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THE FUTURE OF TANKS FOR THE NON-PRODUCING NATIONS: HOW TO MAKE THE BEST USE OF A TANKS FLEET?

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HOW TO MAKE THE BEST USE OF A TANKS FLEET?

By Major Khalifa Aldoseri

AIM

1. Focusing on the best possible way to use the tanks when we are limited in the production means or the numbers, what are the areas of strength and weaknesses, how to train and prepare for current, future operations and how to evolve in implementing the tanks domestically and in overseas deployment.

INTRODUCTION

2. Tanks were introduced as a solution for tranches and machine guns supremacy during WWI, and without debating nor arguing of whom 1st invented the tank; the battle of the Somme in 1916 was the 1st official use of Tanks in an offensive operation when nearly 50 new war machines stunned the Germans with mass of protection, mobility and fire power, and from that moment of history the land forces across the globe realized that you cannot have ground forces advantage without Tanks, as a matter of fact, Russia beat Hitler by tanks[1] and since WWII most military conflicts in way or another Tanks were used.

3. The Main role that lead to the invention of the modern Tank was offence, how to penetrate the enemy forces with a weapon that less fragile against rapid fires, a moving protected fort which enables the infantry to win and hold the grounds, but through history this weapon like any other machine, technology played big role in formulating its identity and proper use, as we reached time in history where the air superiority have made many believe that the era of tanks is long gone, and the only use for them but to resemble dominancy among nations. In this paper I will try to address the areas of strength which needs to be maintained and the areas of improvements that tanks units need consider in the near future, I will try to find economic solutions to the common issues and worries tankers have.

DISCUSSION

4. Around the world there are three distinguished tanks manufactures that possess the ability to mass produce elite reliable tanks, Krauss-Maffei Wegmann (KMW) – Germany, General dynamics (GD) – the United States of America and Uralvagonzavod – Russia, along with few other competing countries the likes of France, the UK and China which are leading the field of R&D of Tanks but that comes at great cost of resources and allocations which can be burdening to even to most financially stabled nations which leave the non-manufacturing countries in a huge dilemma in a gray time where the direction for Land forces warfare is limited to the current unconventional warfare and prediction of the future hoping for that worse never comes.

5. In the annual strong Europe tank challenge, the German Leopard2 has demonstrated its edge by winning the 1st place in the last 3 years, interestingly enough in 2017 the winners were Austrian Leopard2A4 users, among very capable other tanks the likes of M1 Abrams Sep v2, Leclerc, challenger and more[2]. That indicates that many countries have successfully practiced

[1] Tharoor, Ishaan. *Russia Beat Hitler with Tanks. Now it's Showing Off the Tank of the Future*. Washington: WP Company LLC d/b/a The Washington Post, 2015.
[2] (EGNASH, 2018)

being efficient in managing their tank fleets with many obstacles of course. Unfortunately one of the joys of possessing tanks is managing the gab in the capabilities between the owned fleet and the newer generations, the main strengthens of a tank are mobility, protection and armament so by taking as an example the CAF Tanks fleet which consists mainly of the Leopard2 A4, with an MTU power pack of 1200 HP mobility wont be an issue, the same case when it comes to the main gun, the 120 mm Rheinmetall smoothbore is still the most lethal in the market, and finally the protection which is the most critical piece, there is never enough protection and we can see that through the recant approval to equip to the most modern version of the American Tanks, the M1A2 SEP v.2 with an Israeli active protection system (APS) the " Trophy ", also the Russians are implementing an addition layer of protection with internal armored capsule for the crew with more than 900 mm RHA equivalent. Therefor the CAF fleet can be easily and cost effectively modified to reach high level of protection against various threats depending on the future expected conflicts.

6. The main concern when it comes to long dependency upon the similar fleet is aging, and the worrisome of lacking the required spare parts in the future, nonetheless the difficulty of finding new reliable suppliers once the manufacturer stops producing the spares, which is unlikely for the Leopard 2 tank for its popularity and the big number of its users across the globe, yet the countries that intend to put their fleet in the service in the coming 20 years need to manage their spares depots by keeping 3 to 5 years inventory reserve for any unexpected surprises, even though that easier said than done.

7. The major conflicts were tanks are used have shown how ineffective they're once it used unconventionally, like Syria and Yemen were you can see how poor tactics and underestimating the opponent anti-tank (AT) capability can be tanks worse enemy, that leads us to the importance of training and following standard procedures , and how tank units need to respect the fundamentals when operating in non-conventional operations environment. One of the proposed solutions is to keep the cycle of training longer than annually to be prepared for the various tasks the units might be assigned, a cycle of training starts from the sections tactics when operating as support for the light units in urban terrain to a whole regiment tactics as a whole unit operations, that along with flexibility in the training schedules to meet the emerging threats and the renewing operational requirements. It's a standard for the professional modern military units regardless of how difficult or long the training objectives are, the commanders always meet those the objectives and standards, on the other hand the biggest problem usually is preparing for the vague future conflicts which are difficult to predict and identify, what should be the main effort, what the focus of training, conventional or – non-conventional, therefore undoubtedly there is a necessity for flexible renewable training cycle which not limited to time but by standards and contingencies.

8. New solutions and technologies are merging by the day, from heat Signature concealing paint to various protection kits to new ammo with higher muzzle velocity, but the base hardly changes from steal protected body armed with main gun mobilized by a power pack, therefor investing in cost effective modernization kits is always a solution, to support that theory there are reports suggesting that the Russians and after years of R&D which led them to the production of their newest most advanced tank the Armata T-14 they are seriously considering to cease the production and invest in modernizing their T-72 fleet, the main reason is the financial

constraints[3]. So one considerable approach is to keep up with multiple threats is to have portable protection kits, which easily could be attached and detached to the main body of the vehicle in a short time, lighter kit for low intensity missions when the main threat is the rocket propelled grenades (RPJ) and heavy kit for conventional operations. By doing so there are great outcomes, first lowering the fuel consumption when operating the vehicles in non-operational environment second the connivance of being able to replace the "Armor" whenever a more effective technology surfaces and the ability to shift from passive or active armors, thirdly it easier to test and experiment the effectiveness of the armor when it's detachable.

9. The additional systems needed for tanks the likes of mine rollers systems, where tanks are expected to lead dangerous ways and deal with mines or even the improvised explosive devices (IED), it's always a great advantage for the ground forces to have mine sweeper equipped tanks, every land force need to have at least one system per platoon, slowly in the coming 5 to 10 years, and as an advantage similar to the protection those systems can easily be attached and detached leading to huge flexibility advantage. One more capability that tankers value is Tank recovery vehicles (TRV), as much as the tanks are reliable during the operations yet always technical issues show up to the theater, the Leopard2 tank is a masterpiece when it comes to its MTU engine, one of the most reliable engines across the globe, and one more advantage of this power pack is the ease of replacement, it would latterly take 30 minutes to change one tank engine on the field, yet for that to be possible a capable TRVs are highly needed in every tank company. Additionally, the newer generation tanks have advanced command and control (C2) systems, APS and have better detection and counter detections capabilities but those are can be easily added to fleet whenever needed as future programs.

10. Transportability is a key for the tanks in the future, the tanks units need to have their own trailers to easily deploy their vehicles wherever they are needed, especially in a vast country, additionally the use of train network can add immensely to the agility of the tanks units. Also strategic lift should be an option, one of the very niche capabilities is the ability to deploy tank company by air, so as an example if CAF in the future in cooperation with RCAF came with a plan to be have the capability to deploy tank CO in 48-72 hours in any theater that would be a huge contribution to the NATO and by that the gap in the capabilities can be easily closed with the other allies. The C-17 can carry one main battle tank (MBT) as the C-5 can carry two so such a capability is worth investing in.

11. The Canadian army never had any real interest in purchasing attack helicopters because they were far too expensive to buy and maintain and keeping tanks was the major priority[4]. This stance needs to be restudied; the attacking helicopters are a must in today's warfare, and ground forces will always need close air support (CAS) in any type of operation, great example the operations in Afghanistan, many battles outcome would have been uncertain without the CAS, there are economic alternatives than the Boeing AH-64 Apache which costs more than a whole tanks platoon, like the Bell AH-1 super cobra with almost the price of one tank.

[3] (Gady, 2018)
[4] (Maas, 2017)

12. The use of military simulators (MS) in training for tankers is needed on all levels, from engagements to the tactical and operational levels. Tools like full fidelity vehicle simulators at the crew level, to deployable desktop sets for the tactical training and war gaming simulators for the operational level. Advanced capable Simulators are no longer a luxury for the land forces but an essential requirement that is needed to be programmed in the training annual rotation. During the field training exercises (FTX) the use of the deployable gunnery training systems can reduce the costs of the FTX's, also to give the FTX's extra sense of reality the use of the Multiple integrated laser engagement systems (MILES) should became the core of FTXs to unsure the highest level of realism.

CONLUSION

13. This paper represents the minimal required effort to keep the tanks fleet rolling for the coming 20 years, with some focus on the some areas to improve, expend and sustain. Most of the 3rd generation tanks the likes of the Leopard2 have the core needed for future operations; with minimal cost effective modernization efforts those beasts can be with longer fangs for years to come. Tank units have to keep what they have been good at all through history, being efficiently, lethal and ruthless, even though sometimes the political and the financial conditions get in the way, but as usual tanks surprises everyone against the odds and one great example is the decision of involving the CAF tanks in Afghanistan which many didn't agree to and argued that it's going to be catastrophic, yet the results were nothing but positive. The northern star for the 3rd generation tanks is protection, with great fire power and power pack the challenge remains the protection from the unforgiving threats likes of IED's and AT's.

RECOMMENDATIONS

It would make sense for the nations which have large fleets of tanks to merge them into the maneuver units at the battalion or brigade level, but for the nations with limited number of tanks the better of structuring the tanks into pure heavy battalions, so they remain as a decisive strike force when they summoned in a great scale weather domestically or overseas. Training, sustainment and development would be much easier, with sophisticated training on every echelon the effectiveness of tanks implementation will increase. The leopard2 is a very competitive vehicle, and with few modernizations it will be a great asset for the land forces years to come. The main modernization should include enhanced protection based on the expected threats the nation will have to deal with in the future, multiple layers of protections, tactics, policies, passive and active means. The need for mine rollers is unquestionable, a few in every tank company has become an operational necessity. Spare parts depot for the armored corps with inventory for couple of years in highly helpful, also obtaining durable and reliable TRV's like the Bergepanzer Wisent 2 or the M88 for each and every tank company and securing multiple mean of transportation to increase the agility and the deployment speed especially with strategic lift capability even for a small force would make a competitive advantage. The land forces operational success without CAS in today's environment is close to impossible so for any armored corps the availability of attacking helicopters is a near future priority, and finally in the era of digitization where an effective C2 can make the difference in the battle field, digitizing the

forces has become a need, the armored units will always be more agile with proper C2 capabilities and a training cycle which involves the use of MS on base or during FTXs, also the use of MILES for increased training reality and training outcome measurement.

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