

HEADQUARTERS
823RD TANK DESTROYER BATTALION
APO No. 403 U.S. ARMY

26 July 1945

SUBJECT: Recommendations for Changes in Organization and Equipment and Employment of Tank Destroyer Units.
TO : Commanding General, Fourth Armored Division, APO 254

I PERSONNEL

1. Improper ratings, Officer Personnel.
 - a. Company executive officer to be 1st Lieutenant.

A Company executive officer is the second in command and should be the same rank as a platoon leader. He is also responsible for the proper performance of the FDC when the company is on their secondary mission.



2. Enlisted personnel - Addition to present T/O.

- a.
 - (4) Tec 3 - HCO, one (1) per A, B, C & Hq Co.
 - (9) Tec 5 - Computers three (3) per A, B & C Co.
 - (4) Tec 4 - VCO, One (1) per A, B, C & Hq Co
 - (1) S/Sgt - Wire chief, Hq Co
 - (3) Sgt - Wire chief, one (1) per A, B & C Co.
 - (4) Tec 5 - Linemen, one (1) per A, B, C & Hq Co.
 - (12) Pvt - Linemen, three (3) per A, B, C & Hq Co.

The above FDC personnel have been drawn from gun squads, maintenance sections and company headquarters. Generally the men capable of performing such duties are also assigned important duties for the normal functioning of a TD Co in its primary or secondary role. It is felt that the above additional personnel are essential in giving maximum performance in a secondary role.

- b. Survey Crew

- (3) Sgt - Survey, one (1) per A, B & C Co
- (3) Tec 5 - Instrument operator, one (1) per A, B, & C Co
- (3) Pvt - Chainmen, one (1) per A, B & C Co.

Survey crews must be able to utilize daylight hours for survey. Makeshift crews are got generally available when most needed. When a survey is necessary the crew members must leave their primary job to perform their secondary mission. Often this caused neglect of their primary duty.

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(Our survey crew is made up of mechanics, gun crew members and men from company headquarters)

- c. (4) Tec 4 - Operator Radio, one per A, B, C & Rcn Co
- (4) Tec 5 - Operator Radio, one per A, B, C & Rcn Co

It has been found in combat that at least two (2) responsible men in addition to the company radio Sgt are radio electrician are essential to insure good communications. These two (2) men, one machine gunner and one basic, are, in fact, radio operators, and should be so carried on the T/O in a rank commensurate with the responsibility carried. These men should also be used as part of the company wire team.

- 3. The security section as organized has been adequate to care for the primary mission and to furnish some specialists in the company FDC during secondary missions.

II EQUIPMENT

- 1. Ordnance Additions.

- a. Three (3) 2 1/2 ton trucks

It is necessary to furnish gas and oil for one hundred sixty three (163) vehicles on this battalion, frequently making long hauls. At present this gas must be hauled along with water and supplies since only one (1) 2 1/2 ton truck and one (1) 3/4 ton truck are available for water, gas, oil, rations and supplies. Due to the wide deployment of a Tank Destroyer Battalion, supply problems regarding each and every vehicle arise. Due to the necessary use of the vehicle for its routine duty of hauling water and rations, gasoline must, of necessity, take second choice in priority and cannot be gotten to the vehicles; this causes a delay in movement in many cases because of lack of fuel. At the present time it is necessary to run the 3/4 ton truck and the 2 1/2 ton truck night and day to meet problems of supply.

- b. One (1) 3/4 ton truck for communications section.

This vehicle is presently authorized in excess of T/E by CG, Ninth U.S. Army.

- c. One (1) 1 ton trailer for battalion supply section

The hauling space is necessary to transport emer-



Recommendations or changes in TDs (Contd)

gency supplies and equipment. At present time the battalion supply section has a 2 1/2 ton truck, a 3/4 ton truck and one (1) command car in which to haul supplies, rations, gas, oil and water as well as carry on all other functions of supply. Any addition whatsoever would add greatly to the working of this section. In order to provide as much space as possible for hauling of gas, oil, rations water and supplies, it is always necessary to unload all vehicles completely at each stop whereas with a trailer this unnecessary labor would in part be avoided. The one (1) ton trailer would also serve as an extra unit on which supplies could be hauled when necessary. Trailer could be used as a storage space if the occasion arose in inclement weather.

- d. One (1) 1/4 ton truck for Battalion commander, with 12 volt generator system.

The M-20 assigned to the battalion commander has the SCR 608 radio which is the battalion NCS,

This makes it impossible for this vehicle to leave the battalion CP area. All other vehicles available in the CP must remain there for similar reasons. It has been found that it is suicidal to take large vehicles to the front lines where they expose gun positions and draw enemy fire, whereas a 1/4 ton vehicle could safely go into the front lines. A fast means of travel is also necessary for the numerous trips to higher headquarters.

- e. One (1) 1/4 ton truck for S-1.

Necessary transportation for S-1 on the many administrative trips it is necessary for him to make. A small vehicle is urgently needed for reconnaissance for CP positions. This vehicle can also be used for the procuring of mail from the APO and for transmission of incoming mail to the companies and platoons. Also can be used for messenger service when necessary.

- f. One (1) 1/4 ton truck for Battalion Communications Section. The current T/O makes no provision whatsoever for a communication setup for indirect fire. This Battalion has been called upon many times to fire indirect fire and its communication set-up is more or less piecemeal from what is available at the time. In this secondary mission of indirect fire it is to be properly cared for a vehicle is necessary for the laying of wire. The addition of an indirect fire mission without any change in transportation allocations has created a critical shortage of vehicles and a critical situation with regard to the laying of wire and the carrying of wire equipment. Companies of this unit have been on in-

Recommendations for changes in TDs (Contd)

direct fire missions up to eighteen(18) miles apart and while this not normal, all situations have required a wire laying vehicle.

- g. One ¼ ton per line Company to use as a liaison vehicle. The unit is authorized an excess officer per line Company who acts in the capacity of a liaison officer with Regimental Combat Teams. The ¼ ton vehicle is very necessary for the fulfillment of this mission.

2. Substitutions.

- a. Light tanks instead of M-8s in Reconnaissance Company. Additional fire-power and protection for performance of his duties. To the enemy an M-8 looks like a tank and therefore the presence in front lines always draws tremendous fire. Without having the armor, or maneuverability of a tank, it is there relegated to a four-wheeled motor driven SCR 608. Greater fire-power, armor and maneuverability such as a light tank possesses would enable reconnaissance units to function with some degree of success. Protection is the prime consideration and it is felt that an M-8 which operates a little further to the rear than the reconnaissance platoons could accomplish this.

3. Ordnance - Weapons and Miscellaneous Addition

- a. Ground mounts for all machine guns. For better defense of gun positions against enemy infantry accompanying tanks.

4. Ordnance - Weapons and Miscellaneous-Substitutions.

- a. 29 Cal .45 pistols for supply section and drivers in transportation section in lieu of Carbine and Rifles. The type of work performed by men in these sections is such that the Carbine and Rifle is cumbersome and unwieldy for instantaneous use. A pistol could be carried on the person at all times and provide the necessary protection.

5. T/E changes - Additions.

- a. Mimeograph machine and two (2) additional typewriters.

The unit Personnel section has great need for a mimeograph machine and two (2) additional standard typewriters. Captured German articles have filled this need to the present time.

Recommendations for changes in TDs (Contd)



b. Linemans Equipment.

<u>NOMENCLATURE</u>	<u>Hq & Hq Co</u>	<u>Gun Co (ea)</u>	<u>Rcn Co</u>	<u>Total</u>
Linemans Equipment				
TE-21	1	1	1	5
Reel RL-31	1	1	1	5
Switchboard, BD-72	1	1	1	5
Wire, W-110B	5 Miles	-	3 Miles	8 Mi.

The above equipment is absolutely essential in the proper performance of indirect fire roles, and proved invaluable when the tactical situation permitted wire communications in combat. Received by this organization on special authorization, from Hq First US Army and Hq Ninth U.S. Army.

c. RADIO SCR 300 (ANVR-6)

Radio SCR 300, mounted in 3 inch Gun, Motor Carriage M-10 is the only practical means of netting the Infantry-Tank Tank Destroyer Team. These sets were borrowed from Infantry Regiments on a long term loan basis, and proved especially valuable in river crossing operations. A specific target could be selected by the Infantry and fired by the Tank Destroyers with a maximum degree of success. Without SCR 300 communication it was necessary for the platoon leader to stay on the ground with the Infantry or if he was with his platoon the Infantry had to send a runner. In either case the men were more exposed to fire and the results obtained not adequate.

5. T/E Changes - Deletions

<u>a. NOMENCLATURE</u>	<u>Hq&Hq Co</u>	<u>Gun Co</u>	<u>Rcn Co</u>	<u>Total</u>
Alignment Equipment				
ME-238	2	1	1	5
Flagset, M-238	37	28	33	154
Converter, M-209	3	--	--	3
Radio SCR (Sup Ser)	1	--	--	1
Reel, RL-39	5	--	4	9
Panel Set AP-30-C and AP-30D	-	--	1	1
Tool Equipment TE-41	1	1	1	5
Wire W-130 on Reel DR-8	3 Miles	2 Miles	3 Miles	12 Miles

This equipment was found to be either unsatisfactory or unnecessary for combat operations.

Recommendations for changes in TDs (Contd)



7. Comments on Communications Equipment.

RADIO SCR, 610

Radio SCR 610 is too fragile to stand the punishment it is required to take. The basic cause of this fragility lies in the tubes, which should be built for longer operations.

PLATE SUPPLY UNIT PE-117-C is not readily adaptable to a 12 volt battery system. R-S, which is supposed to have 7.5 Ohms resistance, usually measures considerably higher. In one Company, 9 out of 12 PE-117-C's were out of action because of trouble with this resistor. It can be fixed by cutting the resistance down to 7.5 volts and soldering the resistor back with extreme care. PE-120 furnishes a better power supply, if vibrators VB-12-A and VB-13-A are available.

RADIO SET SCR 608

The fundamental weakness of this set is the tubes. They should be much more durable than they are.

8. COMMENTS ON ORDNANCE EQUIPMENT

Design of the Primary weapon and carriage.

Based on the experience this Unit has had in fighting a 3" gun, towed from Normandy to the Bulge, fighting combination of 3" gun, towed and M-10 in the Batt~~al~~ of the Bulge and the M-10 from the Bulge to the Elbe River, the following recommendations are made.

(1) The 90mm gun be used as the Primary weapon. The 3" gun is too small and will not effect a penetration on the front of a Mk V, VI or Panzer Jaeger. Unit has destroyed 57 Mk IVs, 25 Mk Vs and 18 Mk VIs to base this observation on.

(2) A muzzle velocity of 3500 feet per second should be developed for the 90 mm gun to insure penetration of heavy armor.

(3) The carriage should possess:

- a. A closed turret
- b. More flotation by widening the track to enable cross-country maneuverability.
- c. Diesel motors are preferable to gasoline.
- d. The vehicle should be heavily armored at the cost of reduced speed.

M-8 has the following deficiencies:

- (1) Underpowered - This is further aggravated by lack of traction and flotation.
- No armor protection - Have M-8s with 30 cal bullet holes thru turret and hull.
- Distinctive silhouette - At distance looks like tank

Recommendation for changes in TDs (Cont.)

so draws fire. Might as well have the tank and at least have some armor protection.
 Poor maneuverability - Turning radius very wide. Negotiation of narrow roads difficult. Poor vision of driver makes driving at night difficult.
 Poor design - Normal sized driver and assistant cannot sit upright when buttoned up. Periscopes set too low for normal sized man, cannot see thru them. Gear shift too far to rear makes efficient shifting of gears difficult.
 No top on turret, Radio on wrong side. To keep batteries charged when radio is operating must run M-8 continuously. Not possible in forward areas. No space provided for essential equipment. Cramped quarters of driver makes it difficult to even turn steering wheel. Excessive maintenance necessary. Our M-8s are in the shop more often than any other vehicle in the Battalion with the exception of the M-20, its counterpart.

The transportation platoon needs 3 2 1/2 ton trucks in the gas and oil section to enable them to do their servicing in a more efficient manner.

III EMPLOYMENT



1. Comments on towed gun units versus SP gun units.
 - a. In view of the fact that this unit was a towed Battalion for about five (5) months and a SP, M-10 Battalion for a little over four (4) months, through France, Belgium, Holland and Germany, it is felt that we are qualified to make a comparison.
 - b. The 3" gun, towed is definitely inferior for the type of fighting our mission required for the following reasons:
 - (1) In SP Unit, only five (5) men are required to accomplish the same mission it takes ten (10) on a towed gun.
 - (2) Due to the lack of maneuverability under fire, once emplaced and engaged the towed gun cannot be moved. The results of this are as follows:
 - (3) In village fighting the towed gun is a disadvantage in that the traverse is too limited and the men are exposed. In MORTAIN, FRANCE this unit lost a platoon of towed guns due to the fact that the guns could not reverse their field of fire in time to protect themselves from enemy tanks that had maneuvered in behind them.

Recommendation for changes in TDs (Cont.)

- (4). Towed guns have no armor protection and personnel are exposed to enemy small arms and artillery fire more so than M-10 personnel. This is indicated by the following figures:

From 24th June 44 to 3d January 45 as a towed Battalion this unit suffered the following losses:

Killed in action and died of wounds	----	46 men
Missing in action	----	72 Men
Wounded in action	---	207 Men

As a SP unit the casualties were as follows:

Killed in action and died of wounds	----	13 Men
Missing in action	-----	None
Wounded in action	-----	57 Men

The large majority of the casualties were caused by artillery and mortar fire, since approximately the same amount of fire was received during the two periods the following conclusions can be drawn:

As a Towed Battalion this unit suffered 2 1/2 times as many men killed and four (4) times as many wounded as compared with the SP mount.

2. It is the recommendation of this unit that a tank be substituted for a Tank Destroyer mount for the following reasons:
 - a. The M-10 is used in an assault role with Infantry in the attack. The open turret does not afford the necessary protection for the crew members and casualties are sustained from enemy artillery. For the assault role a machine gun mounted in ball mount in the hull is a must.
3. This unit has enjoyed a semi-organic attachment to the 30th Infantry Division with one exception since landing in Normandy. We have been made to feel a part of the Division and as a result better coordination and fighting ability was attained between the Tank Destroyers and Infantry. By always making the same attachments to Regimental Combat Teams, Infantry and Tank Destroyer officers became acquainted and could better anticipate each others needs. Better understanding, tactics and team work was the result.
4. Tank Destroyers should be attached to Division Artillery at Division level for the purpose of indirect fire only. As the Tank Destroyers are a part of the Infantry Combat Team they should be left under Infantry Command.

