank regiment would you recommend:

a. That the battalion maintenance platoon be reduced in size and scope.

Lt Col Felber - No
Lt Col Dolvin - No
Lt Col Bates - No
Maj McNeill - No
Maj Guerin - Definitely not.

b. That the regimental maintenance echelon do all but the minimum essential maintenance for efficient operation?

Lt Col Felber - No
Lt Col Dolvin - No
Lt Col Bates - No
Maj McNeill - No
Maj Guerin - No

13. What other recommendations on organization, equipment or technique of tanks with infantry divisions will you make?

Lt Col Felber - Tank Companies should be commanded by Majors and have total of 7 officers, separate battalions definitely need a dentist.
General
Ranks of all enlisted men should be raised.
Put an Ordnance Company (Heavy Maintenance Tank) into the battalion.
All tank crew members should be equipped with pistols.

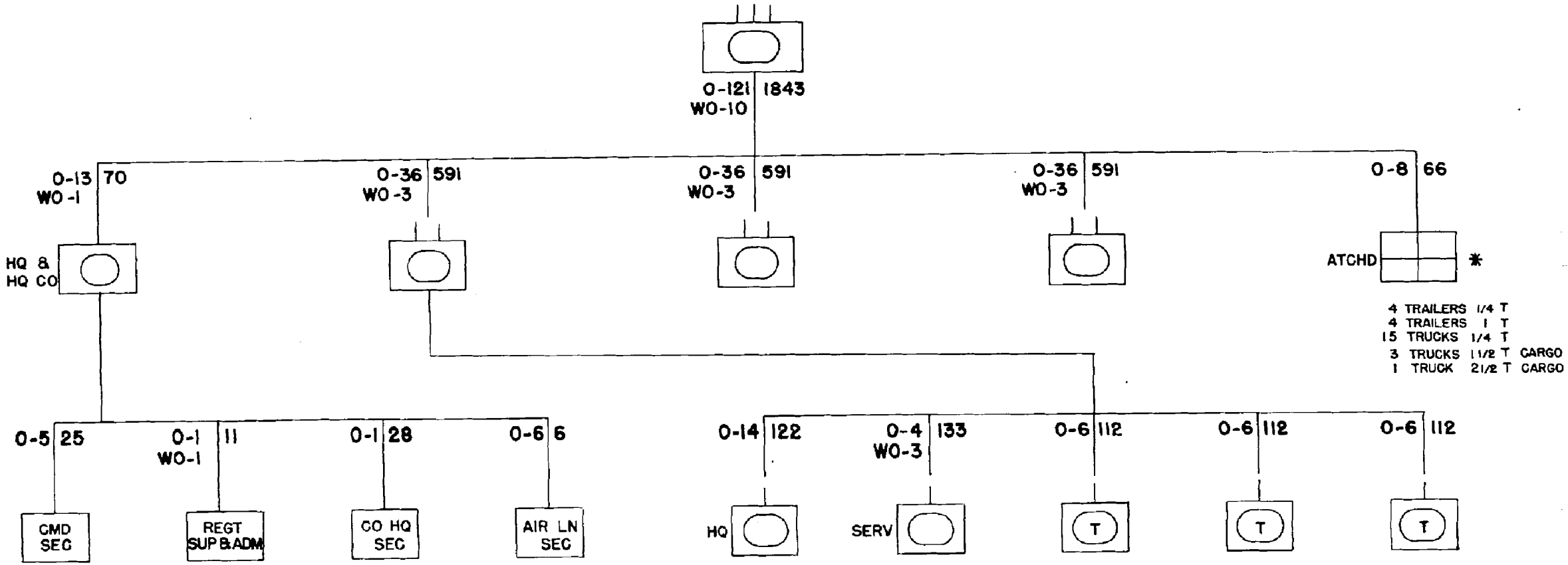
Major Guerin - All tank crews should be equipped with pistols.
A small arms-resistant plastic bubble for the use of the tank commander should be developed.

ROSTER OF OFFICERS

ANSWERING QUESTIONNAIRE

Major General Cliff Andrus	CG 1st Infantry Division
Major General A. J. Barnett	CG 94th Infantry Division
Major General A. R. Bolling	CG 84th Infantry Division
Major General W. A. Burress	CG VI Corps
Major General Norman D. Cota	CG 28th Infantry Division
Major General H. L. Earnest	CG 90th Infantry Division
Major General T. D. Finley	CG 89th Infantry Division
Major General C. H. Gerhardt	CG 29th Infantry Division
Major General C. R. Heubner	CG V Corps
Major General Leland S. Hobbs	CG 30th Infantry Division
Major General Frank A. Keating	CG 102d Infantry Division
Major General R. C. Macon	CG 83d Infantry Division
Major General H. L. McBride	CG XX Corps
Major General E. P. Parker	CG XXIII Corps
Major General W. R. Schmidt	CG 3d Infantry Division
Major General Arthur A. White	CG 71st Infantry Division
Brigadier General H. M. Harris	CG 63rd Infantry Division
Brigadier General J. A. Ladd	CG 9th Infantry Division
Brigadier General Onslow Rolfe	71st Infantry Division
Brigadier General Robert I. Stack	CG 36th Infantry Division
Brigadier General L. H. Watson	CG 79th Infantry Division
Lieutenant Colonel Paul L. Bates	CO 761st Tank Battalion (M)
Lieutenant Colonel Welborn G. Dolvin	CO 774th Tank Battalion (M)
Lieutenant Colonel Joseph G. Felber	Armored Officer, USFET, formerly CO 753rd Tank Battalion (M)
Major Vincent G. Guerin	CO 759th Tank Battalion (L)
Major Charles L. McNeill	CO 191st Tank Battalion (M)

TANK REGIMENT



60 CARBINES CAL .30
24 PISTOLS AUTO CAL .45
6 AIRPLANE LIAISON
2 CP VEHICLES FULLTRACK
1 CARRIER FULLTRACK
3 VEHICLES WIRE LAYING
2 TRUCKS 2 1/2 T CARGO
2 TRUCKS 1 1/2 T CARGO
8 TRUCKS 1/4 T
1 TRAILER 1 T
8 TRAILERS 1/4 T
1 TRAILER 3 KW GENERATOR

210 CARBINES CAL .30
396 PISTOLS AUTO CAL .45
24 RIFLES CAL .30 M 1
6 ASSAULT GUNS
9 CARRIER FULLTRACK
54 TANK MEDIUM
5 TANK MEDIUM (MECHANICAL RESERVE)
27 TRAILERS 1 T
15 TRAILERS 1/4 T
1 TRAILER 3 KW GENERATOR
17 TRAILERS M 10
28 TRUCKS 1/4 T
6 TRUCKS 1 1/2 T CARGO
35 TRUCKS 2 1/2 T CARGO
2 TRUCKS WRECKING HEAVY
5 VEHICLES TANK RECOVERY M 32

APPENDIX 5

* ATTACHED MEDICAL PERSONNEL NOT INCLUDED IN TOTALS OF REGIMENT.