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EMPLOYMENT OF TANKS IN SPANISH CIVIL WAR

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FOOTNOTE ABBREVIATIONS USED

IS Intelligence Summary (US).
AN Jour Army and Navy Journal.
2W "Two Wars and More to Come", by H. L. Matthews.
MA Military Attache Report (US).
FA Jour Field Artillery Journal (US).
CGSQ Command and General Staff School Quarterly.
SW "The First Year of the War in Spain", by Wanty..
AO Army Ordnance (US).
NYT New York Times.
Inf Jour Infantry Journal (US).
MW "Mechanized Warfare", by von Eimannsberger.
Conf Conference.

EMPLOYMENT OF TANKS IN SPANISH CIVIL WAR

1. INTRODUCTION.--It has been, and to some extent still is, the popular belief that the Spanish Civil War has been a testing ground for the tactical employment of the most modern implements of war, and that the lessons derived therefrom would either prove or disapprove the doctrines of certain major powers in connection therewith. However, this has not been the case, at least as far as the first year of hostilities is concerned, and this article will endeavor to explain the reasons therefor. (1)

It was hoped that at least one major engagement could be used to bring out in detail the principles of tank employment as used by both belligerents, but this cannot be done due to the very general information contained in all the reference data obtainable at this time as listed in the bibliography. The cause of this lack of essential detailed information is not known (information concerning detailed plans, orders, unit operations maps, etc.). It is possible that strict censorship on both sides, and lack of appreciation of the minute details desired in connection with tank employment by those available for observation on the Loyalist front, are responsible for the omission of these very necessary elements.

In this connection it may be of interest to note that the only eyewitness account of a tank attack, available at this time, is contained in a book written by a newspaper correspondent. This action has no tactical lesson to offer, merely describing the unsuccessful attempt of a group of Loyalist tanks, supported by infantry, to overcome machine-gun resistance in some stone houses on the outskirts of Madrid.

(1) IS No. 653, p 16416 (10-15-37).

Repeated assaults were of no avail due to the absence of heavy artillery necessary to demolish the houses. This resistance was later overcome by foot troops, in a night raid, without a single casualty. (2)

As no maps of a scale smaller than five miles to the inch dealing with any tank actions are obtainable, and it is assumed that all concerned are familiar with the general topography of the Spanish peninsula, no maps nor sketches will accompany this article.

As indicated above, all information contained herein deals mostly with the first year of the war as no detailed data is available concerning the employment of tanks during the year 1938, although they were used in every major battle. Also, no attempt will be made in orientation regarding the continuity of events as it is considered unnecessary in the presentation of the subject.

2. EQUIPMENT.--At the outbreak of the war the few tanks possessed by the military establishment apparently went over to the Nationalists and were used by them in their successful advance to the gates of Madrid. These tanks were of an obsolete World War type, mostly French, and were employed in small groups without fear of consequences (mostly in connection with cavalry advance guard actions) due to the untrained, undisciplined and poorly equipped militia opposing them at this stage of the hostilities. (3) Shortly thereafter the tanks used by both sides during the period covered by this article made their appearance, and aside from a probable increase in numbers and possible minor changes in armor and armament, it is believed these same types are being employed at present. (4)

(2) 2W, pp 281-284

(3) MA, 16680, p 8 (7-20-38)

(4) AN Jour (12-24-38), p 371

On the Nationalist side we find two types of tanks, one Italian and one German, both in the light class, the majority of which, it is assumed, are being operated by drivers furnished by the above named governments. (5)

Italian - Fiat Ansaldo

Max. Speed	26 mph
Weight	3.3 tons
Armor	.2-.5 inch
Crew	2 men
Armament	1-2 machine guns

This tank was used advantageously in the Ethiopian campaign but has met with little success in this war. Foreign military experts consider it too light and of insufficient armor and armament to be employed as an accompanying tank, the role it has been forced to play in Spain. (6)

German Light Tank

Max. Speed	31 mph
Weight	6 tons
Armor	.3-.5 inch
Crew	2-3 men
Armament	Twin MGs in turret

This tank is also considered unsatisfactory for the same reasons stated above.

The Loyalists are equipped with two Russian type tanks (really hybrids--combining British, Russian and Christie features), a light and a medium. Initially, it was understood, these tanks were operated by Russian personnel, but since the organization and completion of the Loyalist Tank School it is believed all unit commanders and operators are Spaniards. (7)

(5) FA Jour (May-June 1938), p 185

(6) AN Jour (12-24-38), p 371

(7) AN Jour (12-24-38), p 371

Light Tank T-26

Max. Speed	16-18.5 mph
Weight	8.5 tons
Armor	.5-.64 inch
Crew	3 men
Armament	2 MGs and 1 cannon 45-mm

Medium Tank T-28

Max. Speed	25 mph
Weight	20 tons
Armor	1.0 inch
Crew	5-6 men
Armanent	3 MGs and 1 cannon 45-mm

Both of the above tanks are considered superior to those employed by the Nationalists, mostly due to their advantage in tank versus tank combat (being armed with an antitank cannon) and their ability to operate over difficult terrain, including wet ground, with greater facility. (8) However, these tanks are also considered poor combat machines due to inadequate armor and certain constructional features that cause excessive mechanical failure, or their vulnerability (when incorrectly employed or isolated) at the hands of individuals employing containers filled with gasoline, which, when ignited, cause their destruction by fire. (9)

Although all of the tanks described above are of post World War design and construction, it is not believed that they are the latest types produced, and adopted for current military use, by the powers concerned. (10)

3. EMPLOYMENT.--It can surely be assumed that both the Nationalist and Loyalist General Staffs understand

(8) MA, 23443-W, p 2 (5-25-37)
(9) CGSQ (Dec 1937), pp 285 & 315
(10) MA, 23443-W, p 3 (5-25-37)

thoroughly the accepted principles of tank employment as practiced by the major military powers of the world today, but the shortage of this arm on both sides has precluded any opportunity to properly apply these principles, and even though the shortage in this arm had not existed, it is doubtful if any definite lessons of value would have been forthcoming due to the shortage in other weapons of the combat team, notably, artillery, air, chemical, and in addition, antitank guns. (11)

The tactical principles as taught at the Loyalist Tank School by Russian instructors are believed, in principle, to be the same employed in the schools of most modern armies. The means of applying them are absent. (12) On the Nationalist side it must be assumed, that with German and Italian officer personnel present, and their tanks operated by nationals of those countries, that they also attempt to apply the approved methods of tank employment of their respective military establishments.

The opportunity to learn anything about tank employment in open warfare was lost as the fronts had become stabilized before either side was able to obtain and put into action sufficient of these weapons. This is one phase of warfare wherein, it has been stated, the French and Germans differ; the latter favoring their use in meeting engagements, the former rejecting it. (13) However, this statement appears to be erroneous as the French, in their regulations, contemplate using tanks in advance guards. (14)

It has been estimated that the total number of tanks received by both sides during the first year of the war was

(11) SW, p 64
(12) MA, 6587, p 8 (6-27-37)
(13) CGSQ (Mar 1937), p 260
(14) Conf

as follows:

Nationalists: 400-500 from Italy and Germany

Loyalists: about 200 from Russia. (15)

As it can be assumed that all of these tanks were not received at one time, and at the start of hostilities, it is easy to understand, if the above figures are approximately correct, why tanks have been used in such small numbers in practically every operation to date.

From all accounts, except for the Loyalist action in the Parla and Torrejon sector south of Madrid in October 1936, and the interesting mechanized (so-called) battle of Guadalajara in March 1937, both sides have endeavored to apply the basic principles of tank employment in the attack (even though in small numbers), that is, tanks in mass closely followed by infantry who are supposed to exploit the success of a rapidly overwhelmed enemy position (surprise).

In the first action mentioned above, about forty Russian tanks, although initially supporting an infantry attack, and having gained the element of surprise, broke through the Nationalist position and penetrated alone as far as the artillery, the idea being that the tanks by their independent action would exploit the initial success and assure a complete victory. Although the enemy was not entrenched, and poorly equipped with antitank weapons, these tanks were repulsed by reserves, resulting in their partial destruction. Here was another proof that tanks acting independently of other arms are impotent in gaining a decision. (16)

The Battle of Guadalajara is very interesting, and has been widely discussed by foreign military experts, as it was

(15) CGSQ (Dec 1937), p 68

(16) CGSQ (Dec 1937), p 315; SW, p 53; CGSQ (Mar 1938), p 226

the first occurrence in modern warfare of a completely motorized offensive action. (17)

The Nationalist plan was to attack from the north, drive a wedge in the Loyalist lines in the vicinity of Guadalajara, some thirty odd miles northeast of Madrid, and open the way for a pincer movement on that city cutting its line of supply and communication to Valencia. (18)

Three parallel columns were to initiate a surprise attack from Algora, about thirty-five miles northeast of Guadalajara. The main, or center, column was composed of solely Italian troops, the Littorio Division, completely motorized, including artillery and tanks. The entire attacking force was supported by approximately two hundred tanks. (19)

It had been raining for days and the ground was very wet and muddy. The element of surprise was gained, however, and after a brief artillery bombardment the advance guard, composed of tanks and motorized infantry, moved forward practically unopposed. In three days this force penetrated to a depth of nearly fifty kilometers but was forced to retreat to its initial line of departure due to the fact that the main body, in trucks, was held up on account of a small bridge giving way under the weight of a loaded vehicle, holding the entire column on the road as the condition of the ground prevented the light tanks and trucks passing around this obstruction. (20) At this inopportune time the main body was attacked by Loyalist aviation, demoralizing it, and the Loyalist counterattack did the rest by throwing the entire attacking force back on its original positions. In this counterattack the Loyalist medium tanks, which could

(17) SW, p 47

(18) SW, p 18

(19) CGSQ (June 1938), p 188

(20) SW, p 48; CGSQ (June 1938), p 188

operate on the wet terrain, easily were victors over the Italian light tanks in the mopping up operations. (21)

This action was another proof of the impotency of tanks inadequately supported, and also, that motorized equipment is not suited to all conditions of terrain and weather. (22) However, it is doubtful if the motor vehicles (other than tanks) used were of the latest cross-country types as we understand such equipment.

These two examples appear to be the main exceptions to the usual employment of tanks by both Nationalists and Loyalists. In all other major engagements the employment seems to follow the accepted pattern. That is, tanks, followed as closely as possible by infantry on foot, and preceded by an artillery or aerial bombardment, carrying a definite objective to be mopped up and occupied by the foot soldier. (23) In addition, regardless of the total number of tanks used in any one operation, for instance two hundred by the Nationalists at the battle of Santander, it is not believed that over fifty, or possibly one hundred, were ever employed as a unit under one commander in a concerted action.

4. SUMMARY.--It must be clearly understood, that in comparison with our conception of a modern war, the Spanish Civil War is a very small war indeed. It has been estimated that the opposing forces hardly exceed 500,000 combatants on each side, and these are operating on a front approximately 1100 miles long, a great part of which includes extremely mountainous terrain.

At the outset, the Spanish Army, which initially had to furnish the leaders and equipment for both factions, was never considered a modern military establishment in any

(21) SW, pp 51-53; FA Jour (May-June 1938), p 188

(22) SW, p 52; AO (Mar-Apr 1938), p 280

(23) CGSQ (June 1938), p 188

respect, and it is the concensus of opinion, that with all due regard to his personal courage and patriotism (and this is doubted in some quarters), the Spaniard, being essentially a rural type, is not a good tank soldier. (24) If this is true, aside from the known fact that both sides are woefully lacking in modern equipment in sufficient quantity to equip properly the forces opposing each other, it is easy to understand why the majority of military experts agree that nothing of tactical value has been learned from this war. (25)

The use of tanks in this conflict has taught us nothing in connection with their tactical employment, merely serving to verify lessons already learned from the World War; that is, that the successful use of tanks is dependent upon surprise, the support of other arms, and their employment in mass. Also that tanks acting independently cannot gain a decision, and that no tank operation will be successful over terrain which is not suited to their use. (26)

It has been stated that the light tank has proven its uselessness on the battlefield due to its insufficient armor and consequent lack of protection for its vital parts and crew and its unstability in connection with the accuracy of its fire while in motion. Also its inability to cross obstacles, both natural and man-made that are easily overcome by the medium and heavy tank. (27) In considering this statement it must be remembered that the light tanks referred to do not compare in any respect to our conception of a tank of that class, such as our own M2A3, which, although a light tank, is faster and more heavily armored than the Russian T-26, and is undoubtedly far more efficient in mechanical performance than any known tank employed in Spain to date. (28)

(24) AO (July-August 1938), p 26

(25) NYT (12-27-38), p 8, Sec C

(26) AO (July-August 1938), p 27; Conf

(27) Inf Jour (July-August 1938), p 354

(28) Inf Jour (July-August 1938), p 369; NYT (12-27-38), p 8, Sec C

Due to the marked efficiency and improvements in antitank weapons as demonstrated by both the Nationalists and Loyalists, there is some doubt as to whether the light fast tank, even though employed properly and in sufficient numbers, possesses any value as an accompanying or combat tank in an attack on a prepared and properly equipped defensive position. (29) This has not been definitely determined however, in any action of the war so far, due to the aforementioned lack of sufficient quantities of modern implements of war in the hands of both belligerents; that is, where the attacker possessed the normal number and types of tanks, and artillery support for same for the operation planned, and the defender possessed the normal amount of antitank weapons and artillery support (plus highly trained and disciplined troops on both sides), as would normally be expected in any engagement between forces of two major powers. In addition, the effect of chemical warfare action against tanks has not been determined due to the fact that this weapon has not been used in Spain. (30)

However, the statement that the light tank has demonstrated its uselessness is not agreed with, particularly in respect to reconnaissance in force, protection of motorized, mechanized and marching columns, protection of flanks, and as a breakthrough, counterattack and pursuit force.

As stated previously, it is believed that no tactical doctrines regarding the employment of tanks, as understood and adopted by the major military powers of the world, have either been verified or proven to be wrong. However, certain technical and constructional lessons have been learned, and one of the most interesting is the fact that the battlefield

(29) Inf Jour (July-August (1938), p 370; AO (July-August 1938),
p 27
(30) MA, 16680, p 1 (7-20-38)

speed of a tank is now considered of secondary importance to its armor and armament. (31) How the German and Italian General Staffs could have been misled in this connection, as demonstrated by the tanks of those countries now employed by the Nationalists, is difficult to understand. It is said that the Germans have rearranged their evaluation of the desirable characteristics of the tank in this respect due to the experiences gained in this war. (32) It is interesting to note, that though the French undoubtedly appreciated tank speed in connection with its tactical employment, they have never wavered in their belief that armor, armament and mechanical efficiency are more important on the field of battle, and are considering the construction of tanks weighing approximately fifty tons to be used in attacking heavily defended positions. They have already adopted a combat tank weighing thirty-two tons. (33)

It is also interesting to note, that prior to this war, and based on an erroneous estimation of the combat efficiency of the post World War development of the tank, in some quarters it was believed that an intensive artillery preparation prior to an attack, in which tanks were to take part, would be unnecessary. This has proven to be untrue. It is now generally conceded that a most thorough artillery preparation is necessary in order to neutralize the antitank weapons of the defense, otherwise the tank attack will be broken up or immobilized. (34)

In the foregoing discussion, pertaining to tanks of a combat (accompanying) type, or as in this war, those used as such, it should be noted that the idea of arming all tanks

(31) Inf Jour (Jan-Feb 1938), p 78

(32) MA, 2657-E-353, p 5

(33) MA, 23443-W (5-25-37); MA, 23440-W (5-25-37)

(34) AN Jour (12-24-38), p 371; SW, pp 45 & 65

with an antitank gun is gaining favor in the military minds of all major European powers, as it has been verified, for the second time, that in any combat between tanks (and this is becoming more impossible to avoid), those so armed are always victorious. On the Nationalist side (and also the Italian Army), during the past year, an average of approximately one tank for each platoon has been equipped with an antitank gun for the protection of the unit in case it is attacked by enemy tanks. (35)

In any discussion concerning military operations, the human element must not be overlooked, and especially in connection with this subject, as it has been clearly intimated that the tank personnel on the Loyalist side is inferior, and in some cases sabotage has been resorted to in order to avoid hazardous duty. (36) If this is true, it is another reason for being careful in drawing too definite conclusions from any action participated in by this particular force. It is believed that this condition has been improved by this time.

It is the concensus of opinion of many military experts that success in the employment of tanks in any modern military action depends to a great extent on the courage, discipline and high state of training of the personnel charged with their operation. (37)

5. CONCLUSIONS.--a. Tactical.--That the problems occupying the military minds of the world for the last twenty years on the employment of tanks have not been solved by any action to date in the Spanish Civil War. (38)

That this war has merely served to substantiate the lessons in tank employment already understood from experiences

(35) FA Jour (May-June 1938), p 191; MA, 16680 (7-20-38), p 13
(36) MA, 6587, p 8 (6-27-37); CGSQ (Dec 1937), p 285;
Inf Jour (Nov-Dec 1938), p 503
(37) CGSQ (Dec 1937), p 286
(38) CGSQ (Dec 1937), p 286

gained in the World War; that is, that tanks can only be successful when employed in mass in any type of operation, and closely supported by trained and disciplined infantry, on foot, in all attacks on a prepared defensive position, and closely supported by mechanized or motorized troops in any other operation except reconnaissance in force (surprise being essential in any employment).

b. Technical.--That the light tank (European classification) is of doubtful value as an accompanying tank due to inadequate armor, armament and obstacle crossing ability. Its main role is in reconnaissance in force, protection of mechanized, motorized, and marching columns, protection of flanks, counterattack and pursuit. (39)

That all types of tanks, or at least a certain percentage in each unit, be armed with an antitank gun for tank versus tank combat. (40)

That no tank should have armor less than one inch in thickness for the protection of its crew and vital parts.

That the battlefield speed of a combat tank is secondary in importance to its armor protection and armament (41), although a high horsepower per ton is desirable in order to obtain battlefield maneuverability. (42) In this connection it is believed that a top speed of thirty miles per hour is sufficient to meet any tactical requirement of accompanying tanks if the normal combat zone speed of motorized columns of infantry and artillery are taken into consideration.

That there is no possibility at present of considering any known tank as an all-purpose tank for the same obvious reason there is no all-purpose battleship. (43)

(39) SW, p 58

(40) Inf Jour (July-August 1938), p 355

(41) MA, 23443-W, p 3 (5-25-37); MA, 23440-W, p 1 (5-25-37)

(42) Conf

(43) MW, p 214, par 3 and p 139, par 5

c. General.--That the latest development in tanks of the various major European powers have not been used in Spain as the powers concerned are surely not willing to divulge their respective secrets in this connection and expose the strength or weakness of the means they must depend upon for their very existence in the event of future hostilities. (44)

That a brief, but thorough, artillery preparation is necessary to insure the success of a tank attack on a prepared defensive position. (45)

That means for aerial reconnaissance be made available at all times for commanders of tank units to include the regiment and separate battalion.

That tank organizations should be composed of selected personnel only and that the highest state of discipline and morale be maintained at all times and under all conditions. (46) In this connection, it has been usual to assume lately that this is a simple matter to effect, however, it is believed that the unit commanders (particularly the company) in the next emergency, due to the apparent decrease in blind national patriotism and the increase in pacifism, socialism and communism since the World War, will have a much more difficult task in this respect than was our lot in 1917-18, and this fact should never be overlooked nor subordinated to any phase of training, due to the large percentage of non-professional enlisted personnel in our present military establishment which is daily sending back to civil life a great number of young men upon whom we must count as future basic instructors, and leaders of small units, in the next emergency.

(44) AN Jour (Apr 1938), p 785; MA, 23443-W (5-25-37), p 3

(45) SW, pp 45 & 65

(46) MA, 6783, p 3 (2-26-38); MA, 6587, pp 8-9 (6-27-37)