LETTERS

Thoughts on the Tracked M113 Versus the Wheeled LAV

Dear Sir:

The Jan-Feb 2002 *ARMOR* was interesting, informative, and — in the case of "Murphy's Laws of Armor" — rather amusing.

In his article, "Employing Armor in Low-intensity Conflicts," 2LT Noah Kanter provides much information I have not seen elsewhere, in a well-written overview of Israeli and Russian experiences. Unfortunately, his closing paragraphs contain some significant errors and omissions.

2LT Kanter describes the M113 as "too heavy," and favors the LAV because it is "a lighter, more mobile vehicle." The truth is just the opposite, however. The M113 is about 500 pounds lighter than the Marines' LAV I, and weighs roughly *5 tons* less than the LAV III.

Also, the ability of the tracked M113 to negotiate adverse terrain and crawl over improvised obstacles is superior to the wheeled LAV. (For some interesting comments by a cavalry commander regarding LAV III mobility during Army tests, see "The New Art of Combat," *Jane's Defence Weekly,* 11 October 2000.)

In addition, LT Kanter compares "the ability [of the LAV] to carry nine soldiers, as opposed to the six of a Bradley," while conveniently ignoring the fact that the M113 was designed to transport *11* infantrymen. Lastly, he says, "I do not propose that we form a motorized army..." Actually, by advocating an armored force equipped solely with wheeled vehicles, a motorized army is precisely what he is proposing!

There were also some inaccuracies in the letter by LTC Larry Altersitz ("Tank Guns on a Howitzer Chassis..."), who — like myself and others — thinks that "the M113 should be the vehicle of choice for the IBCT." The M113 has several advantages over the LAV III, not least of which is that it is already in service, and could have been used to equip the IBCTs more than two years ago.

The one major drawback to the M113 family is the lack of a variant that mounts a large-caliber, high-velocity main gun. LTC Altersitz's proposal to revive the M108 self-propelled howitzer, or to install an M109 turret with a 105mm howitzer onto an M113 chassis, simply "won't fly" — at least not on a C-130, as the M108/M109 hull and turret are about two feet too wide to fit in that aircraft's cargo bay.

One possibility that seems to never have been considered is to install a 105mm tank gun on the M113 chassis. Since the deck heights of both the LAV and M113 are approximately the same, and the LAV III mobile gun system (MGS), with its low-profile turret (LPT), fits into the C-130, the same should be true of an M113/LPT. Because of the low weight of the M113, and the high recoil of the 105mm gun, this is likely not a feasible option, but there is some doubt that the M68 cannon can even be successfully mated to the 19-ton LAV III. MOWAG, the company that designed the LAV series, reportedly asserts that it would be necessary to have a much heavier (and possibly larger) chassis for such a weapon system to be workable. If true, it means that the Army is expending precious resources on a goal that can't be achieved.

Since the MGS is intended primarily to provide direct fire support to infantry, not to fight tanks, perhaps a more practical armament would be a breech-loading, 120mm gun-mortar. This dual-purpose weapon can be employed for both direct and indirect fire, and — due to a maximum elevation of 80-85 degrees — is ideal for the high angles of tire needed in urban combat. To be able to engage tanks would necessitate the development of a HEAT round, or perhaps a vehicle mount for the Javelin missile.

I know that the idea of a 120mm gun-mortar is not going to be enthusiastically welcomed by tankers, even though it has some useful characteristics. Nevertheless, it may be the only viable choice for a direct-fire weapon that uses standard ammunition, and can be successfully integrated into a light armored vehicle chassis.

One final point: I truly hope that the leadership will reconsider the decision to equip the Brigade Combat Teams with the limited-mobility LAV III instead of tracked vehicles, which would have mobility better suited to full-spectrum operations. If this does not happen, then I fear that in the future we may see a replay of the destruction of Groupement Mobile 100, another force that chose wheels over tracks for much the same reasons that the LAV III was selected for the U.S. Army...

STANLEY C. CRIST

Armor in LIC Article Offered Good Overview, Flawed Conclusion

Dear Sir:

I wish to comment on the article "Employing Armor in Low-intensity Conflict: Some Lessons for the U.S. Armor Force" by 2LT Noah Kanter (*ARMOR*, Jan-Feb 2002).

The bulk of the article (an overview of Russian experience in Afghanistan and Israeli experience in Lebanon) is interesting and full of thought-provoking observations and insights. Unfortunately, all of this good work is compromised by the final "Lessons for the U.S." portion, which is factually muddled and seems merely to cheer on the Army's decision to procure LAVs. The author generalizes LIC, generalizes all tracked vehicles, and then sweepingly advocates the LAV as a solution. This is utter folly.

First, LIC is militarily and politically complex. Russian experience in Afghanistan has many parallels to U.S. experience in Vietnam. Modern armies confronted poorly equipped guerrilla forces that constantly evolved and improved, especially through outside assistance. The enemy ambushed targets of opportunity and faded away into rugged, inaccessible terrain. Firepower was applied liberally, but the real problem for the military was a lack of a clear objective. Neither the U.S. nor the Soviets sought to conquer a country. Instead, they tried to defend and stabilize the existing (some might say "puppet") governments.

Israeli experience in Lebanon was even more restricted. That situation morphed into a security mission during a guerrilla insurgency in a MOUT environment. Responding with conventional firepower into crowds of civilians is not an option.

Is there a role for armor in LIC? Simply consider the opposite. Could Russia or Israel have done better without armor? Of course not!

Now, let us consider armored vehicles. Tanks have superior firepower and protection. They are designed for shock action. They destroy enemy forces at long range and can maneuver while under enemy fire. Armored personnel carriers (APC) provide some protection for infantry but are (generally) poorly armed. Infantry fighting vehicles (IFV) tend to be in-between, having better firepower and protection than APCs, but far less than tanks. Tanks are heavy, IFVs are intermediate, APCs are light. Though their road speed may be limited to about 40 mph, all have excellent cross-country mobility and maneuverability thanks to their rugged tracked drive trains.

The Light Armored Vehicle (LAV) is wheeled. In firepower and protection, it is essentially a wheeled APC, though it is larger and heavier. It has a higher road speed, but its cross-country mobility is lower due to ground pressure, tire slippage, turning radius, etc. Its wheeled drive train is much more exposed and vulnerable to battle damage.

Both APCs and LAVs can be upgunned and uparmored equally. Both can accept 25mm cannon turrets, making them into IFVs. Both can mount 40mm Mk-19 grenade machine guns. Both serve as a basis for a family of vehicles, to include mortars, antitank missiles, air defense weapons, howitzers, ambulances, etc., etc. In all cases, the APC version will be smaller, lighter, and with superior cross-country mobility while the LAV will be larger, heavier, and with higher road speed. Neither approaches the shock action of a main battle tank.

One can discuss LIC tactics forever, but combined arms doctrine clearly demands a mix of systems. The author's examples touched on the successful contribution of airmobility, light infantry, armored infantry, mortars, air defense (automatic) weapons, and tanks, as the situation dictates.

Having succinctly presented so much information, why the author then ignored it and how he arrived at so flawed and narrow a conclusion is beyond me.

CHESTER A. KOJRO
LTC, Armor, USAR (Ret.)

The Author Responds

Dear Sir:

I would like to thank both Mr. Crist and LTC Kojro for their comments on my article, "Employing Armor in Low-Intensity Conflicts." I would especially like to thank Mr. Crist for his factual corrections to errors I made in the article. I stand corrected.

Mr. Crist, LTC Kojro, and I all agree that low-intensity conflict is something that the U.S. has not sufficiently addressed. Moreover, all of us realize that LIC will place limitations on how we will employ our armored forces. Additionally, all of us agree that an armored vehicle suited for potential LIC would ideally have a certain level of protection, mobility, firepower, and transportability in addition to a modest logistical train.

Unfortunately, we do not live in an ideal world. Political, economic, and technical issues make it difficult, if not impossible, to create the "perfect" LIC armored vehicle. Rather, we must decide which features we are willing to sacrifice in favor of others. Reasonable students of armored warfare can and will disagree as to which compromises we should make and those which we should not. As a credit to our profession, the debate continues and I am grateful for the commentary which this discussion has generated.

2LT NOAH KANTER
nckanter@hotmail.com

Chat Room Buddies May Have Been Mystery Authors of "Murphy's Laws"

Dear Sir:

I saw the article "Murphy's Laws of Armor" in the January-February issue and would like to claim credit as the author. The "laws" started out as a set of observations over a series of years while I occupied the positions of tank commander, platoon sergeant, and master gunner in 3/185 Armor and, after that 1/18 Cavalry.

In February 2000, I posted my observations to the Usenet newsgroup alt.folklore.military and solicited additional items. Here is a link to the original post:

http://groups.google.com/groups?hl=en&selm=oe6k9sg63ara8rarteqkm3q61dl0cgt8em%404ax.com

The final version (which made it to *ARMOR* magazine) includes both my original items and those added by the following people:

Richard Adams (formerly 1/18 Cavalry, now 2nd Brigade, 40th ID)

Scott D. Hann (formerly 1/15 Inf.)

Jorge Castro (unit unknown)

Sean Murphy (19D - unit unknown)

Pete C. (Unit and MOS unknown)

The following were people who posted using 'handles' rather than real names:

"Yeff' (former USAF)

'Ceejay'

MSG COLIN CAMPBELL
HQ, 40th ID (M)

Empowering Company Commanders: Now It's Time; Here's a Way

Dear Sir:

CPT Chris Connolly's article, "Chasing the Mythical Commander's Week," (Nov-Dec 2001) offers an accurate snapshot of life as a company commander in today's armor force, especially in 4ID (M) at Fort Hood, Texas. Many such commanders are doing great work in the Army, executing the company-level taskings, training, and operations directed to them by multiple echelons of headquarters, both over them and "around" them. But perhaps such commanders hoped for more from — and have more to offer to — the Army and its soldiers.

Army transformation is far from over, and if rational thought prevails, the Army just may realize that tactical information networks and situational awareness imply a need for fewer headquarters and larger spans of control. This means reversing the trend toward smaller companies and battalions while proliferating additional headquarters for CSS.

A road map for reshaping the Army to empower company commanders and create a force structure that offers scaleable land power options for combatant CINCs should include:

- Eliminating the division, DIVARTY, and DISCOM headquarters.
- Establishing organic combined arms battalion and company MTOES.
- Pushing CSS units back into the brigade and battalions.
- Enlarging battalion scout and mortar platoons.
- Adding an engineer or infantry platoon to each tank company's existing three platoons.

But tactical transformation will not be enough to fully release the energy and creativity of the Army's future company commanders if they remain busy garrisoning a Civil War-era basing concept whose rationale has long since disappeared. The strategic consumption of training time and other resources devoted to manning and guarding the commercial infrastructure on modern military bases is simply Napoleonic, as company commanders like CPT Connolly will tell you in charts, slides, or rock drills of what their soldiers actually do on the modern military "fort."

It's time to go beyond Base Realignment and Closing (BRAC) and eliminate the installation as we know it. Only by "moving the fences in" to only core military assets such as training areas, arms rooms, and motor pools will commanders and their soldiers escape the garrison tasking machine.

MAJ MIKE STOLLENWERK
Santa Monica, Calif.

Some Background on Early Auxiliary Power Units

Dear Sir:

The back cover article about the Under Armor Auxiliary Power Unit, from the Jan-Feb 2002 issue, is incorrect in stating that the WWII auxiliary power units were "crude add-ons." On the contrary, the auxiliary power units inside the M3- and M4-series medium tanks, as well as the subsequent M46-early M48 series, were well thought out and were an integral part of the vehicle design. The M3- and M4-series medium tanks had the unit located inside the crew compartment, where it not only supplied electrical power when the batteries were low or the main engine was off, but also could be used as a source of heat during the winter months. With the introduction of the M26, the APU was moved to the main engine compartment, where it remained until the advent of the M48A3. The fuel economy introduced by the M48A3 and M60-series allowed the Army to drop the APU as unnecessary, since the diesel engine could be kept running at idle to keep the tank electrical equipment in operation. It was not until the introduction of the M1 that fuel economy again became an issue and the need for a cheaper way of operating the electronic equipment became evident.

CHARLES R. LEMONS
Curator,
Patton Museum of Cavalry & Armor
Fort Knox, Ky.

Auxiliary Power Units: Remembering the Early Days

Dear Sir:

I am writing about the Jan-Feb 2002 back cover article on the Under Armor Auxiliary Power Unit (UAAPU) that is being fielded for the M1A2SEP tanks at Fort Hood. This addition to the tank is an obvious asset, saving fuel and running quietly to extend operational capability and avoiding thermal detection.

The article refers to auxiliary power units as "pony engines." Some veteran tankers may have said that, but in my ten-year experience

with the M48-series tanks, we called them "Little Joe's." They ran on MOGAS, as did the main engine. They also had a pull starter feature similar to your lawnmower that would start the APU even if the batteries were so discharged that the main engine would not turn over.

The same APU was used in the M88 Recovery Vehicle to power the hydraulic system as well as provide electrical power. The units were dependable and interchangeable.

CW4 (RET.) PAUL A. LOACH
2/185 Armor
CAARNG

More Auxiliary Power Unit Memories

Dear Sir:

In September of 1962, I turned in my typewriter to become a gunner of an M48A1. We had a gasoline-powered generator in the right front of our engine compartment. It was fueled from the main gas tanks and could be started from the driver's compartment or by a recoil starter accessed by lifting a grill door.

One other thing I remember is that one of my duties was to stand on the back deck with a CO2 extinquisher whenever we started the main engine. The exhaust came out over the back deck and was used to heat our steel pot full of water in front for bathing, shaving, or heating our C rations.

JAMES R. MILLER
SFC (Retired)
Stoughton, Wis.

Editor's Note: Because of confusion in the information we received, the UAAPU in the photo at right on the back cover of the Jan-Feb 2002 is upside down.

Civilians Replacing Master Gunners Could Free MGs to Lead Troops

Dear Sir:

As the Armor community becomes more technologically advanced, and future armored forces are focused on deployability and digitized capability, it's time to take a look at a program that has become outdated. Master gunners have been in existence for over 20 years now, from the M60-series through the M1A2 SEP.

The master gunner has always been the NCO on the spot to correct vehicle malfunctions and crew training. He is the one on the range, in the tower, directing range operations and engagements. He is always there to assist the commander in any way possible to help the unit — be it a single crew or a division — to put steel on target.

Now I think it's time to take a good hard look at what a master gunner really does for a living. Not what the duty description says, or what the local commander thinks he should be doing, but what he really does, what he is capable of doing, and what he has been trained to do.

Most battalion master gunners, and certainly company master gunners, rarely use what is trained in master gunner school, with the exception of machine guns and obtaining discreet CCFs (for which a very nifty sheet has been developed). The maintenance aspect of the master gunner's role has now been simplified by self-diagnosing equipment and line-replaceable LRUs. Almost all of the unit certifications (TCE, AGTS and UCOFT I/O) are certified outside the battalion. DRB, OPTEMPO and Force Protection Missions preclude any type of rational gunnery training cycle…. Why send an NCO to school for three months of extensive and difficult training (more if he is to become M1A2, M1A2 SEP and UCOFT/AGTS I/O and Senior I/O certified) when the job can be given to, and accomplished by, the same NCO who is probably already doing the mission anyway without the identifier?

We depend more and more on contractors to train our tankers on both new and old equipment. OPNETT, OMNETT, FBCB2, MCS, UCOFT I/Os (in Korea) are a few examples that are currently in effect Army-wide. Let's take a look at replacing the master gunner with a contracted civilian permanently assigned to the battalion or higher. He goes to school once, keeps current, and won't be affected by sources other that the commander. He will not be PCS'd or ETS'd, or concerned about his time in a staff job or a TDA assignment. More importantly, this would leave our most competent NCOs free to lead their crews or platoons. This may not be "The" answer but it is "An" answer to the question.

I am not criticizing the competence or abilities of those of us who have served, or are currently serving, as master gunners. The point is, do we really want or need that high-speed NCO in the tower, the MILES warehouse, or making tracking charts? Wouldn't we rather have him leading his men?

SFC CRAIG MCINTOSH
Battalion Master Gunner
2-8 Cav, 1CD

Training Killers

Dear Sir:

I am writing with regards to "Breaking the Reconnaissance Code" by CPT Eric Shaw (Nov-Dec 2001) and CPT T.J. Johnson's response to the same article in the January-February issue. I will attempt to address the root issues brought up in the two pieces.

The first issue is the need for a dedicated reconnaissance platform within the Army. Reconnaissance is non-branch specific and. therefore, has no branch chief to look out for its best interests, which have been overlooked to an extent. The Army needs to place more emphasis on reconnaissance at the unit level. The need for a thick-skinned, large wheeled vehicle, with a formidable weapon and thermal capability is a must for matching the mission to the capabilities of scouts. Capable scouts should not be handcuffed by improper equipment. A dedicated recon vehicle would be a good start in improving what should be the task force or brigade commanders' "bread and butter."

The rubber meets the road with the BRT or task force scouts, not with satellite or UAV reconnaissance; we must not over-rely on high technology. A good scout on the ground can both acquire and process intelligence, unlike the duo of high-tech equipment and a rear-echelon analyzer.

The next issue then becomes how to improve the skills of a scout unit, or any unit, once they have the proper equipment. In order to improve, one must look at how you are training and what you are training. I will focus on the how, not the what, because in this case, the egg is needed before you can have the chicken. The method of how we train our warfighters is not efficient or as effective as possible. Send the leaders of fighting units to "right seat ride" with OPFOR units in order to understand how fighting day in and day out, year round, improves a unit, both before and after LD. Allow OPFOR leaders down to platoon level to mentor and discuss with their counterparts regularly. Eliminate the handcuffs that degrade the OPFOR from providing the toughest, most lethal enemy available. Provide more iterations and repetitions to the training unit during their time at a CTC. Repetitive training is much more important than providing more time for planning and preparation in the current Army daily operating environment. Once improvement is made on how we train, then we can look at what we are training.

CPT Johnson's weak response to why OPFOR scouts are better than BLUFOR scouts is a typical excuse that, unfortunately, is a dominant belief throughout BLUFOR units. The OPFOR is an educated, thinking, living, and breathing enemy. The OPFOR strives to get better everyday and sustain its strengths. The OPFOR is not robotic at executing a Plan X, Y, or Z as believed. Every mission is different because the enemy and situation differs every single day. The excuse of losing to a cheating OPFOR is just that, an excuse. The OPFOR has a lesser challenge in beating the BLUFOR than they do in holding themselves to a high standard of MILES and ROE compliance in order to avoid such bogus claims of cheating. It is true, the OPFOR knows their land very well, just as any enemy would, just as the evil-doers in Afghanistan. But the OPFOR knows something far more important than the lay of their land; they know the art of using the land to their advantage. Using the terrain is an art, and once you can paint, it does not mat-

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ter as much where you paint, but how you paint.

I have an entire platoon of capable scouts, foaming at the mouth to paint anytime, anywhere. You supply a DTG and a grid, and we will bring the art supplies.

GREG W. DAMERON
1LT, Infantry
1-4 IN (OPFOR), CMTC
Germany

OPFOR Defends Itself Against Gamesmanship Charge

Dear Sir:

As a platoon sergeant in D Troop, 1-509th IN (ABN) serving as the OPFOR at the JRTC, I was disturbed by the comments made by CPT T.J. Johnson in "Letters" in the Jan-Feb 2002 issue.

First, we don't play a game. We face every rotational unit that trains here as if it was real and the stakes are high. In essence, we are afraid to "die," so we train everyday to survive in simulated, and by extension, real combat. That training includes battle drills, marksmanship, field craft, and for us in D Troop, armor-related tasks. It doesn't include how to beat the system, or play the "game." I wouldn't tolerate any form of cheating in my platoon or troop. In fact, not only is it punishable under the UCMJ, but anyone doing so will leave the OPFOR and find a job elsewhere.

I do agree that we have advantages. We are in the field two-plus weeks a month, which allows us to hone our SOPs and techniques. We fight in our "box," so we know the terrain and where the most logical places are to find BLUFOR. However, these advantages are enjoyed by most guerrilla armies; generally they've been at war long before the U.S. Army got there, and operate in their own country.

Also, OPFOR does face units on neutral ground in some cases, and even sometimes on the BLUFOR ground. I have been deployed to face active duty BLUFOR units at several National Guard camps, and even at Fort Bragg. Still, the results are the same; the amount of time that we train is our greatest advantage. The reason any unit deploys to the JRTC is to see where they stand on their METL and SOPs. We work hard to provide a thinking OPFOR, that — given the opportunity — will demonstrate where the opposing unit needs to focus their training.

If your unit leaves home station with the attitude that OPFOR cheats, or that OPFOR will win no matter what you do, you are wasting your trip. Which means you have wasted the time of every soldier in your command over the last year.

SFC MICHAEL S. CLEMENS
Fort Polk, La.

Claims of an Army "Malaise" More Conjured Than Real

Dear Sir:

I would like to thank LTC (Ret.) Harold Raugh, Jr. for his very thoughtful and provocative review of *Leadership: The Warrior's Art*. He did mention in the review that he would have liked to see solutions to the "current malaise" in the U.S. Army addressed in the book. While I did address on p. xxiv the fact that high-quality leadership was the only real solution to the supposed morale crisis in the Army, his point has inspired me to consider the general "malaise" argument that has seemed to enjoy popular acclaim over the past several years. Quite simply, the existence of a malaise that has infected the entire Army is more conjured than real.

The Army is too big, too complex, and too diverse to be "of one" about morale. In fact, as many of us have seen, within the same company one well-led platoon will have high morale, while the one right next to it that is poorly led will have low morale. The difference is leadership. To be sure, there are plenty of poor leaders in the ranks that reek of the problems identified by LTC Raugh, and those types certainly do cause morale crises within their organizations. At the same time, the Army has a vast number of outstanding leaders that create excellent organizations that possess high morale. Those soldiers in those units do not have malaise or any other form of morale affliction. I know, because I was a soldier in such a unit from 1999-2001.

The Second Armored Cavalry Regiment at Fort Polk is a superb organization. Located in the backwoods of Louisiana, the leaders of the regiment would have every right to complain that the odds of creating high morale are stacked against them due to the remote nature of the installation. The regiment, however, is an outstanding unit because of the high quality of its leadership…. They do not have malaise, nor do their units. To be sure, there are some poor leaders within the regiment and their units do have morale problems. Nevertheless, one visit to the regiment in garrison or in the field will convince anyone that the 2nd Regiment of Dragoons is, with very few exceptions, a proud organization of high morale from top to bottom. Morale is local, by and large. The difference is in the leadership. The 2nd ACR is certainly not alone in that regard.

The argument by so many pundits and self-appointed experts that the entire Army is afflicted with malaise is way overdrawn, perhaps even nonsensical. What is troubling about the argument is that it obscures the real issue: morale problems are caused by poor leadership. Universal "malaise" gives dysfunctional leaders an escape hatch — they are not held accountable if "everyone" has morale problems. It is time to take poor leaders to task. We must avoid blaming the symptoms rather than the root cause of the problem.

There simply is no excuse for poor leadership. Perhaps part of the problem is that we have not, as an organization, articulated a coherent standard for what we mean by leadership. If "getting results" or "accomplishing the mission" is the only standard, then we open ourselves to all sorts of dysfunctional behavior on the way to getting the job done. The screaming, zero-defect, self-serving, and ethically challenged prima-donna is therefore just as good as the person we admire as a true leader as long as they both get results. The problems that occur from this mentality are obvious, and will continue to manifest themselves as long as some senior leaders tolerate poor leadership on the part of their subordinates.

We need to do a better job of distinguishing between merely getting results and getting results the right way. A person that merely gets good results is nothing special. We have plenty of people who can do that. A leader who gets good results the right way, through character and competence, who inspires the best in others and creates high performing teams of great morale along the way, and who leaves a lasting, positive impact on the lives of others, is someone special. Great leaders leave a legacy of excellence. We need to grow more of those people.

Perhaps the war on terrorism will provide the impetus to fix some nagging problems, such as training budgets, quality of life issues, and stability. Solving those structural problems, however, will not cure the low morale in some units any more than the problems themselves created the low morale. The real solution is in our own hands and in our own gardens.

Cure poor leadership and you will cure poor morale. To begin, we need look no further than the mirror and our subordinate leaders. The great leaders have already figured this out. Their organizations are wonderful ones in which to serve, and there are plenty of them throughout the Army.

The best way to increase and sustain morale is to promote and develop high-quality leadership and to reform or get rid of poor leaders. To do so requires seniors with the wisdom and courage to look beneath the surface of mere results. We wrote *Leadership: The Warrior's Art* to help identify, understand, and develop such high-quality leadership.

MAJ CHRISTOPHER D. KOLENDA

Correction

The photo on Page 10 of the January-February 2002 issue was misidentified as an Israeli M113. The vehicle is actually an Israeli Nagmachon APC (a Centurion modification).