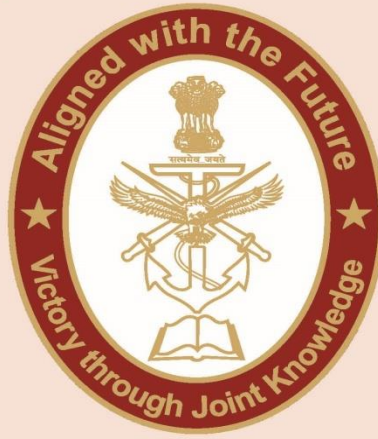


CENTRE FOR JOINT WARFARE STUDIES



CENJOWS

**EVOLVING INTO
A TANK FOR
HIGH ALTITUDE**



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The current Sino Indian standoff has highlighted the lack of a suitable tank for high altitudes. The tank is required not only for defending our territory but also for carrying out any offensive into China. Unless we pose a credible offensive threat to China, our territory will always be subject to salami slicing. Having a light tank in adequate numbers in Eastern Ladakh and Sikkim is mandatory. The second issue which has been starkly highlighted is that we need this tank as of 'day before yesterday'. India does not have the luxury of daydreaming through strategic partnerships or building the castles (FRCV) in air.

Procrastination by our military and civil bureaucracy has been the thief of our territory. Enough of paperwork. Keep the draft DPP a side and get down to business. We do not need a DPP. We need a tank. We must build a tank now with what we have and can. We have two choices. We can go back to the Russians as we have traditionally done and buy a light tank from them. The Russian lobby in our uniforms must already be salivating at this prospect. Otherwise we take the Atma Nirbharta route and do things on our own. I would prefer the later.

There are basically two options. First use the K 9 Vajra hull and build a light tank on it. The second option is to up-gun a BMP and convert it into a light tank. I have grave doubts whether anything beyond a 40 mm gun can be mounted on a BMP. A 40 mm gun will be inadequate for the task. Also, OFB has major issues of capacity, on time delivery and quality, besides undergoing the wobble of corporatisation. We are left with only one option. Luckily it is credible. However, within this we have two choices. We can design and build a tank using the Vajra Hull and mating it with a 105/120 mm gun and turret. We might come out with a prototype in about 2 years. Carry out trials for another two years and then negotiate and place orders. By then we would have lost some more salamis to China! The other option is to evolve into a light tank by down gunning the Vajra progressively in stages while increasing our combat power. Have a look at the Russian T series of tanks T34-T55-T62-T72-T80-T90. It is an evolution. Though the current case is different, the lesson is to evolve and not attempt reinvention of the wheel.

Stage-1. Convert two VAJRAs into high altitude capable guns by incorporating heating devices, turbo chargers, using thinner oils, modified fuels and using better rubber parts. Incorporate a **CM3LR Sight** to improve its antitank engagement capability. Induct them into Eastern Ladakh forthwith. Use both guns for a couple of months. Based on the experience, modify and induct one regiment of high altitude capable VAJRAs into Eastern Ladakh by October. The hull and engine would be proven fit for the job. Any other problems will also bubble up. It is a concept of operational utilisation cum trials. Use the experience of 155 mm Dhanush environmental trials of a troop in high altitude. Additionally, the regiment so inducted reinforces the existing armour in Eastern Ladakh. A 155 mm 52 cal SP gun with a sophisticated night sight like CM3LR will provide devastating direct fire. Remember Tololing and Tiger hill being plastered by BOFORS? All Chinese defences will become vulnerable. It will blow any Chinese tank to smithereens. The CM3LR Sight is important. It is available in India with other guns. At 47 tons, the AFV will be mobile enough for the purpose. The gun can be used in normal role also. Its 52 Cal barrel achieves a range of 40 km. In high altitudes, it will achieve over 50 km. One VAJRA SP regiment will change the firepower balance in Eastern Ladakh. It will immediately generate offensive options. The major payoff will be that intent is conveyed.

Stage-2. Strip the VAJRA of unwanted weight. Even if its weight can be reduced by about 2 tons, its mobility will improve substantially. However, care should be taken to ensure the overall stability is not lost. A stripped-down VAJRA should be able to operate in Eastern Ladakh in about 3-4 months. This stripping operation should be done in Leh. If nothing else, we will have a high-altitude capable VAJRA – fit for both antitank and indirect roles. Let us also not fret too much about purity of a tank design. In Eastern Ladakh the requirement is mobile shooting capability with a degree of protection and not great manoeuvrability. Till this stage ammunition is not a problem at all. We have adequate 155 mm ammunition.

Stage-3. Must commence simultaneously in parallel. We need at least two options of a Vajra mated with a turret and guns in the range of 105-120 mm. It should make use of the feed-back received from the inducted VAJRAs. I am not too worried about stability, mating etc. the VAJRA hull will take on

any tank gun in the 105/120 mm class. Reason is simple. A 52 cal 155 mm gun which achieves 40 km range is a beast-compared to all other guns. Remove that and the VAJRA hull could be prancing horse. Target a weight of about 35 tons. Time frame. In 18 months, we should be evaluating the equipment in Eastern Ladakh. The evaluation should be for about 2-3 months (Max) since the VAJRA would have been in use already in High Altitude for 2 years plus by then. Thereafter it is production time. We must have clarity on ammunition in the meanwhile. We should not end up in a cul-de-sac where we have a tank without ammunition. All maintenance and quality related issues should have been sorted out meanwhile. Trials should be largely truncated since most of such evaluation has already been done on the K9 VAJRA Gun. Commence production when some degree of assurance is visible that the effort will succeed. Some risk taking is mandatory.

Stage-4. Must commence once the candidates for the turret are identified. The idea will be to reduce the weight of the hull by incorporating better and lighter materials. Our aim should be to ensure that the overall weight should not exceed 30 tons ultimately. Part of this endeavour should be to come up with an indigenous 1000 hp engine within this time frame on a mission mode. Otherwise sack the entire R&D staff of those who have been fooling the nation for the past two decades that they will produce an engine. Induct some right thinking, risk taking youngsters to deliver the goods. I am making this statement very deliberately.

For this option we have everything in place – design, development and production capability. What we have been lacking is the motivation. That has been provided by the Chinese, who have appeared with a salami slicing knife. The natural question will be – will our system permit this? My answer– the system will enable it double time if two gentlemen sit across a table and decide that it should be done. One sits in the 5th Floor of Sena Bhavan. The other sits in the 1st floor of South Block. In my opinion, the Army should have the fire in the belly to take the reins and ride this horse with everyone (MOD, DRDO, OFB, Industry) enabling it.

If this comes through, and I do not see why not, we will feel late Mr Manohar Parikkar's warm smile from heaven as it was depicted with the Rafale in flight in the social media. After all it was he, when sitting in 1st floor South Block decided with the gentleman in 5th floor Sena Bhavan that the Vajra (and more) should come in. Everything came – despite the GSQRs, trials, CNC, DPP, DAC, DPB, DGQA, FADS etc etc. If the path to hell is crooked. The path to heaven is more so.

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